

## Part 03: Setting Up Development Environment

```
$ sudo apt update && sudo apt upgrade -y
```

```
Processing triggers for linux-image-5.4.0-109-generic (5.4.0-109.123) ...
/etc/kernel/postinst.d/initramfs-tools:
update-initramfs: Generating /boot/initrd.img-5.4.0-109-generic
/etc/kernel/postinst.d/zz-update-grub:
Sourcing file `/etc/default/grub'
Sourcing file `/etc/default/grub.d/init-select.cfg'
Generating grub configuration file ...
Found linux image: /boot/vmlinuz-5.4.0-109-generic
Found initrd image: /boot/initrd.img-5.4.0-109-generic
Found linux image: /boot/vmlinuz-5.4.0-105-generic
Found initrd image: /boot/initrd.img-5.4.0-105-generic
Found linux image: /boot/vmlinuz-5.4.0-62-generic
Found initrd image: /boot/initrd.img-5.4.0-62-generic
done
root@vmi867730:~#
```

Output

```
$ sudo apt install curl tar wget clang pkg-config libssl-dev jq
build-essential \
```

```
$ git make ncdt -y
```

```
Setting up gcc-11 (11.2.0-19ubuntu1) ...
Setting up llvm-14-dev (1:14.0.0-1ubuntu1) ...
Setting up libc-devtools (2.35-0ubuntu3) ...
Setting up libbinfo-dev:amd64 (6.3-2) ...
Setting up clang-14 (1:14.0.0-1ubuntu1) ...
Setting up g++-11 (11.2.0-19ubuntu1) ...
Setting up gcc (4:11.2.0-1ubuntu1) ...
Setting up clang (1:14.0-55~exp2) ...
Setting up g++ (4:11.2.0-1ubuntu1) ...
update-alternatives: using /usr/bin/g++ to provide /usr/bin/c++ (c++) in auto mode
Setting up build-essential (12.9ubuntu3) ...
Processing triggers for libc-bin (2.35-0ubuntu3) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for install-info (6.0-4build1) ...
root@vmi897239:~#
```

Output

*Install Golang:*

```
ver="1.18.2"
```

```
$ 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"
```

```
gol.18.2.linux-amd64.tar.gz          100%[=====] 135.17M 47.1MB/s   in 2.9s
2022-06-02 23:26:12 (47.1 MB/s) - 'gol.18.2.linux-amd64.tar.gz' saved [141732542/141732542]
root@vmi887582:~# sudo rm -rf /usr/local/go
root@vmi887582:~# sudo tar -C /usr/local -xzf "go$ver.linux-amd64.tar.gz"
root@vmi887582:~# rm "go$ver.linux-amd64.tar.gz"
```

Output

*And Press Enter*

```
root@vmi887582:~# rm "go$ver.linux-amd64.tar.gz"
```

Output

```
$ echo "export PATH=$PATH:/usr/local/go/bin:$HOME/go/bin" >>
$HOME/.bash_profile
```

```
$ source $HOME/.bash_profile
```

```
root@vmi897239:~# echo "export PATH=$PATH:/usr/local/go/bin:$HOME/go/bin" >> $HOME/.bash_profile
source $HOME/.bash_profile
root@vmi897239:~#
```

Output

```
$ go version
```

```
root@vmi897239:~# go version
go version gol.18.2 linux/amd64
root@vmi897239:~#
```

Output

## Part 04: Install Celestia App

```
$ cd $HOME
$ rm -rf celestia-app
$ git clone https://github.com/celestiaorg/celestia-app.git

$ cd celestia-app/

APP_VERSION=$(curl -s
  \https://api.github.com/repos/celestiaorg/celestia-
  app/releases/latest \| jq -r ".tag_name")

$ git checkout tags/$APP_VERSION -b $APP_VERSION

$ make install
root@vmi887582:~/celestia-app# git checkout tags/$APP_VERSION -b $APP_VERSION
Switched to a new branch 'v0.5.2'
root@vmi887582:~/celestia-app# make install
```

Output

## And Press Enter

```
go: downloading github.com/modern-go/concurrent v0.0.0-20180306012644-bacd9c7ef1dd
go: downloading github.com/modern-go/reflect2 v1.0.2
go: downloading github.com/golang/groupcache v0.0.0-20210331224755-41bb18bfe9da
go: downloading github.com/jmespath/go-jmespath/internal/testify v1.5.1
go: downloading github.com/go-playground/locales v0.13.0
  > Ensure dependencies have not been modified
GO111MODULE=on go mod verify
all modules verified
--> Installing celestia-appd
root@vm1897239:~/celestia-app#
```

Output

```
$ celestia-appd --help
```

```
root@vm1897239:~/celestia-app# celestia-appd --help
Start celestia app

Usage:
  celestia-appd [command]

Available Commands:
  add-genesis-account Add a genesis account to genesis.json
  collect-gentxs   Collect genesis txs and output a genesis.json file
  config           Create or query an application CLI configuration file
  debug            Tool for helping with debugging your application
  export            Export state to JSON
  gentx             Generate a genesis tx carrying a self delegation
  help              Help about any command
  init              Initialize private validator, p2p, genesis, and application configuration files
  keys              Manage your application's keys
  migrate           Migrate genesis to a specified target version
  query             Querying subcommands
  rollback          rollback tendermint state by one height
  rollback cosmos-sdk and tendermint state by one height
  start             Run the full node
  status            Query remote node for status
  tendermint        Tendermint subcommands
  tx                Transactions subcommands
  validate-genesis validates the genesis file at the default location or at the location passed as an arg
  version           Print the application binary version information

Flags:
  -h, --help   help for celestia-appd
  --home string   directory for config and data (default "/root/.celestia-app")
  --log_format string   The logging format (json|plain) (default "plain")
  --log_level string   The logging level (trace|debug|info|warn|error|fatal|panic) (default "info")
  --trace   print out full stack trace on errors

Use "celestia-appd [command] --help" for more information about a command.
root@vm1897239:~/celestia-app#
```

Output

## Part 05: Setup P2P Network

```
$ cd $HOME
$ rm -rf networks
```

```
$ git clone https://github.com/celestiaorg/networks.git
```

```
Cloning into 'networks'...
remote: Enumerating objects: 816, done.
remote: Counting objects: 100% (529/529), done.
remote: Compressing objects: 100% (302/302), done.
remote: Total 816 (delta 319), reused 370 (delta 219), pack-reused 287
Receiving objects: 100% (816/816), 349.82 KiB | 7.42 MiB/s, done.
Resolving deltas: 100% (417/417), done.
root@vm1897239:~#
```

Output

```
celestia-appd init "node-name" --chain-id mamaki
```

*Please replace “node-name” by your name for example:*

```
$ celestia-appd init Sohale --chain-id mamaki
```

```
["app_message": {"auth": {"accounts": [], "params": {"max_memo_characters": "256", "sig_verify_cost_ed25519": "590", "sig_verify_cost_secp256k1": "1000", "tx_sig_limit": "7", "tx_size_cost_per_byte": "10"}}, "bank": {"balances": [], "denom_metadata": [{"base": "utia", "denom_units": [{"aliases": ["microceles"], "denom": "utia", "exponent": 0}], "uri": "", "uri_hash": ""}], "params": {"default_send_enabled": true, "send_enabled": []}, "supply": [], "capability": {"index": "1", "owners": []}, "crisis": {"constant_fee": {"amount": "1000", "denom": "utia"}, "exponent": 6}, "description": "The native staking token of the Celestia network.", "display": "TIA", "name": "TIA", "symbol": "TIA"}, "ithdraw_addr_enabled": true}, {"previous_proposer": "", "validator_accumulated_commissions": [], "validator_current_rewards": [], "validator_historical_rewards": []}, {"validator_slash_events": []}, {"evidence": {"evidence": []}, "feegrant": {"allowances": []}, "genutil": {"gen_txs": []}, "gov": {"deposit_params": {"max_deposit_period": "172800s"}, "deposits": [], "proposals": [], "starting_proposal_id": "1", "tally_params": {"quorum": "0.33400000000000000000000000000000", "veto_threshold": "0.50000000000000000000000000000000", "votes": []}, "voting_params": {"voting_period": "172800s"}, "ggb": []}, "mint": {"minter": {"annual_provisions": "0.00000000000000000000000000000000", "inflation": "0.13000000000000000000000000000000"}, "params": {"blocks_per_year": "6311520", "goal_bonded": "0.67000000000000000000000000000000", "inflation_max": "0.20000000000000000000000000000000", "inflation_min": "0.07000000000000000000000000000000", "inflation_rate_change": "0.13000000000000000000000000000000", "mint_denom": "utia"}, "params": null, "payment": []}, {"slashing": {"missed_blocks": []}, "params": {"downtime_jail_duration": "600s", "min_signed_per_window": "0.50000000000000000000000000000000", "signed_blocks_window": "100", "slash_fraction_double_sign": "0.05000000000000000000000000000000", "slash_fraction_downtime": "0.01000000000000000000000000000000"}, "signing_infos": [], "staking": {"delegations": [], "exported": false, "last_total_power": "0", "last_validator_powers": []}, "params": {"bond_denom": "utia", "historical_entries": 10000, "max_entries": 7, "maxValidators": 100, "min_commission_rate": "0.00000000000000000000000000000000", "unbonding_time": "1814400s"}, "redelegations": [], "unbonding_delegations": []}, "validators": {"de": "0", "resting": "1"}, "chain_id": "mamaki", "gentxs_dir": "", "moniker": "nodebucheron", "node_id": "0le8105d861f8e81b3130173f9d5a25c4416fc21"}]
root@vm1897239:~#
```

Output

```
$ cp $HOME/networks/mamaki/genesis.json $HOME/.celestia-app/config
root@vm1897239:~# cp $HOME/networks/mamaki/genesis.json $HOME/.celestia-app/config
root@vm1897239:~#
```

Output

```
$ BOOTSTRAP_PEERS=$(curl -sL
https://raw.githubusercontent.com/celestiaorg/networks/master/mamaki/bootstrap-peers.txt | tr -d '\n')
```

```
$ echo $BOOTSTRAP_PEERS
```

```
$ sed -i.bak -e "s/^bootstrap-peers *=.*bootstrap-peers = \
\"$BOOTSTRAP_PEERS\"/" $HOME/.celestia-app/config/config.toml
```

```
sed -i.bak -e "s/^bootstrap-peers *=.*bootstrap-peers = \"$BOOTSTRAP_PEERS\"/" $HOME/.celestia-app/config/config.toml
a46bbdb81e66c950e3ccbe5ee748a2d6bb185dd@161.97.168.77:26656,f0c58d904dec824605ac36114db28f1bf84f6ea38144.76.112.238:26656
root@vm1897239:~#
```

