

# Conflux

Conflux PoW( ) + PoS( ) RPC node ( client

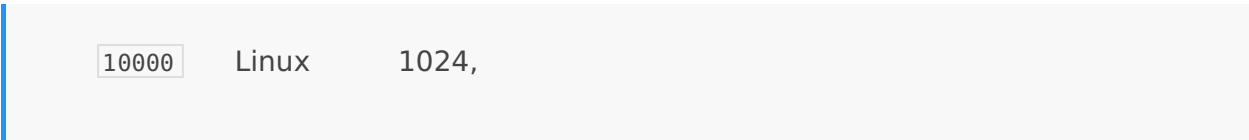
## ArchiveNode VS FullNode

Conflux (ArchiveNode) (FullNode) (LightNode)  
, RPC ArchiveNode.

### ArchiveNode

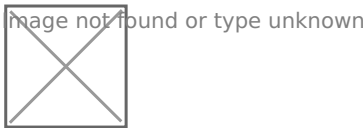
- CPU 4Core
- 16G
- 1T

### Fullnode



RPC ESSD AWS GP3 6000IOPS Provisioned IOPS SSD

Conflux Github [Release](#) [Conflux-rust](#) [Release](#) [Window](#)



conflux-vx.x.x, conflux-vx.x.x-testnet.

zip run

```
→ tree
.
├── conflux #
├── log.yaml #
├── pos_config # pos
│   ├── genesis_file
│   ├── initial_nodes.json
│   └── pos_config.yaml
├── start.bat # windows
├── start.sh # unix
├── hydra.toml #
└── throttling.toml #
```

0 directories, 6 files

conflux hydra.toml( tethys.toml), wind(conflux.exe

hydra.toml ( tethys.toml), testnet.toml. bootnodes chainId conflux-rust Github run  
hydra.toml testnet.toml

( )

- node\_type: full ( archive, light

## chainId

- chainId 1029, 1 ID )
- evm\_chain\_id eSpace chainId, 1030, 71 ( )

# Miner related

- `mining_address`: hex40 CIP-37 ( `minint_type` of `stratum` chainId )
- `mining_type`: `stratum`, `cpu`, `disable`
- `stratum_listen_address`: `stratum`
- `stratum_port`: `stratum`
- `stratum_secret`: `stratum`

# RPC related

- `jsonrpc_cors`: `none`, `all`, ( )
- `jsonrpc_http_keep_alive`: `false` or `true` rpc HTTP connections KeepAlive
- `jsonrpc_ws_port`: websocket rpc
- `jsonrpc_http_port`: http rpc
- `public_rpc_apis`: `rall`, `safe`, `txpool`, `pos`, `cfx`, `debug`, `pubsub`, `test`, `trace`  
(`safe=cfx+pubsub`) `safe`
- `persist_tx_index`: `true` or `false` transaction RPCs , Archiv
- `executive_trace`: `true` or `false` trace EVM execution trace database
- `get_logs_filter_max_epoch_range`: Event log `cfx_getLogs` epoch
- `get_logs_filter_max_limit`: `cfx_getLogs` log
- `jsonrpc_http_eth_port` = 8545 eSpace http
- `jsonrpc_ws_eth_port` = 8546 eSpace websocket
- `public_evm_rpc_apis` = "evm" eSpace RPC namespace

# Snapshot

- `additional_maintained_snapshot_count`: stable checkpoint snapshot 0 stable ( snapshot

# directries

- `conflux_data_dir`: block data, state data, node database
- `block_db_dir`: block `conflux_data_dir` `blockchain_db`
- `netconf_dir`: network `net_key`

# Log related

- `log_conf`: `log.yaml` `log_level`
- `log_file`: log stdout
- `log_level`: `error`, `warn`, `info`, `debug`, `trace`, `off`

log

(dev)

Conflux-rust (dev) RPC

- `bootnodes` :
- `mode` : `dev`
- `dev_block_interval_ms` : , (ms)

`Conflux-rust v2.0` `dev` http RPC port

genesis

`dev` `genesis_secrets.txt` `genesis` `genesis_secrets` `0x` , :

```
genesis_secrets = './genesis_secrets.txt'
```

