Dear Lido Community.

Icome to our monthly notes, updating you about our activities to maintain a safe Ethereum environment with Stereum.

SOFTWARE UPDATES

All full nodes and validator clients have been updated.

We started investigations regarding a Nimbus validator client performing poorly with non-Nimbus fallback nodes. More information about this Nimbus crash investigation:

github.com/status-im/nimbus-eth2

## Missed Duties followed by a crash of nimbus VC

opened 01:23PM - 29 Aug 23 UTC closed 05:32PM - 29 Aug 23 UTC NeoPlays ](https://github.com/NeoPlays)

Describe the bug Nimbus VC recognizing time offset followed by missed dutie.

s and resulting in a crash. The VC was running just fine beforehand (no time offsets, no missed duties)

To Reproduce Nimbus is running in Docker withstatusim/nimbus-validator-client:multiarch-v23.7.0 image

and resulting in a crash. The VC was running ust time beforehand (no time offset, no missed duties)

To Reproduce Minks is number to the control of the cont

github.com/status-im/nimbus-eth2

# Nimbus VC continuously loses connection to Prysm and Teku BNs

opened 06:40PM - 31 Aug 23 UTC NeoPlays ](https://github.com/NeoPlays)

Describe the bug Nimbus VC continuously drops Prysm and Teku BN connections...

. For Prysm this normally happens after a lot of attestations are published and after VC receives new attester duties. For Teku this only happens after receiving attester duties.

This is on Mainnet holding 500 keys

Same setup on testnet with 1 key works fine.

running in docker; consensys/teku:23.8.0 prysmaticlabs/prysm-beacon-chain:v4.0.8 nimbus-validator-client:multiarch-v23.7.0

LOGS: ("log":"INF 2023-08-31 18:24:23.735+00:00 Received new attester duty pubkey=a6dc5555e slot=7223569 validator\_index=514033 committee\_length=374 committee\_s\_at\_slot=64 validator\_committee\_index=119 epoch=225736 dependent\_root=da7ad193 service=duties\_servi cein", "stream":stdout", "time":"2023-08-31 18:24:23.735+00:00 Received new attester duty pubkey=a6dc55567 validator\_index=514044 committee\_index=18 committee\_length=373 committee\_s\_at\_slot=64 validator\_committee\_index=294 epoch=225573 dependent\_root=da7ad193 service=duties\_servi cein", "stream":stdout", "time":"2023-08-31 18:24:23.735+00:00 Received new attester duty pubkey=abd03011 slot=7223557 validator\_index=506733 committee\_index=30 committee\_length=373 committee\_length=373 committee\_length=373 committee\_index=30 service=duties\_servi cein", "stream":stdout", "time":"2023-08-31 18:24:23.735+00:00 Received new attester duty pubkey=a8381861 slot=7223582 validator\_index=517741 committee\_index=36 committee\_index=37.5406.00 Received new attester duty pubkey=a8381861 slot=7223582 validator\_index=517741 committee\_index=37 committee\_index=37.5406.00 Received new attester duty pubkey=a839.3406.00 Received new attester duty pubkey=a5755039 slot=7223559 validator\_index=506393 committee\_index=30 service=duties\_service="in", "stream": stdout", "time": "2023-08-3118:24:23.7354715612"] ("ing": "INF 2023-08-3118:24:23.735400.00 Received new attester duty pubkey=a57560 slot=7223564 validator\_index=506398 committee\_index=30 committee\_index=

cein", "stream" "stdout", "time" "2023-08-31T18:24:23.735631562Z" | "log" "ERR 2023-08-31 18:24:24.123-0:00 Beacon node provides unexpected response reason="Serialization error;200;getValidatorsActivity();unexpected-data\" node=http://10.12.1.63:5051[tekuv23.8.0/linux-x86\_64/-eclipseadoptium-openjdk64bitservervm-java-17] node\_index=0 node\_roles=AGBSDTin", "stream"\*stdout", "time"\*2023-08-31T18:24:24.123851353Z" | "log":"NOT 2023-08-31 18:24:25.604+00:00 Beacon node is ominiae agent\_version=lekuv23.8.0/linux-x86\_64/-eclipseadoptium-openjdk64bitservervm-java-17] node\_index=0 node\_roles=AGBSDTin", "stream"\*stdout", "time"\*2023-08-31T18:24:25.604+00:00 Beacon node is compatible node=http://10.12.1.63:5051[tekuv23.8.0/linux-x86\_64/-eclipseadoptium-openjdk64bitservervm-java-17] node\_index=0 node\_roles=AGBSDTin", "stream"\*stdout", "time"\*2023-08-31T18:24:25.6085999327" ["log":"NOT 2023-08-31T18:24:25.601400:00 Beacon node is in synchrolog is in synchrology is interestinated in synchrology

data: (slot: 7223520, index: 43, beacon\_block\_root: \\\"30756965\\\", source: \\\"225734.4a744323\\\", target: \\\"225735.30756965\\\"), signature: \\\"b2119b76\\\")\\"n", "stream"."strdout", "time":"2023-08-31T18:24:29.292635326Z"} {"log":"NOT 2023 08-31 18:24:29.292+00:00 Attestation published delay=2s292ms574us222ns service=attestation\_service validator=b3ff1ce0@517195 attestation=\"(aggregation\_bits:

### OBSERVATIONS OF POOR COMPATIBILITY

We also observed this bad sync participation with non-Nimbus fallback nodes on our systems, and a generally bad compatibility with non-Nimbus nodes.

These observations lead us to planning new fallback combinations, bearing especially those combinations in mind that show poor compatibility

## INCREASE OF HARDWARE PERFORMANCE

By optimizing the configuration of our hardware, we managed to increase its performance.

Also, we exchanged faulty hardware - without any downtime, due to a redundant setup

#### CLIENT COMPATIBILITY

Due to the experiences in the past months, we redesign failover setups mixing validator clients and consensus clients right now. The changes will be made public in our monthly notes as we roll them

OBOL

Just in case we already started an Obol mainnet cluster and hope to use this new technology soon for Lido too.

SSV

For the SSV mainnet we prepared a mainnet setup after having participated in the testnets for some time now. For this we see the possibility for using it for Lido, too.

Thank you for your interest in our work!

Roland for the RockLogic Node Operator Team