Output

## Part 06: Configure Pruning and Validator Mode

```
$ PRUNING="custom"
```

```
$ PRUNING_KEEP_RECENT="100"
```

```
$ PRUNING_INTERVAL="10"
```

```
$ sed -i -e "s/^pruning *=.*pruning = \\"$PRUNING\\"/" $HOME/.celestia-app/config/app.toml
```

```
$ sed -i -e "s/^pruning-keep-recent *=.*pruning-keep-recent = \
\\\"$PRUNING_KEEP_RECENT\\"/" $HOME/.celestia-app/config/app.toml
```

```
$ sed -i -e "s/^pruning-interval *=.*pruning-interval = \
\\\"$PRUNING_INTERVAL\\"/" $HOME/.celestia-app/config/app.toml
```

```

root@vmi897239:~# BOOTSTRAP_PEERS=$(curl -sL https://raw.githubusercontent.com/celestiaorg/networks/master/mamaki/bootstrap-peers.txt | tr -d '\n')
echo $BOOTSTRAP_PEERS
sed -i.bak -e "s/bootstrap-peers *=.*bootstrap-peers = \"$BOOTSTRAP_PEERS\"/" $HOME/.celestia-app/config/config.toml
a46bdb81ef6c950e3cdbe5ee748a2d6bdb185dd@161.97.168.77:26656, f0c58d904dec824605ac36114db28f1bf84f6ea3@144.76.112.238:26656
root@vmi897239:~# PRUNING="custom"
PRUNING_KEEP_RECENT="100"
PRUNING_KEEP_INTERVAL="10"
PRUNING_INTERVAL="10"

sed -i -e "s/^pruning *=.*/pruning = \"PRUNING\"/" $HOME/.celestia-app/config/app.toml
sed -i -e "s/^pruning-keep-recent *=.*/pruning-keep-recent = \
\"PRUNING_KEEP_RECENT\"/" $HOME/.celestia-app/config/app.toml
sed -i -e "s/^pruning-interval *=.*/pruning-interval = \
\"PRUNING_INTERVAL\"/" $HOME/.celestia-app/config/app.toml
root@vmi897239:~# 

```

Output

```

$ sed -i.bak -e "s/^mode *=.*/mode = \"validator\"/"
$HOME/.celestia-app/config/config.toml
root@vmi897239:~# sed -i.bak -e "s/^mode *=.*/mode = \"validator\"/" $HOME/.celestia-app/config/config.toml
root@vmi897239:~# 

```

Output

```

$ celestia-appd tendermint unsafe-reset-all --home $HOME/.celestia-
app

```

```

goroutine 1 [running]:
github.com/tendermint/tendermint/prvval.FilePVKey.Save((0xc000a07800, 0x14, 0x20), {0x2a35380, 0xc0005650c8}, {0x2a35340, 0xc000565098}, {0xc000406160, 0x1e})
    /root/go/pkg/mod/github.com/celestiaorg/celestia-core@v1.2.2-tm-v0.35.4/prvval/file.go:70 +0x13a
github.com/tendermint/tendermint/prvval.(*FilePV).Save(0xc00095c6e0)
    /root/go/pkg/mod/github.com/celestiaorg/celestia-core@v1.2.2-tm-v0.35.4/prvval/file.go:287 +0x9a
github.com/tendermint/tendermint/cmd/tendermint/commands.resetFilePV((0xc000406160, 0x1e), {0xc000406160, 0x1e}, {0x2a33000, 0xc0000fe3f0}, {0x2008867, 0x7})
    /root/go/pkg/mod/github.com/celestiaorg/celestia-core@v1.2.2-tm-v0.35.4/cmd/tendermint/commands/reset.go:158 +0x8e
github.com/tendermint/tendermint/cmd/tendermint/commands.resetAll((0x2004e69, 0x4), {0xc000406160, 0x1e}, {0xc000406180, 0x1e}, {0x2a33000, 0xc0000fe3f0})
    /root/go/pkg/mod/github.com/celestiaorg/celestia-core@v1.2.2-tm-v0.35.4/cmd/tendermint/commands/reset.go:78 +0x37e
github.com/tendermint/tendermint/cmd/tendermint/commands.resetAllCmd(0x3a4cf40, {0xc00024e9e0, 0x07, 0x27})
    /root/go/pkg/mod/github.com/celestiaorg/celestia-core@v1.4.0/command.go:50 +0x14e
github.com/spf13/cobra.(*Command).execute(0x3a4cf40, {0xc00024e980, 0x2, 0x2})
    /root/go/pkg/mod/github.com/spf13/cobra@v1.4.0/command.go:856 +0x67c
github.com/spf13/cobra.(*Command).Execute(0xc0004aa780)
    /root/go/pkg/mod/github.com/spf13/cobra@v1.4.0/command.go:974 +0x3b4
github.com/spf13/cobra.(*Command).Execute(0xc0004aa780)
    /root/go/pkg/mod/github.com/spf13/cobra@v1.4.0/command.go:902
github.com/spf13/cobra.(*Command).ExecuteContext(0xc0004aa780)
    /root/go/pkg/mod/github.com/spf13/cobra@v1.4.0/command.go:895
github.com/cosmos/cosmos-sdk/server/cmd.Execute(0x4012f0?, {0x20098be, 0x8}, {0xc000276cf0, 0x13})
    /root/go/pkg/mod/github.com/celestiaorg/cosmos-sdk@v1.1.1-sdk-v0.46.0/server/cmd/execute.go:36 +0x20f
main.main()
    /root/celestia-app/cmd/celestia-appd/main.go:14 +0x38
root@vmi897239:~# 

```

Output

## Part 07: Start the Celestia-App with SystemD

Create Celestia-App systemd file:

```
$ sudo tee <<EOF >/dev/null /etc/systemd/system/celestia-
appd.service
[Unit]
Description=celestia-appd Cosmos daemon
After=network-online.target
[Service]
User=$USER
ExecStart=$HOME/go/bin/celestia-appd start
Restart=on-failure
RestartSec=3
LimitNOFILE=4096
[Install]
WantedBy=multi-user.target
EOF
> WantedBy=multi-user.target
> EOF
root@vmi087582:~/celestia-node#
```

Output

Check with this command:

```
$ cat /etc/systemd/system/celestia-appd.service
root@vmi087582:~/celestia-node# cat /etc/systemd/system/celestia-appd.service
[Unit]
Description=celestia-appd Cosmos daemon
After=network-online.target
[Service]
User=root
ExecStart=/root/go/bin/celestia-appd start
Restart=on-failure
RestartSec=3
LimitNOFILE=4096
[Install]
WantedBy=multi-user.target
root@vmi087582:~/celestia-node#
```

Output

Enable and start celestia-appd daemon:

```
$ systemctl enable celestia-appd
$ systemctl start celestia-appd
Created symlink /etc/systemd/system/multi-user.target.wants/celestia-appd.service → /etc/systemd/system/celestia-appd.service.
root@vmi087582:~/celestia-node# systemctl start celestia-appd
```

And press Enter

```
root@vmi087582:~/celestia-node# systemctl start celestia-appd
root@vmi087582:~/celestia-node#
```

Output

*Check if daemon has been started correctly:*

**\$ systemctl status celestia-appd**

```
* celestia-appd.service - celestia-appd Cosmos daemon
   Loaded: loaded (/etc/systemd/system/celestia-appd.service; enabled; vendor preset: enabled)
     Active: active (running) since Fri 2022-06-03 17:24:49 CEST; 1min 45s ago
       Main PID: 24354 (celestia-appd)
          Tasks: 12 (limit: 19141)
            Memory: 240.8M
           CGroup: /system.slice/celestia-appd.service
                   └─24354 /root/go/bin/celestia-appd start

Jun 03 17:26:30 vmi887582.contaboserver.net celestia-appd[24354]: 5:26PM INF stopping service impl=MConn(65.21.237.164:26656) module=p2p peer=("Hostname":"65.21.237.164","NodeID":"72c6c2f2b35ef9f118feb6cb36a41e9629b6245c","Path":"","Port":26656,"Protocol":"mconn") service=MConnection
Jun 03 17:26:33 vmi887582.contaboserver.net celestia-appd[24354]: 5:26PM INF starting service impl=MConn(167.86.105.96:26656) module=p2p peer=("Hostname":"167.86.105.96","NodeID":"72c6c2f2b35ef9f118feb6cb36a41e9629b6245c","Path":"","Port":26656,"Protocol":"mconn") service=MConnection
Jun 03 17:26:33 vmi887582.contaboserver.net celestia-appd[24354]: 5:26PM INF peer connected endpoint={}
Jun 03 17:26:33 vmi887582.contaboserver.net celestia-appd[24354]: 5:26PM INF received peer update module=statesync peer=b560411ba23da2784276dbb47cb2af77d19e
Jun 03 17:26:34 vmi887582.contaboserver.net celestia-appd[24354]: 5:26PM ERR failed to process message ch id=0 envelope=|"Broadcast":false, "From":"b560411ba23da2784276dbb47cb2af77d19e"
Jun 03 17:26:34 vmi887582.contaboserver.net celestia-appd[24354]: 5:26PM ERR peer_error, evicting err="peer sent too many addresses (max: 100, got: 230)" module=p2p peer=b560411ba23da2784276dbb47cb2af77d19e
Jun 03 17:26:34 vmi887582.contaboserver.net celestia-appd[24354]: 5:26PM INF evicting peer module=p2p peer=b560411ba23da2784276dbb47cb2af77d19e
Jun 03 17:26:34 vmi887582.contaboserver.net celestia-appd[24354]: 5:26PM INF stopping service impl=MConn(167.86.105.96:26656) module=p2p peer=("Hostname":"167.86.105.96","NodeID":"72c6c2f2b35ef9f118feb6cb36a41e9629b6245c","Path":"","Port":26656,"Protocol":"mconn") service=MConnection
Jun 03 17:26:34 vmi887582.contaboserver.net celestia-appd[24354]: 5:26PM INF peer disconnected endpoint={}
Jun 03 17:26:34 vmi887582.contaboserver.net celestia-appd[24354]: 5:26PM INF received peer update module=statesync peer=b560411ba23da2784276dbb47cb2af77d19e
Jun 03 17:26:34 vmi887582.contaboserver.net celestia-appd[24354]: 5:26PM INF peer update module=statesync peer=b560411ba23da2784276dbb47cb2af77d19e
lines 1-19/19 (END)
```

**Output**

*And press CTRL+C*

```
Jun 03 17:26:34 vmi887582.contaboserver.net celestia-appd[24354]: 5:26PM INF evicting peer module=p2p peer=b560411ba23da2784276dbb47cb2af77d19e
Jun 03 17:26:34 vmi887582.contaboserver.net celestia-appd[24354]: 5:26PM INF stopping service impl=MConn(167.86.105.96:26656) module=p2p peer=("Hostname":"167.86.105.96","NodeID":"72c6c2f2b35ef9f118feb6cb36a41e9629b6245c","Path":"","Port":26656,"Protocol":"mconn") service=MConnection
Jun 03 17:26:34 vmi887582.contaboserver.net celestia-appd[24354]: 5:26PM INF peer disconnected endpoint={}
Jun 03 17:26:34 vmi887582.contaboserver.net celestia-appd[24354]: 5:26PM INF received peer update module=statesync peer=b560411ba23da2784276dbb47cb2af77d19e
root@vmi887582:~/celestia-node#
```