`10000,000,000,000,000,000,000` Drip 1w CFX

- `net_key` : 256 bit node id 64 hex
- `tx_pool_size` : `50W` (
- `tx_pool_min_tx_gas_price` : gas `1` (

`dev_pos_private_key_encryption_password`

```
#  
$ ./start.sh
```

stdout :

```
2021-04-14T11:54:23.518634+08:00 INFO main network::thr -  
throttling.initialize: min = 10M, max = 64M, cap = 256M
```

```

2021-04-14T11:54:23.519229+08:00 INFO main conflux -
:'#####::'#####::'##::##'#####'##:::##'##::'##'#####'##
'##...##'##...#####:##.##.....:##:::##:##'##:
##:::##:##:##.###.##.##:::##:::##:##.##'##:
##:::##:##.###.##.##:::##:::##:##.##'##:
##:::##:##.##.##.#####:##:::##:##.##.###:
##:::##:##.##.###.##.#####.#####:##:##.##:
.#####:#####:##:##.##.#####.#####:##:##.##:
:.....:
Current Version: 1.1.3-testnet

```

```

2021-04-14T11:54:23.519271+08:00 INFO main conflux - Starting full
client...

```

```
blockchain_data, log
```

catch up

epoch

```

2021-04-16T14:49:11.896942+08:00 INFO IO Worker #1 cfxcore::syn - Catch-up mode:
true, latest epoch: 102120 missing_bodies: 0
2021-04-16T14:49:12.909607+08:00 INFO IO Worker #3 cfxcore::syn - Catch-up mode:
true, latest epoch: 102120 missing_bodies: 0
2021-04-16T14:49:13.922918+08:00 INFO IO Worker #1 cfxcore::syn - Catch-up mode:
true, latest epoch: 102120 missing_bodies: 0
2021-04-16T14:49:14.828910+08:00 INFO IO Worker #1 cfxcore::syn - Catch-up mode:
true, latest epoch: 102180 missing_bodies: 0

```

```
cfx_getStatus
```

epochNumber

scan

epoch

## RPC

RPC

Dapp

RPC url

.

```
http://node-ip:12537
```

Portal

SDK

.

## Docker

Docker Docker pull image

image

tag pipeline:

- x. x. x-mainnet :
- x. x. x-testnet :
- x. x. x :

# Conflux v2.0 Updates

Conflux v2.0 (Hydra) 8 CIP PoS eSpace

tethys.toml hydra.toml

- evm\_chain\_id = 1030 eSpace chainId1030 71
- jsonrpc\_http\_eth\_port = 8545 eSpace http
- jsonrpc\_ws\_eth\_port = 8546 eSpace websocket
- public\_evm\_rpc\_apis = "evm" eSpace RPC namespace
- dev\_pos\_private\_key\_encryption\_password = "your-password" ( ) PoS pos\_k  
dev\_pos\_private\_key\_encryption\_password

bootnodes

## pos\_config

V2.0 hardfork pos\_config PoS genesis

- genesis\_file
- initial\_nodes.json
- pos\_config.yaml

pos\_config .

pos\_key , PoS

conflux binary dev\_pos\_private\_key\_encryption\_password pos\_key ,

Conflux 1 200G 1T(ArchiveNode)

PoS

PoS PoS PoS PoS

- pos\_key PoS
- pos\_key CFX PoS
- (foreRetired) PoS unlock unlock 14 PoS

PoS forceRetired

PoS

1. PoS ./conflux rpc local pos stop\_election null PoS PoS
2. PoS null PoS
3. null PoS 2-3 PoS

PoS pos\_key

PoS pos\_key pos\_db/secure\_storage.json pos\_key

checkpoint replay checkpoint .

?

?

:

- `persist_tx_index`
- `executive_trace`

.

archive node ?

2022.8.1

300 G

?

GPU

archive node

[fullnode-node](#)

error ?

`start.sh` `stderr.txt`

IP

RPC

Conflux

IP

v2

No such device or address

v1.x

v2

`dev_pos_private_key_encryption_password`



```
Error: "failed to start full client: \"0s { code: 6, kind: Uncategorized, message: \\\"No such device or address\\\" }\""
```

- 
- 

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Revision #7

Created 11 June 2022 14:49:03 by Pana

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