*Check daemon logs in real time:*

**\$ journalctl -u celestia-appd.service -f**

```
root@vmi887582:~/celestia-node# journalctl -u celestia-appd.service -f
-- Logs begin at Fri 2022-06-03 12:51:49 CEST. --
Jun 03 17:27:59 vmi887582.contaboserver.net celestia-appd[24354]: 5:27PM INF peer disconnected endpoint={} module=p2p peer=eld27bba851e9a8e8a0573c47df60f1fe0f0
0f0da5
Jun 03 17:27:59 vmi887582.contaboserver.net celestia-appd[24354]: 5:27PM INF received peer update module=statesync peer=eld27bba851e9a8e8a0573c47df60f1fe0f0
da5 status-down
Jun 03 17:28:01 vmi887582.contaboserver.net celestia-appd[24354]: 5:28PM INF starting service impl=MConn(65.21.237.164:26656) module=p2p peer=("Hostname":"65
.21.237.164","NodeID":"72c6c2f2b35ef9f118feb6cb36a41e9629b6245c","Path":"","Port":26656,"Protocol":"mconn") service=MConnection
Jun 03 17:28:01 vmi887582.contaboserver.net celestia-appd[24354]: 5:28PM ERR failed to handshake with peer err="incompatible: peer is on a different network.
| Got devnet-2, expected mamaki" module=p2p peer=("Hostname":"65.21.237.164","NodeID":"72c6c2f2b35ef9f118feb6cb36a41e9629b6245c","Path":"","Port":26656,"Protocol
:"mconn")
Jun 03 17:28:01 vmi887582.contaboserver.net celestia-appd[24354]: 5:28PM INF stopping service impl=MConn(65.21.237.164:26656) module=p2p peer=("Hostname":"65
.21.237.164","NodeID":"72c6c2f2b35ef9f118feb6cb36a41e9629b6245c","Path":"","Port":26656,"Protocol":"mconn") service=MConnection
Jun 03 17:28:06 vmi887582.contaboserver.net celestia-appd[24354]: 5:28PM ERR failed to dial endpoint endpoint="IP":"164.68.100.86","Path":"","Port":26656,"Protocol
:"mconn" err="dial tcp 164.68.100.86:26656: connect: no route to host" module=p2p peer=f0f6120fa9bcf09e39e7e2373804c7018a4990fc5
Jun 03 17:28:06 vmi887582.contaboserver.net celestia-appd[24354]: 5:28PM ERR failed to dial peer err="all endpoints failed" module=p2p peer=("Hostname":"164.
68.100.86","NodeID":"f86120fa9bcf09e39e7e2373804c7018a4990fc5","Path":"","Port":26656,"Protocol":"mconn")
Jun 03 17:28:06 vmi887582.contaboserver.net celestia-appd[24354]: 5:28PM INF starting service impl=MConn(75.119.140.91:26656) module=p2p peer=("Hostname":"75
.119.140.91","NodeID":"90e3efaf1c9137284422899fld460d798fee38e8","Path":"","Port":26656,"Protocol":"mconn") service=MConnection
Jun 03 17:28:06 vmi887582.contaboserver.net celestia-appd[24354]: 5:28PM ERR failed to handshake with peer err="incompatible: peer is on a different network.
| Got devnet-2, expected mamaki" module=p2p peer=("Hostname":"75.119.140.91","NodeID":"90e3efaf1c9137284422899fld460d798fee38e8","Path":"","Port":26656,"Protocol
:"mconn")
Jun 03 17:28:06 vmi887582.contaboserver.net celestia-appd[24354]: 5:28PM INF stopping service impl=MConn(75.119.140.91:26656) module=p2p peer=("Hostname":"75
.119.140.91","NodeID":"90e3efaf1c9137284422899fld460d798fee38e8","Path":"","Port":26656,"Protocol":"mconn") service=MConnection
root@vmi887582:~/celestia-node#
```

**Output**

*And press CTRL+C*

```
b73c973bf33712f9","Path":"","Port":43656,"Protocol":"mconn")
Jun 03 17:29:15 vmi887582.contaboserver.net celestia-appd[24354]: 5:29PM INF stopping service impl=MConn(141.94.73.39:43656) module=p2p peer=("Hostname":"141
.94.73.39","NodeID":"43e9da043318a4ea0141259c17fc06eff816af","Path":"","Port":43656,"Protocol":"mconn") service=MConnection
Jun 03 17:29:18 vmi887582.contaboserver.net celestia-appd[24354]: 5:29PM INF starting service impl=MConn(65.21.237.164:26656) module=p2p peer=("Hostname":"65
.21.237.164","NodeID":"72c6c2f2b35ef9f118feb6cb36a41e9629b6245c","Path":"","Port":26656,"Protocol":"mconn") service=MConnection
Jun 03 17:29:18 vmi887582.contaboserver.net celestia-appd[24354]: 5:29PM ERR failed to handshake with peer err="incompatible: peer is on a different network.
| Got devnet-2, expected mamaki" module=p2p peer=("Hostname":"65.21.237.164","NodeID":"72c6c2f2b35ef9f118feb6cb36a41e9629b6245c","Path":"","Port":26656,"Protocol
:"mconn")
Jun 03 17:29:18 vmi887582.contaboserver.net celestia-appd[24354]: 5:29PM INF stopping service impl=MConn(65.21.237.164:26656) module=p2p peer=("Hostname":"65
.21.237.164","NodeID":"72c6c2f2b35ef9f118feb6cb36a41e9629b6245c","Path":"","Port":26656,"Protocol":"mconn") service=MConnection
Jun 03 17:29:18 vmi887582.contaboserver.net celestia-appd[24354]: 5:29PM INF Connection is closed @ recvRoutine (likely by the other side) conn=(Logger:{} modules=p2p peer=("Hostname":"65.21.237.164","NodeID":"72c6c2f2b35ef9f118feb6cb36a41e9629b6245c","Path":"","Port":26656,"Protocol":"mconn"))
Jun 03 17:29:18 vmi887582.contaboserver.net celestia-appd[24354]: 5:29PM ERR Error stopping connection err="already stopped" module=p2p peer=("Hostname":"65.
21.237.164","NodeID":"72c6c2f2b35ef9f118feb6cb36a41e9629b6245c","Path":"","Port":26656,"Protocol":"mconn")
^C
root@vmi887582:~/celestia-node#
```

**Output**

```
$ curl -s localhost:26657/status | jq .result | jq .sync_info
```

## Part 08: Install Celestia Node

```
$ cd $HOME  
$ rm -rf celestia-node  
$ git clone https://github.com/celestiaorg/celestia-node.git  
$ cd celestia-node/  
$ git checkout tags/v0.3.0-rc1  
$ make install  
  
git switch -c <new-branch-name>  
Or undo this operation with:  
git switch -  
Turn off this advice by setting config variable advice.detachedHead to false  
HEAD is now at 5843c5e tests(node): add TestNamespacedDataRequest, refactor tests  
root@vmi897582:~/celestia-node# make install
```

Output

*And press Enter*

```
go: downloading github.com/davidlazar/go-crypto v0.0.0-20200604182044-b73af7476f6c  
go: downloading github.com/ipld/go-ipfs-prime v0.9.0  
go: downloading github.com/multiformats/go-multicodec v0.2.0  
go: downloading github.com/huin/goump v1.0.3-0.20220313090229-ca81a64b4204  
go: downloading github.com/jackpal/go-nat-pmp v1.0.2  
go: downloading github.com/koron/go-ssdp v0.0.2  
root@vmi897582:~/celestia-node#
```

Output

```
$ celestia version
```

```
Semantic version: v0.3.0-rc1  
Commit: 5843c5e102651206fe11c685c163f267b141b103  
Build Date: Fri 03 Jun 2022 05:16:25 PM CEST  
System version: amd64/linux  
Golang version: go1.18.2  
root@vmi897582:~/celestia-node#
```

Output

## Part 09: Create a Wallet

```
$ celestia-appd config keyring-backend test
```

```
root@vmi897239:~# celestia-appd config keyring-backend test  
root@vmi897239:~#
```

Output

```
celestia-appd keys add "validator"
```

*Please replace “validator” by your walletname for example:*

```
$ celestia-appd keys add Sohale
```

```
root@vmi897239:~# celestia-appd keys add jackal_Wallet  
- address: celestia1704du5xeycku2p970913r3l3v85krk62w0djya Your address wallet  
  name: jackal_Wallet  
  pubkey: '{"@type":"/cosmos.crypto.secp256k1.PubKey", "key":"AiMI3ElCrDluSINRSYz0cavdN3E6IUjZI+17P9Bz8zaZ"}'  
  type: local  
  
**Important** write this mnemonic phrase in a safe place.  
It is the only way to recover your account if you ever forget your password.  
Your Seed  
forward panda moment shrimp blast mean expect drive surprise wasp force another fly document uncover entry acquire crime double phone mind quick oppose seed  
forward panda moment shrimp blast mean expect drive surprise wasp force another fly document uncover entry acquire crime double phone mind quick oppose seed
```

## Output

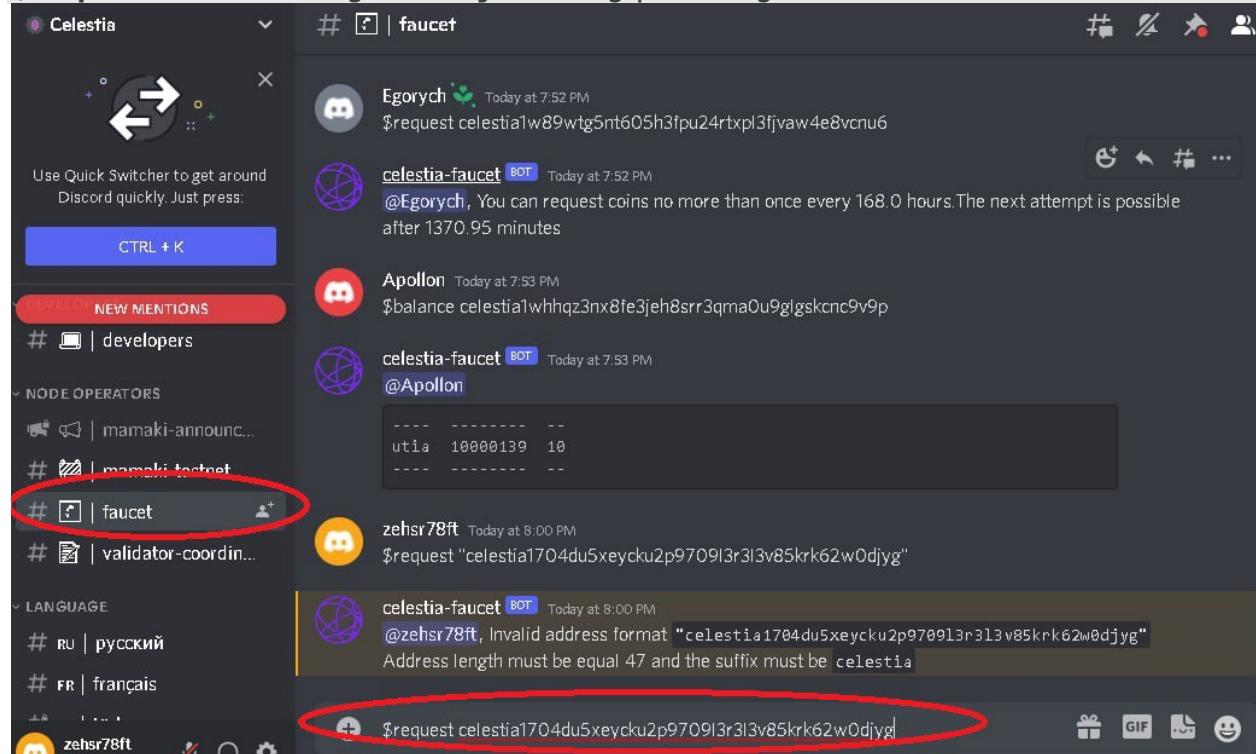
Save You Seed Phrase  
And Save You Wallet Address

Please save your wallet information in a notepad!!!

Go to the [celestia discord](#) in the channel #faucet

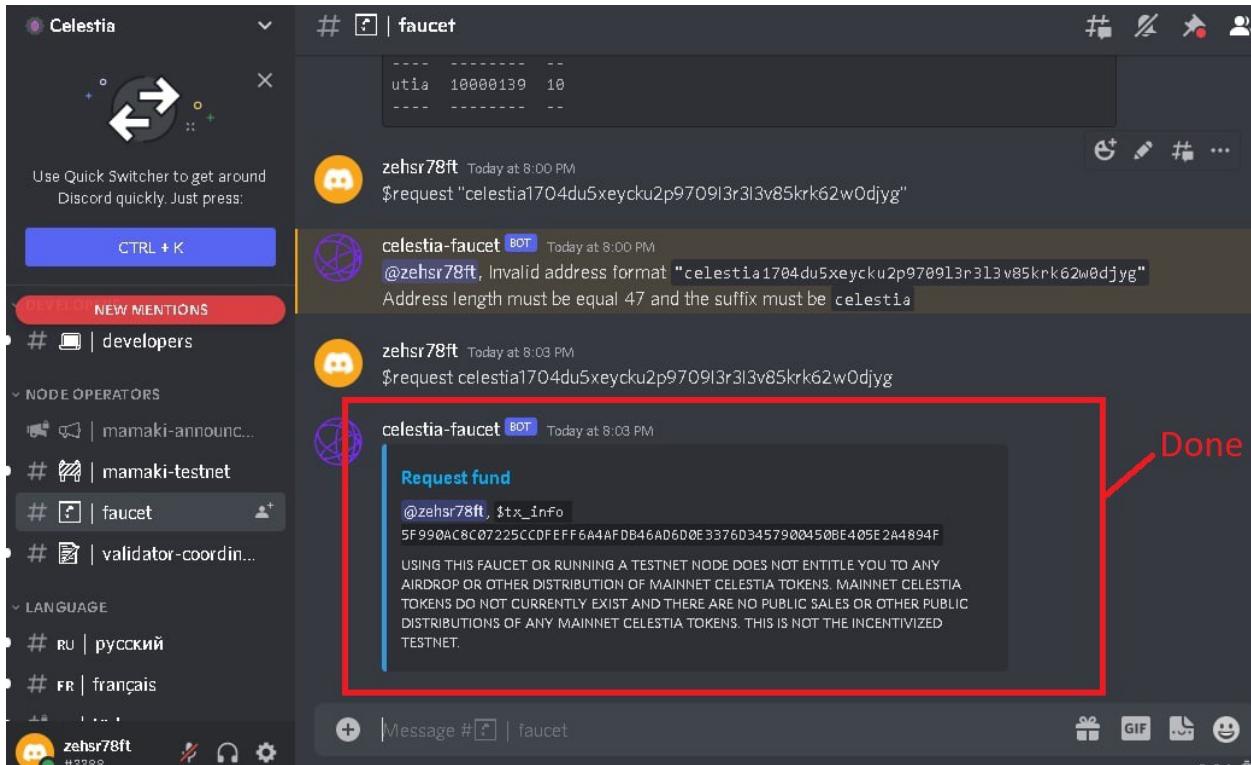
send them this command \$request followed by your address wallet(an example below):

\$request celestia1gwd3h5mj5feucegq5kdmuug40zke40ksv4hsa5



Please send this command with your adress wallet

Wait a few moment



*Celestia bot confirms the sending of your tokens with the tx info  
now you can check your balance*

```
$balance celestia1gwd3h5mjsfeucegg5kdmuug40zke40ksv4hsa5
```

## Part 10: Configure Celestia app

```
$ cd $HOME
```

*And*

```
$ vi ./celestia-app/config/config.toml
```

```

<!-- This is a TOML config file.
-- For more information, see https://github.com/toml-lang/toml

# NOTE: Any path below can be absolute (e.g. "/var/myawesomeapp/data") or
# relative to the home directory (e.g. "data"). The home directory is
# "$HOME/.tendermint" by default, but could be changed via $TMHOME env variable
# or --home cmd flag.

#####
# Main Base Config Options
#####

# TCP or UNIX socket address of the ABCI application,
# or the name of an ABCI application compiled in with the Tendermint binary
proxy_app = "tcp://127.0.0.1:26658"

# A custom human readable name for this node
moniker = "NodeJacks"

# Mode of Node: full | validator | seed
# * validator node
#   - all reactors
#   - with priv_validator_key.json, priv_validator_state.json
# * full node
#   - all reactors
#   - No priv_validator.key.json, priv_validator.state.json
# * seed node
#   - only P2P, PEX Reactor
#   - No priv_validator.key.json, priv_validator.state.json
mode = "validator"

# Database backend: goleveldb | cleveldb | boltldb | rocksdb | badgerdb
# * goleveldb (github.com/syndtr/goleveldb - most popular implementation)
#   - pure go
#   - stable
# * cleveldb (uses levigo wrapper)
#   - fast
#   - requires gcc
#   - use cleveldb build tag (go build -tags cleveldb)
# * boltldb (uses etcd's fork of bolt - github.com/etcd-io/bbolt)
#   - EXPERIMENTAL
#   - may be faster in some use-cases (random reads - indexer)
#   - use boltldb build tag (go build -tags boltldb)
#   - EXPERIMENTAL
#   - may be faster in some use-cases (random reads - indexer)
#   - use boltldb build tag (go build -tags boltldb)

"./.celestia-app/config/config.toml" 527L, 20844B
</pre>


4,1      Top


```

## Output

### Press Shift+R OR R you are now in “replace mode”

```

<!-- This is a TOML config file.
-- For more information, See https://github.com/toml-lang/toml

# NOTE: Any path below can be absolute (e.g. "/var/myawesomeapp/data") or
# relative to the home directory (e.g. "data"). The home directory is
# "$HOME/.tendermint" by default, but could be changed via $TMHOME env variable
# or --home cmd flag.

#####
# Main Base Config Options
#####

# TCP or UNIX socket address of the ABCI application,
# or the name of an ABCI application compiled in with the Tendermint binary
proxy_app = "tcp://127.0.0.1:26658"

# A custom human readable name for this node
moniker = "nodebuchenon"

# Mode of Node: full | validator | seed
# * validator node
#   - all reactors
#   - with priv_validator_key.json, priv_validator_state.json
# * full node
#   - all reactors
#   - No priv_validator.key.json, priv_validator.state.json
# * seed node
#   - only P2P, PEX Reactor
#   - No priv_validator.key.json, priv_validator.state.json
mode = "validator"

# Database backend: goleveldb | cleveldb | boltldb | rocksdb | badgerdb
# * goleveldb (github.com/syndtr/goleveldb - most popular implementation)
#   - pure go
#   - stable
# * cleveldb (uses levigo wrapper)
#   - fast
#   - requires gcc
#   - use cleveldb build tag (go build -tags cleveldb)
# * boltldb (uses etcd's fork of bolt - github.com/etcd-io/bbolt)
#   - EXPERIMENTAL
#   - may be faster in some use-cases (random reads - indexer)
#   - use boltldb build tag (go build -tags boltldb)
#   - EXPERIMENTAL
#   - may be faster in some use-cases (random reads - indexer)
#   - use boltldb build tag (go build -tags boltldb)

REPLACE --
</pre>


1,1      Top


```

You can now **replace** any value. Just put the cursor on the value to be changed and overwrite it

*Use the arrow keys to move and changes some value so that:*

### **use-legacy must be = true**

```
pprof-laddr = "localhost:6060"  
#####  
### P2P Configuration Options  
#####  
[p2p]  
  
# Enable the legacy p2p layer.  
use-legacy = false  
Replace by "true"  
  
# Select the p2p internal queue  
queue-type = "priority"  
  
# Address to listen for incoming connections  
laddr = "tcp://0.0.0.0:26656"
```

Before modification

```
#####  
### P2P Configuration Options  
#####  
[p2p]  
  
# Enable the legacy p2p layer.  
use-legacy : true  
to remove the "e" use the space key  
  
# Select the p2p internal queue  
queue-type = "priority"  
  
# Address to listen for incoming connections
```

During modification

```
#####  
### P2P Configuration Options  
#####  
[p2p]  
  
# Enable the legacy p2p layer.  
use-legacy : true  
  
# Select the p2p internal queue  
queue-type = "priority"  
  
# Address to listen for incoming connections  
laddr = "tcp://0.0.0.0:26656"
```

After modification

### **max-num-inbound-peers must be = “180”**

### **max-num-outbound-peers must be = “70”**

### **max-connections must be = “250”**

```
addr-book-strict = true  
  
# Maximum number of inbound peers  
  
# TODO: Remove once p2p refactor is complete in favor of MaxConnections.  
# ref: https://github.com/tendermint/tendermint/issues/5670  
max-num-inbound-peers : 40  
Replace by "180"  
  
# Maximum number of outbound peers to connect to, excluding persistent peers  
  
# TODO: Remove once p2p refactor is complete in favor of MaxConnections.  
# ref: https://github.com/tendermint/tendermint/issues/5670  
max-num-outbound-peers : 10  
Replace by "70"  
  
# Maximum number of connections (inbound and outbound).  
max-connections : 64  
Replace by "250"  
  
# Rate limits the number of incoming connection attempts per IP address.  
max-incoming-connection-attempts = 100
```

Before

```

# Maximum number of inbound peers
# TODO: Remove once p2p refactor is complete in favor of MaxConnections.
# ref: https://github.com/tendermint/tendermint/issues/5670
max-num-inbound-peers = 180

# Maximum number of outbound peers to connect to, excluding persistent peers
# TODO: Remove once p2p refactor is complete in favor of MaxConnections.
# ref: https://github.com/tendermint/tendermint/issues/5670
max-num-outbound-peers = 70

# Maximum number of connections (inbound and outbound).
max-connections = 280

```

After modification

**timeout-propose must be = “3s”**

**timeout-commit must be = “25s”**

**skip-timeout-commit must be = “false”**

```

# How long we wait for a proposal block before prevoting nil
timeout-propose = "3s"
# How much timeout increase in usages with each round
timeout-propose-delta = "500ms"
# How long we wait after receiving +2/3 prevotes for "anything" (ie. not a single block or nil)
timeout-prevote = "1s"
# How much the timeout-prevote increases with each round
timeout-prevote-delta = "500ms"
# How long we wait after receiving +2/3 precommits for "anything" (ie. not a single block or nil)
timeout-precommit = "1s"
# How much the timeout-precommit increases with each round
timeout-precommit-delta = "500ms"
# How long we wait after committing a block, before starting on the new
# height (this gives us a chance to receive some more precommits, even
# though we already have 2/3)
timeout-commit = "25s"

# How many blocks to look back to check existence of the node's consensus votes before joining consensus
# When non-zero, the node will panic upon restart
# If the same consensus key was used to sign (double-sign-check-height) last blocks,
# So, validators should stop the state machine, wait for some blocks, and then restart the state machine to avoid panic.
double-sign-check-height = 0

# Make progress as soon as we have all the precommits (as if TimeoutCommit = 0)
skip-timeout-commit = false

# Emptyblocks mode and possible interval between empty blocks
create-empty-blocks = true
create-empty-blocks-interval = "0s"

```

It's already OK

*Now press **escape** to exit the “replace mode”*

```

pex = true
# Comma separated list of peer IDs to keep private (will not be gossiped to other peers)
# Warning: IPs will be exposed at /net_info, for more information https://github.com/tendermint/tendermint/issues/3055
private-peer-ids = ""

# Toggle to disable guard against peers connecting from the same ip.
allow-duplicate-ip = false

# Peer connection configuration.
handshake-timeout = "20s"
dial-timeout = "3s"

#####
###      Mempool Configuration Option      ###
#####

[mempool]

# Mempool version to use:
#   1) "v0" - The legacy non-prioritized mempool reactor.
#   2) "v1" (default) - The prioritized mempool reactor.
version = "v1"

recheck = true
broadcast = true

# Maximum number of transactions in the mempool
size = 5000

# Limit the total size of all txs in the mempool.
# This only accounts for raw transactions (e.g. given IMB transactions and
# max-txs-bytes=5MB, mempool will only accept 5 transactions).
max-txs-bytes = 1073741824

# Size of the cache (used to filter transactions we saw earlier) in transactions
cache-size = 10000
Do not remove invalid transactions from the cache (default: false)
# Set to true if it's not possible for any invalid transaction to become valid
# again in the future.
keep-invalid-txs-in-cache = true

# Maximum size of a single transaction.
# NOTE: the max size of a tx transmitted over the network is (max-tx-bytes).
# Replace "has disappeared" with your own message.
max-tx-bytes = 1073741824

```

355,2      65%



*Now press I to be in “insert mode”*

```

size = 5000

# Limit the total size of all txs in the mempool.
# This only accounts for raw transactions (e.g. given IMB transactions and
# max-txs-bytes=5MB, mempool will only accept 5 transactions).
max-txs-bytes = 1073741824

# Size of the cache (used to filter transactions we saw earlier) in transactions
cache-size = 10000
Do not remove invalid transactions from the cache (default: false)
# Set to true if it's not possible for any invalid transaction to become valid
# again in the future.
keep-invalid-txs-in-cache = true

# Maximum size of a single transaction.
# NOTE: the max size of a tx transmitted over the network is (max-tx-bytes).
# INSERT --
max-tx-bytes = 1073741824

```

355,1      65%

**INSERT MODE**



*Start by copying the entire command below:*

```
e4429e99609c8c009969b0eb73c973bff33712f9@141.94.73.39:43656,09263a4  
168de6a2aaf7fef86669ddfe4e2d004f6@142.132.209.229:26656,13d8abce0ff  
9565ed223c5e4b9906160816ee8fa@94.62.146.145:36656,72b34325513863152  
269e781d9866d1ec4d6a93a@65.108.194.40:26676,322542cec82814d8903de22  
59b1d4d97026bcb75@51.178.133.224:26666,5273f0deefaf9c2d0a3bbf70840  
bb44c65d835c@80.190.129.50:49656,7145da826bbf64f06aa4ad296b850fd697  
a211cc@176.57.189.212:26656,5a4c337189eed845f3ece17f88da0d94c7eb2f9  
c@209.126.84.147:26656,ec072065bd4c6126a5833c97c8eb2d4382db85be@88.  
99.249.251:26656,cd1524191300d6354d6a322ab0bca1d7c8ddf01@95.216.22  
3.149:26656,2fd76fae32f587eceb266dce19053b20fce4e846@207.154.220.13  
8:26656,1d6a3c3d9ffc828b926f95592e15b1b59b5d8175@135.181.56.56:2665  
6,fe2025284ad9517ee6e8b027024cf4ae17e320c9@198.244.164.11:26656,fcf  
f172744c51684aaefc6fd3433eae275a2f31b@159.203.18.242:26656,f7b68a49  
1bae4b10dbab09bb3a875781a01274a5@65.108.199.79:20356,6c076056fc80a8  
13b26e24ba8d28fa374cd72777@149.102.153.197:26656,180378bab87c9cecea  
544eb406fc8fc82bc21b@168.119.122.78:26656,88fa96d09a595a120896872  
7819367bd2fe8eabe@164.70.120.56:26656,84133cfde6e5fcacf915436d56b3e  
ef1d1996d17@45.132.245.56:26656,42b331adaa9ece4c455b92f0d26e3382e46  
d43f0@161.97.180.20:36656,c8c0456a5174ab082591a9466a6e0cb15c915a65@  
194.233.85.193:26656,6a62bf1f489a5231ddc320a2607ab2595558db75@154.1  
2.240.49:26656,d0b19e4d133441fd41b4d74ac8de2138313ad49e@195.201.41.  
137:26656,bf199295d4c142ebf114232613d4796e6d81a8d0@159.69.110.238:2  
6656,a46bbdb81e66c950e3cdbe5ee748a2d6bdb185dd@161.97.168.77:26656,8  
31cd61b04ac95155f101723b851af53460d4d65@65.108.217.169:26656,550ab5  
0ad0df01408928a3479e643286a47b4fc9@46.4.213.197:26656,43e9da043318a  
4ea0141259c17fc06ecff816af@141.94.73.39:43656,45d0154bea2e0bbffec3  
43894072f5feab19d242@65.108.71.92:43656,2e4084408b641a90c299a499c32  
874f0ab0f2956@65.108.44.149:22656,de6ba05f3ed583a12c396c182e5126ed6  
5a32514@154.53.44.239:26656,d6fb487ff10d9878449beaa89007da15ec43057  
f@194.163.137.209:26656
```

*Now search for **persistent-peers** and position the cursor as in the image below:*

```

seeds = ""

# Comma separated list of peers to be added to the peer store
# on startup. Either BootstrapPeers or PersistentPeers are
# needed for peer discovery.
bootstrap-peers = "a4lbbdb8e66c950e3cdbe5ee748a2d6bdb185dd@161.97.168.77:26656,f0c58d904dec824605ac36114db20f1bf84f6ea3@144.76.112.238:26656"

# Comma separated list of nodes to keep persistent connections to
persistent-peers = ""

# UPNP port forward
upnp = false

# Path to address book
# TODO: Remove once p2p refactor is complete in favor of peer store.
addr-book-file = "config/addrbook.json"

# Set true for strict address routability rules
# Set false for private or local networks
addr-book-strict = true

# Maximum number of inbound peers

```

*And right click to paste the entire command*

```

bootstrap-peers = "a4lbbdb8e66c950e3cdbe5ee748a2d6bdb185dd@161.97.168.77:26656,f0c58d904dec824605ac36114db20f1bf84f6ea3@144.76.112.238:26656"

# Comma separated list of nodes to keep persistent connections to
persistent-peers = "a4429e99609c0c009969b0eb73c973bfff33712e99e141_94_73_39:43656,09263a4160deca2aaef7fe0f06669ddfef2e2d004ff0142_132_209_229:26656,13d0abce0ff95
5ed123c5a4b9906160016ee9fa@94_62_146_145:36656,72b34325513063152269e701d986d1ec4d693a065_108_194_40:26656,322542ecc02914de903de2259b1d4d97026pb575851_178_
33_724:26656,5273f0deefaf9fc0d0a3bbf70840hb44c66d835c880_190_129_50:49656,7145da826bbf64f0f6aa4ad296eb50fd697a11cc@176_57_189_212:26656,ha4c337189e0d845f3ec
17e980da0d94c7eb2f9c8209_126_64_147:26656,ec072065bdct126a5833c97e8eb2d4383db85be085_99_249_251:26656,cd1524191300d6384d6a322ab0bcad17e8ddfd010895_216_223_14
:26656,2fd76fae32f5977c6cb266dc19053b20fcfa4e846@207_154_220_138:26656,1d6a3c3d9f5fc829b26f95592e15b1b59b5d81750135_101_56_56:26656,fe2025284ad9517eccc1b0270
40f4a170320e98198_144_164_1:26656,fcf1f172744cc1684maefc0/d1d433ae275a2f31b@159_201_18_242:26656,(fb65a91bae4b10dbaa9b875781a01274a5865_108_199_79:203
6_6c076056fc00a13b36e24bad28fa374cd727778149_102_153_197:26656,100370bab07c9ceceaa544b040fc081cd2cc21b@166_119_122_70:26656,00fa9cd094355a120986072701936
pd2reabe@164_70_120_56:26656,04133cfdeee5fcfa5915436d50b3ee1d1996d17f445_132_245_56:26656,42b331adaaecc445b92f0d2e3982e46d43f08161_97_180_20:36656,c8c
45635174a6b082591a466aae0ch15c915a698194_233_85_193:26656,6a62b1f1489a5231ddc320a2607ab299558d758154_12_240_49:26656,db019e4d13341f041b4d74a8de2138313ad
9e@195_201_41_137:26656,bf199235d4c142ebf114232613dd7@eed01aado@159_69_110_230:26656,a46bbdb01e66c950e3cdbe5ee740a2d6bdb185dd@161_97_168_77:26656,031cd61b0
ac95155f101723b051af53460d4de65_108_217_169:26656,550ab50ad0df01408920a3479e643266a47b4f9846_4,213_197:26656,439eda4331ba4ea0141259c17fcbb66ecff816af@141
94_73_39:43656,45d0154bea260bbffec343894072f5feab19d242@65_108_71_92:43656,2e408440b641a90c29a499c32874f0ab0f2956@65_108_44_149:22656,de6ba05f3ed583al2c35
c102e5126ed65a325140154_53_44_239:26656,d6fb487f10d9078449beaa9007dal5ec43057@194_163_137_209:26656

# UPNP port forwarding
upnp = false

# Path to address book
# TODO: Remove once p2p refactor is complete in favor of peer store.
addr-book-file = "config/addrbook.json"

# Set true for strict address routability rules
# Set false for private or local networks
addr-book-strict = true

# Maximum number of inbound peers
# TODO: Remove once p2p refactor is complete in favor of MaxConnections.
# See: https://github.com/tendermint/tendermint/issues/5670
max-num-inbound-peers = 180

```

**INSERT (paste)**

Output

256,1987 49%

*Now press escape to exit the “Insert mode”*

```

# do only use these if we can't connect to peers in the addrbook
# NOTE: not used by the new PEX reactor. Please use BootstrapPeers instead.
# TODO: Remove once p2p refactor is complete
# config https://github.com/tendermint/tendermint/issues/5670
seeds = ""

# Comma separated list of peers to be added to the peer store
# on startup. Either BootstrapPeers or PersistentPeers are
# needed for peer discovery
bootstrap-peers = "346bbdb8166c950e3cdbe5ee748a2d6db185d0161.97.168.77.26656,f0c58d904dec824605ac36114db20f1bf84f6ea38144.76.112.238.26656"

# Comma separated list of nodes to keep persistent connections to
persistent-peers = "e4429e996098e009969b0eb73c973bfff33712f90141.94.73.39.43656,09263a4168de6a2aaaf7fe886669ddfe4e2d004f68142.132.209.229.26656,13d8abce0ff955
5ed223cb4b9905160816ee8fa894.62.146.145.36656,72b34325513863152369e701d9866d1cc4d6a93a865.108.194.40.26676,322542cc0814d8903de2259b1d4d97026bcb75851.170.
33.224.26666,5273f0deefaf5fc2d0a3bbf70040bb44c65d035c00.190.129.50.49656,7145da026bbf64f0aa4ad296b050fd697a211cc0176.57.109.212.26656,5a4c337189eed845f3ec
17f98ad0d94c1eb2f9c209.126.94.147.26656,ec072065bd4cc6126a5033c97c8eb2d4302db85be89.99.249.251.26656,cd1524191300d6354d6a322ab0bcaid7c8dd1d01895.216.223.14
;26656,fd7f6fae32f578f7ccb206dc09053b20fce4e646e207.154.220.138.26656,ld6a3c3d9fc828b92cf95592e15b1b595d81750.35.181.56.56.26656,re2025284ad9517ee668b0270
4cfaf1a17320c98.98.244.164.120.56.26656,f7b68aa91bae4b10d8a09b53a975781a012745665.108.199.79.203
;60076056c80a813b26624ba8d28fa374cd727778149.102.153.197.26656,180378ba87c9ceaa54de6406fdcd8fc2cbc21b@166.119.122.78.26656,88fa96d09a595a120896872781936
,60076056c80a813b26624ba8d28fa374cd727778149.102.153.197.26656,180378ba87c9ceaa54de6406fdcd8fc2cbc21b@166.119.122.78.26656,88fa96d09a595a120896872781936
dd2f1e9abef164.70.120.56.26656,f7f749c51804aa4cc6f4d9435aae75a2f31b@159.203.10.242.26656,f7b68aa91bae4b10d8a09b53a975781a012745665.108.199.79.203
;56a5174ab082591a466a6e0ccb1c915a68e194.233.89.193.26656,ca62b7f1409a5231ddc320a2607a2595585db75851.154.12.240.49.26656,dob19e4d133441fd41b4d74ac0de2130313ad
9e@199.201.41.137.26656,bf199295dc4c142ebf114232613d4796eed01a0d08159.69.110.230.26656,a46bbdb81e66c950e3cdbe5ee740a2d6db105dd@161.97.168.77.26656,831cd61b04
ac95155f101723b0851af53460d4de5865.108.217.169.26656,550ab50ad0ddf01408928a3479e64328ea7b4fc9846.4.213.197.26656,43e9da043318a4ea0141259c17fc06ecff816af0141
.94.73.39.43656,45d00154bea2e0bbffec343b94072f5feab19d242665.108.71.92.43656,ze4084408b641a90c299a496c3874f0ab0f2956065.108.44.149.22656,de6ba05f3ed583a12c390
;102e5126ed65a325140154.53.44.239.26656,d6fb407f10d9070495bea09007dal5ec43057f@194.163.137.209.26656

# UPNP port forwarding
upnp = false

# Path to address book
# TODO: Remove once p2p refactor is complete in favor of peer store.
addr-book-file = "config/addrbook.json"

# Set true for strict address routability rules
# Set false for private or local networks
addr-book-strict = true

# Maximum number of inbound peers
# TODO: Remove once p2p refactor is complete in favor of MaxConnections.
# config https://github.com/tendermint/tendermint/issues/5670
max-num-inbound-peers = 180

```

256,1986 49%

"Insert" has disappeared

*Press : and press w*

```

# Comma separated list of nodes to keep persistent connections to
persistent-peers = "e4429e996098e009969b0eb73c973bfff33712f90141.94.73.39.43656,09263a4168de6a2aaaf7fe886669ddfe4e2d004f68142.132.209.229.26656,13d8abce0ff955
5ed223cb4b9905160816ee8fa894.62.146.145.36656,72b34325513863152369e701d9866d1cc4d6a93a865.108.194.40.26676,322542cc0814d8903de2259b1d4d97026bcb75851.170.
33.224.26666,5273f0deefaf5fc2d0a3bbf70040bb44c65d035c00.190.129.50.49656,7145da026bbf64f0aa4ad296b050fd697a211cc0176.57.109.212.26656,5a4c337189eed845f3ec
17f98ad0d94c1eb2f9c209.126.94.147.26656,ec072065bd4cc6126a5033c97c8eb2d4302db85be89.99.249.251.26656,cd1524191300d6354d6a322ab0bcaid7c8dd1d01895.216.223.14
;26656,fd7f6fae32f578f7ccb206dc09053b20fce4e646e207.154.220.138.26656,ld6a3c3d9fc828b92cf95592e15b1b595d81750.35.181.56.56.26656,re2025284ad9517ee668b0270
4cfaf1a17320c98.98.244.164.120.56.26656,f7f749c51804aa4cc6f4d9435aae75a2f31b@159.203.10.242.26656,f7b68aa91bae4b10d8a09b53a975781a012745665.108.199.79.203
;60076056c80a813b26624ba8d28fa374cd727778149.102.153.197.26656,180378ba87c9ceaa54de6406fdcd8fc2cbc21b@166.119.122.78.26656,88fa96d09a595a120896872781936
,60076056c80a813b26624ba8d28fa374cd727778149.102.153.197.26656,180378ba87c9ceaa54de6406fdcd8fc2cbc21b@166.119.122.78.26656,88fa96d09a595a120896872781936
dd2f1e9abef164.70.120.56.26656,f7f749c51804aa4cc6f4d9435aae75a2f31b@159.203.10.242.26656,f7b68aa91bae4b10d8a09b53a975781a012745665.108.199.79.203
;56a5174ab082591a466a6e0ccb1c915a68e194.233.89.193.26656,ca62b7f1409a5231ddc320a2607a2595585db75851.154.12.240.49.26656,dob19e4d133441fd41b4d74ac0de2130313ad
9e@199.201.41.137.26656,bf199295dc4c142ebf114232613d4796eed01a0d08159.69.110.230.26656,a46bbdb81e66c950e3cdbe5ee740a2d6db105dd@161.97.168.77.26656,831cd61b04
ac95155f101723b0851af53460d4de5865.108.217.169.26656,550ab50ad0ddf01408928a3479e64328ea7b4fc9846.4.213.197.26656,43e9da043318a4ea0141259c17fc06ecff816af0141
.94.73.39.43656,45d00154bea2e0bbffec343b94072f5feab19d242665.108.71.92.43656,ze4084408b641a90c299a496c3874f0ab0f2956065.108.44.149.22656,de6ba05f3ed583a12c390
;102e5126ed65a325140154.53.44.239.26656,d6fb407f10d9070495bea09007dal5ec43057f@194.163.137.209.26656

# UPNP port forwarding
upnp = false

# Path to address book
# TODO: Remove once p2p refactor is complete in favor of peer store.
addr-book-file = "config/addrbook.json"

# Set true for strict address routability rules
# Set false for private or local networks
addr-book-strict = true

# Maximum number of inbound peers
# TODO: Remove once p2p refactor is complete in favor of MaxConnections.
# config https://github.com/tendermint/tendermint/issues/5670
max-num-inbound-peers = 180

```

w

*And press Enter*

```

# Comma separated list of nodes to keep persistent connections to
persistent-peers = "e4429e99609c8c009969b0eb73c973bf33712f98141.94.73.39:43656,09263a4168de6a2aaaf7fef8669ddf4e2d004f6e142.132.209.229:26656,13d8abce0ff9
5ed223c5e4b9906160016ee0fa94.62.146.145:36656,72b3432551306331522698701d966d1ec4dca93a65.106.194.40:26676,322542ce02014d0903de2259b1d4d97026bb75851.178
33.224:26666,5273f0defea5f9c2d0a3bbf70840bb44c65d35c880.190.120.504:49656,7145da826bbf64f06a4ad296b850fd697a211cc0176.57.189.212:26656,5acfc337189e0d845f3e
17f980da0d94c7eb2f9c209.126.94.147:26656,ec072065bdc46126a5833c97c9eb2d4392db5be088.99.249.251:26656,cd1524191300d6354d6a322ab0bcad7c0ddfd01095.216.223.1
:26656,2fd76fae32f578f0ecb266dce19053b0f02ced48468207.154.120.138:26656,1d6a3c3d9ff1c829b926f95592e15b1b59b5d81750135.181.190.56:26656,fe2025284d9517ee68b027
4cf1aa17e320c98198.244.164.11:26656,fcff172744c51684aaefc6fd34339ae275a2f31b@159.203.10.242.26656,f7b68a491bae4b10dbab09bb3a075701a01274a5665.108.199.79:20
6,6c0076056fc08a13b26e24bad28fa374cd27778149.102.153.197:26656,180378bab87c9cecea544eb406fc0d8fc0d2bc21b1b@168.119.122.78:26656,881a96d09a595a12089687278193
bd2fe1a8e0abe164.70.120.56:26656,45d0154bea2e0bbffec343894072f5feab19d42865.108.71.92:43656,2e4084408b641a90c299a499c32874f0ab0f2956065.108.44.149:22656,de6ba05f3ed583a12c3
c182e5126ed65a325140154.53.44.239:26656,d6fb487ff10d9878449beaa9007dal5ec43057f@194.163.137.209:26656"

# UPNP port forwarding
upnp = false

# Path to address book
# TODO: Remove once p2p refactor is complete in favor of peer store.
addr-book-file = "config/addrbook.json"

# Set true for strict address routability rules
# Set false for private or local networks
addr-book-strict = true

# Maximum number of inbound peers
#
# TODO: Remove once p2p refactor is complete in favor of MaxConnections.
# ref: https://github.com/tendermint/tendermint/issues/5670
max-num-inbound-peers = 180

"./colestia-app/config/config.toml" 5261, 22810B written

```

This is saved

262,7 49

*Press : and press q*

```

# Comma separated list of nodes to keep persistent connections to
persistent-peers = "e4429e99609c8c009969b0eb73c973bf33712f98141.94.73.39:43656,09263a4168de6a2aaaf7fef8669ddf4e2d004f6e142.132.209.229:26656,13d8abce0ff9
5ed223c5e4b9906160016ee0fa94.62.146.145:36656,72b3432551306331522698701d966d1ec4dca93a65.106.194.40:26676,322542ce02014d0903de2259b1d4d97026bb75851.178
33.224:26666,5273f0defea5f9c2d0a3bbf70840bb44c65d35c880.190.120.504:49656,7145da826bbf64f06a4ad296b850fd697a211cc0176.57.189.212:26656,5acfc337189e0d845f3e
17f980da0d94c7eb2f9c209.126.94.147:26656,ec072065bdc46126a5833c97c9eb2d4392db5be088.99.249.251:26656,cd1524191300d6354d6a322ab0bcad7c0ddfd01095.216.223.1
:26656,2fd76fae32f578f0ecb266dce19053b0f02ced48468207.154.120.138:26656,1d6a3c3d9ff1c829b926f95592e15b1b59b5d81750135.181.190.56:26656,fe2025284d9517ee68b027
4cf1aa17e320c98198.244.164.11:26656,fcff172744c51684aaefc6fd34339ae275a2f31b@159.203.10.242.26656,f7b68a491bae4b10dbab09bb3a075701a01274a5665.108.199.79:20
6,6c0076056fc08a13b26e24bad28fa374cd27778149.102.153.197:26656,180378bab87c9cecea544eb406fc0d8fc0d2bc21b1b@168.119.122.78:26656,881a96d09a595a12089687278193
bd2fe1a8e0abe164.70.120.56:26656,45d0154bea2e0bbffec343894072f5feab19d42865.108.71.92:43656,2e4084408b641a90c299a499c32874f0ab0f2956065.108.44.149:22656,de6ba05f3ed583a12c3
c182e5126ed65a325140154.53.44.239:26656,d6fb487ff10d9878449beaa9007dal5ec43057f@194.163.137.209:26656"

# UPNP port forwarding
upnp = false

# Path to address book
# TODO: Remove once p2p refactor is complete in favor of peer store.
addr-book-file = "config/addrbook.json"

# Set true for strict address routability rules
# Set false for private or local networks
addr-book-strict = true

# Maximum number of inbound peers
#
# TODO: Remove once p2p refactor is complete in favor of MaxConnections.
# ref: https://github.com/tendermint/tendermint/issues/5670
max-num-inbound-peers = 180

:q

```

*And press Enter*

```

"latest_block_hash": "A7B3C5EAF15302F6E16BE20FCECD04F51B37E406FD77D2C1BD4262925235D4D9",
"latest_app_hash": "7603DA3BFFB3A88AA82BF9BFFF67B86A25FRC164FC3B2DEF40C41E11EA1379A",
"latest_block_height": "20407",
"latest_block_time": "2022-06-02T00:01:36.800019683Z",
"earliest_block_hash": "41BBFD05779719E826C4D68C4CCBBC84B2B761EB52BC04CFDE0FF8603C9AA3CA",
"earliest_app_hash": "E3B0C44298FC1C149AFBF4C8996FB92427AE41E4649B934CA495991B7852B855",
"earliest_block_height": "1",
"earliest_block_time": "2022-05-24T13:02:31.713132226Z",
"max_peer_block_height": "0",
"catching_up": false,
"total_synced_time": "0",
"remaining_time": "0",
"total_snapshots": "0",
"chunk_process_avg_time": "0",
"snapshot_height": "0",
"snapshot_chunks_count": "0",
"snapshot_chunks_total": "0",
"backfilled_blocks": "0",
"backfill_blocks_total": "0"
}
root@vmi897239:~# celestia-appd config keyring-backend test
root@vmi897239:~# celestia-appd keys add jackal_Wallet

- address: celestia1704du5xeycku2p970913r3l3v85krk62w0djyg
  name: jackal_Wallet
  pubkey: ('@type":"/cosmos.crypto.secp256kl.PubKey","key":"AiMi3ElCrDluSINRSYz0cavdN3E6IUjZI+17P9Bz8zaZ")'
  type: local

**Important** write this mnemonic phrase in a safe place.
It is the only way to recover your account if you ever forget your password.

forward panda moment shrimp blast mean expect drive surprise wasp force another fly document uncover entry acquire crime double phone mind quick oppose seed
root@vmi897239:~# ^C
root@vmi897239:~# VALIDATOR_WALLET=celestia1704du5xeycku2p970913r3l3v85krk62w0djyg
root@vmi897239:~# celestia-appd keys show celestia1704du5xeycku2p970913r3l3v85krk62w0djyg --bech val -a
celestiavaloper1704du5xeycku2p970913r3l3v85krk62ts0t
root@vmi897239:~# ^C
root@vmi897239:~# vi ./celestia-app/config/config.toml

[[!]+ Stopped          vi ./celestia-app/config/config.toml
root@vmi897239:~# ^C
root@vmi897239:~# vi ./celestia-app/config/config.toml
root@vmi897239:~# 
```

You have quit config.toml!!

## \$ sudo systemctl restart celestia-appd.service

```

Flags:
  -h, --help           help for celestia-appd
  --home string        directory for config and data (default "/root/.celestia-app")
  --log_format string  The logging format (json|plain) (default "plain")
  --log_level string   The logging level (trace|debug|info|warn|error|fatal|panic) (default "info")
  --trace              print out full stack trace on errors

Use "celestia-appd [command] --help" for more information about a command.
root@vmi897239:~# sudo systemctl restart celestia-appd.service
root@vmi897239:~# 
```

Wait a moment

```

root@vmi897239:~# sudo systemctl restart celestia-appd.service
root@vmi897239:~# 
```

Output

## \$ curl -s localhost:26657/status | jq .result | jq .sync\_info

```

root@vmi897239:~# curl -s localhost:26657/status | jq .result | jq .sync_info
{
  "latest_block_hash": "10A2FFA9DE2842BBFD3F37BBC3795A8DED4B3B742A6418C0AA20CB80AB40797E",
  "latest_app_hash": "807E19B2F9F57571F4196CB8259044D0BCAC17B66D045FD3EAF69B5A3F9B1621",
  "latest_block_height": "20973",
  "latest_block_time": "2022-06-02T05:14:54.008686977Z",
  "earliest_block_hash": "41BBFD05779719E826C4D68C4CCBBC84B2B761EB52BC04CFDE0FF8603C9AA3CA",
  "earliest_app_hash": "E3B0C44298FC1C149AFBF4C8996FB92427AE41E4649B934CA495991B7852B855",
  "earliest_block_height": "1",
  "earliest_block_time": "2022-05-24T13:02:31.713132226Z",
  "max_peer_block_height": "22567",
  "catching_up": true,                                     Waiting for it to become "false"
  "total_synced_time": "0",
  "remaining_time": "314830934373",
  "total_snapshots": "0",
  "chunk_process_avg_time": "0",
  "snapshot_height": "0",
  "snapshot_chunks_count": "0",
  "snapshot_chunks_total": "0",
  "backfilled_blocks": "0",
  "backfill_blocks_total": "0"
}
root@vmi897239:~# 
```

Please Wait that your node synchronizes with the blockchain

*Retry the command to check again*

```
$ curl -s localhost:26657/status | jq .result | jq .sync_info
```

```
"latest_block_hash": "3DFFBE113592069525073DE4C7BA14C6D34F5A482908F6CE9A37663C9309C43",
"latest_app_hash": "618547167765134227D651556BCD0A1B85657F86B8041336366C6A660893DE7C43",
"latest_block_height": "22743",
"latest_block_time": "2022-06-02T23:25:14.942523248Z",
"earliest_block_hash": "41B8FD0577919E826C4D68C4CCBEC4B28761EB52BC04CFDE0FF8603C9AA3CA",
"earliest_app_hash": "E3B0C44298FC1C149AFBF4C8996FB92427AE41E4649B934CA495991B7852B8855",
"earliest_block_height": "1",
"earliest_block_time": "2022-05-24T13:02:31.713132226Z",
"max_peer_block_height": "22743",
"catching_up": false,
"total_synced_time": "0s",
"remaining_time": "0s",
"total_snapshots": "0",
"chunk_process_avg_time": "0s",
"snapshot_height": "0",
"snapshot_chunks_count": "0",
"snapshot_chunks_total": "0",
"backfilled_blocks": "0",
"backfill_blocks_total": "0"
}
```

Wait For "remaining\_time": "3519621414272", Become "remaining\_time": "0",

## Now You Can See The False in Catching-Up

## Part 11: Deploy the Celestia Bridge Node as A Background Process With SystemD

```
$ celestia bridge init --core.remote http://localhost:26657 \
--core.grpc http://localhost:26657
```

```
> --core.grpc http://localhost:26657  
2022-06-03T17:57:30.459+0200    INFO    node    node/init.go:26 Initializing Bridge Node Store over '/root/.celestia-bridge'  
2022-06-03T17:57:30.459+0200    INFO    node    node/init.go:62 Saving config {"path": "/root/.celestia-bridge/config.toml"}  
2022-06-03T17:57:30.460+0200    INFO    node    node/init.go:67 Node Store initialized
```

```
root@vm1887582:~/celestia-node# $ celestia bridge start
```

```
2022-06-03T21:28:32.195+0200    INFO    state-access-constructor      state/keyring.go:69    constructed keyring signer      {"backend": "test", "path": "/root/.celestia-bridge/keys", "key name": "my_celes_key", "chain-id": "mamakai"}  
2022-06-03T21:28:32.252+0200    INFO    header/store      store/store.go:109    initialized head      {"height": 1, "hash": "41BBFD05779719E826C4D68C4CCBBC84B2B761EB52BC04CFDE0FF8603C9AA3CA"}  
2022-06-03T21:28:32.255+0200    INFO    watchdog      go-watchdog/v1.2.0/watermarks.go:16    initialized watermark watchdog policy; watermarks: [], threshold: 0.0  
olds: [0933189376 10071827251 11750465126 14268421939 15107740876 15527400345 15947059814]  
2022-06-03T21:28:32.264+0200    INFO    watchdog      go-watchdog/v1.2.0/watchdog.go:471    initialized heap profile capture; threshold: 0.900000; max captures: 10; dir: /root/.celestia-bridge  
2022-06-03T21:28:32.280+0200    INFO    rpc      rpc/server.go:52    RPC server started      {"listening on": ":::126658"}  
2022-06-03T21:28:32.283+0200    INFO    header/p2p      p2p/server.go:30    server: listening for inbound header requests  
2022-06-03T21:28:32.292+0200    INFO    header/store      store/store.go:156    loaded head      {"height": 1, "hash": "41BBFD05779719E826C4D68C4CCBBC84B2B761EB52BC04CFDE0FF8603C9AA3CA"}  
2022-06-03T21:28:32.292+0200    INFO    node      node/node.go:102  
  
/____/ /____/ /____/ /____/ /____/  
  
Started celestia DA node  
node type: bridge  
network: mamaki  
  
/____/ /____/ /____/ /____/ /____/  
  
The p2p host is listening on:  
* ip4/144.91.84.165/tcp/2121/p2p/l2D3KooWRqjoQPJ18FeH9eRkY2YTn7Y6txTzXRDLp5SW0b3LEBsh  
  
2022-06-03T21:28:32.362+0200    INFO    header/sync      sync/sync.go:257    syncing headers {"from": 1, "to": 24839}  
2022-06-03T21:28:33.281+0200    INFO    net/identify      identify/identify.go:372    failed negotiate identify protocol with peer {"peer": "l2D3KooWR3YsMtp7LZ7etfxKjipUwZaCJyjXLRGHCKSjv5WDFB5", "error": "stream reset"}  
2022-06-03T21:28:38.787+0200    INFO    header/store      store/store.go:280    new head      {"height": 513, "hash": "8DC4657286BA81165FEEF595230D3252A6ADC8C099ABBF749EB815CB9F2D9798E"}
```

*And press **CTRL+C***

*Create Celestia Bridge systemd file:*

```
$ sudo tee <>EOF >/dev/null /etc/systemd/system/celestia-bridge.service
[Unit]
Description=celestia-bridge Cosmos daemon
After=network-online.target

[Service]
User=$USER
ExecStart=$HOME/go/bin/celestia bridge start
Restart=on-failure
RestartSec=3
LimitNOFILE=4096

[Install]
WantedBy=multi-user.target
EOF
```

> WantedBy=multi-user.target  
> EOF  
root@vmi007582:~/celestia-node#

*Check with this command:*

```
$ cat /etc/systemd/system/celestia-bridge.service
root@vmi007582:~/celestia-node# cat /etc/systemd/system/celestia-bridge.service
[Unit]
Description=celestia-bridge Cosmos daemon
After=network-online.target
[Service]
User=root
ExecStart=/root/go/bin/celestia bridge start
Restart=on-failure
RestartSec=3
LimitNOFILE=4096
[Install]
WantedBy=multi-user.target
root@vmi007582:~/celestia-node#
```

*Enable and start celestia-bridge daemon:*

```
$ systemctl enable celestia-bridge
$ systemctl start celestia-bridge && journalctl -u \
$ celestia-bridge.service -f
```

```
Jun 03 21:31:05 vmi007582.contaboserver.net celestia[24633]: 2022-06-03T21:31:05.020+0200      INFO      header/p2p          p2p/server.go:38      server
: listening for inbound header requests
Jun 03 21:31:05 vmi007582.contaboserver.net celestia[24633]: 2022-06-03T21:31:05.022+0200      INFO      node           node/node.go:102
Jun 03 21:31:05 vmi007582.contaboserver.net celestia[24633]: / / / / / / / / / / / / / / / / / /
Jun 03 21:31:05 vmi007582.contaboserver.net celestia[24633]: Started celestia DA node
Jun 03 21:31:05 vmi007582.contaboserver.net celestia[24633]: node type: bridge
Jun 03 21:31:05 vmi007582.contaboserver.net celestia[24633]: network: mamaki
Jun 03 21:31:05 vmi007582.contaboserver.net celestia[24633]: / / / / / / / / / / / / / / / /
Jun 03 21:31:05 vmi007582.contaboserver.net celestia[24633]: The p2p host is listening on:
Jun 03 21:31:05 vmi007582.contaboserver.net celestia[24633]: * /ip4/144.91.84.165/tcp/2121/p2p/12D3KooWRqioQPJ18FeH9eRkY2YTn7Y6txTzXRDLp5SW0b3LEBsh
Jun 03 21:31:05 vmi007582.contaboserver.net celestia[24633]: 2022-06-03T21:31:05.068+0200      INFO      header/sync          sync/sync.go:257      synci
ng headers
Jun 03 21:31:05 vmi007582.contaboserver.net celestia[24633]: {"from": 1025, "to": 24840}      INFO      net/identify        identify/id.go:372      fa
iled negotiate identify protocol with peer      {"peer": "12D3KooWDdKdUhQbk7xv6YfZu9uPuaaGA2UafpMiGZ9huit8pGEC", "error": "stream reset"}  
root@vmi007582:~/celestia-node#
```

*And press **CTRL+C***

```

ng headers      {"from": 1025, "to": 24840}
Jun 03 21:31:05 vmi887582.contaboserver.net celestia[24633]: 2022-06-03T21:31:05.112+0200      INFO      net/identify      identify/id.go:372      fa
iled negotiate identify protocol with peer      {"peer": "12d3KoowDgkduh6r7xv6fzuSuPuuaGAAUafpMIGZ9huit8pGEC", "error": "stream reset"}
Jun 03 21:31:14 vmi887582.contaboserver.net celestia[24633]: 2022-06-03T21:31:14.929+0200      INFO      basichost      basic/natmgr.go:91      Disco
verNAT error: no NAT found
Jun 03 21:31:40 vmi887582.contaboserver.net celestia[24633]: 2022-06-03T21:31:40.839+0200      INFO      header/sync      sync/sync.go:239      pend
ing head      {"height": 24841, "hash": "6287A3FG67DBB3B77A554CBDA5FB9EE421EDB97D5A502DC2654072D4D03A49"}
Jun 03 21:31:46 vmi887582.contaboserver.net celestia[24633]: 2022-06-03T21:31:46.255+0200      INFO      header/store      store/store.go:280      ne
w head      {"height": 1537, "hash": "A636335F8151C920302E09E9FA9F411AB863R4A32634B1A2C3AA3B19C05D029A"}
^C
root@vmi887582:~# 

```

## Part 12: Delegate stake to validator

**VALIDATOR\_WALLET=<validator-address>**

*Please replace <validator-adress> by your public adress (an example below):*

```
$ VALIDATOR_WALLET=celestia1rcvckr7z3kkp947460avt2c8yhyq2wjujvd33g
```

```
root@vmi897239:~# VALIDATOR_WALLET=celestia1rcvckr7z3kkp947460avt2c8yhyq2wjujvd33g
root@vmi897239:~# 
```

Output

```
celestia-appd keys show $VALIDATOR_WALLET --bech val -a
```

*Please replace \$VALIDATOR\_WALLET by your public adress for example:*

```
$ Celestia-appd keys show
```

```
celestia1rcvckr7z3kkp947460avt2c8yhyq2wjujvd33g --bech val -a
```

```
root@vmi897239:~# celestia_appd keys show celestia1704du5xeycku2p970913r313v85krk62w0djyg --bech val -a
```

```
celestia1avaloper1704du5xeycku2p970913r313v85krk62ts0tjw Save this information in your note pad
```

```
root@vmi897239:~# 
```

Output

## Part 13:Connect Validator

**MONIKER="Validator"**

**VALIDATOR\_WALLET="adress\_Wallet"**

```
celestia-appd tx staking create-validator \
--amount=1000000utia \
--pubkey=$(celestia-appd tendermint show-validator) \
--moniker=$MONIKER \
--chain-id=mamaki \
--commission-rate=0.1 \
--commission-max-rate=0.2 \
--commission-max-change-rate=0.01 \
--min-self-delegation=1000000 \
--from=$VALIDATOR_WALLET \
--keyring-backend=test
```

Please replace “Validator” by your name and “wallet” by your wallet name for example

```
$ MONIKER=sohale
$ VALIDATOR_WALLET=celestia1rcvckr7z3kkp947460avt2c8yhyq2wjujvd33g

$ celestia-appd tx staking create-validator \
$ --amount=1000000utia \
$ --pubkey=$(celestia-appd tendermint show-validator) \
$ --moniker=$MONIKER \
$ --chain-id=mamaki \
$ --commission-rate=0.1 \
$ --commission-max-rate=0.2 \
$ --commission-max-change-rate=0.01 \
$ --min-self-delegation=1000000 \
$ --from=$VALIDATOR_WALLET \
$ --keyring-backend=test
root@vmi887582:/celestia-node# MONIKER=Dr_Jackal
root@vmi887582:/celestia-node# VALIDATOR_WALLET=jackal_Wallet
root@vmi887582:/celestia-node#
root@vmi887582:/celestia-node# celestia-appd tx staking create-validator \
> --amount=1000000utia \
> --pubkey=$(celestia-appd tendermint show-validator) \
> --moniker=$MONIKER \
> --chain-id=mamaki \
> --commission-rate=0.1 \
> --commission-max-rate=0.2 \
> --commission-max-change-rate=0.01 \
> --min-self-delegation=1000000 \
> --from=$VALIDATOR_WALLET \
> --keyring-backend=test
("body": {"messages": [{"@type": "/cosmos.staking.v1beta1.MsgCreateValidator", "description": {"moniker": "Dr_Jackal", "identity": "", "website": "", "security_contact": "", "details": ""}, "commission": {"rate": "0.1000000000000000", "max_rate": "0.2000000000000000", "max_change_rate": "0.0100000000000000"}, "min_self_delegation": "1000000", "delegator_address": "celestia1gd3h5mjsfeucgg5kdmuug40zke40ksv4hsa5", "validator_address": "celestivaloperlgwd3h5mjsfeucgg5kdmuug40zke40ksf24ftj", "pubkey": {"@type": "/cosmos.crypto.ed25519.PubKey", "key": "arsgQ5pQuIhKORFxkfc3LTAaOK4QaExEl+wKkLCiZuo="}, "value": {"denom": "utia", "amount": "1000000"}]}, "memo": "", "timeout_height": "0", "extension_options": [], "non_critical_extension_options": []}, "auth_info": {"signer_infos": [], "fee": {"amount": [], "gas_limit": "200000"}, "payer": "", "granter": "", "tip": null}, "signatures": []}
confirm transaction before signing and broadcasting [y/N]: 
```

Press Y

```
confirm transaction before signing and broadcasting [y/N]: Y
code: 0
codespace: ""
data: ""
events: []
gas_used: "0"
gas_wanted: "0"
height: "0"
info: ""
logs: []
raw_log: ""
timestamp: ""
tx: null
txhash: D516010A57150305D2C89672EA4D43C0803712260DA62B5395B076FF50F02AAF
root@vmi887582:/celestia-node# 
```

Delegate:

```
$ celestia-appd tx staking delegate \
\celestivaloperxxxxxxxxxxxxxxxxxxxxxxxxxxxxx 9000000utia
\--from=$VALIDATOR_WALLET --chain-id=mamaki 
```

Replace “`celesvaloper1xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx`” by your `celesvaloper` adress and `$VALIDATOR_WALLET` by your wallet name for example

```
$ celestia-appd tx staking delegate \
celestiavaloper1rcvckr7z3kkp947460avt2c8yhyq2wjuhn0g8w 9000000utia \
--from=celestia1rcvckr7z3kkp947460avt2c8yhyq2wjujvd33g --chain-id=mamaki
root@vm1887582:~/celestia-node# celestia-appd tx staking delegate \
> celestiavaloper1gd3h5mjfeucegg5kdmung40zke40ksf24ftj 9000000utia \
> --from=celestialgw3h5mjfeucegg5kdmung40zke40ksv4hsa5 --chain-id=mamaki
{"body": {"messages": [{"@type": "/cosmos.staking.v1beta1.MsgDelegate", "delegator_address": "celestialgw3h5mjfeucegg5kdmung40zke40ksv4hsa5", "validator_address": "celestiavaloper1gd3h5mjfeucegg5kdmung40zke40ksf24ftj"}, {"amount": {"denom": "utia", "amount": "9000000"}], "memo": "", "timeout_height": "0", "extension_options": [], "non_critical_extension_options": []}, "auth_info": {"signer_infos": [], "fee": {"amount": "200000", "gas_limit": "200000", "payer": "", "granter": ""}, "tip": null}, "signature": []}
confirm transaction before signing and broadcasting [y/N]: Y
```

Press Y

```
confirm transaction before signing and broadcasting [y/N]: Y
code: 0
codespace: ""
data: ""
events: []
gas_used: "0"
gas_wanted: "0"
height: "0"
info: ""
logs: []
raw_log: ""
timestamp: ""
tx: null
txhash: 1b5709463fb3fd544d6694c8db62707c0d305790d721b1e0a2ecef6f603264c6
root@vm1887582:~/celestia-node#
```

To check the status of your node

<https://celestia.explorers.guru/>

NG Celestia valoper / tx hash / block height / address

## Validator Details

beta v.0.318.045

Overview

Dr\_Jackal

Active	No	100%
Status	In Jail	Uptime

Voting Power

10 TIA 0.00%

Commission	Bonded	Addresses
Commission 10%	Self Bonded 100%	Account <a href="#">celestia1rcvckr7z3kkp947460avt2c8yhyq2wjujvd33g</a> ↗ Operator

celestiavaloper1r088vhlnry6vwm3ckzlhngd6tffzcqg9r9u0l5 9000000utia \