

DARK PRAGUE 2026

A memory budget on decentralization

Chronicles of running DarkFi nodes on two small machines

Why small machines

second-order centralization

Normally the people with the resources are the ones who run this kind of infra. A lot of people do not even consider it, because of those demands.

lowering the entry cost

Even if a node and a miner don't fit in mainnet, the memory only gets tuned if somebody debugs it on a small machine first.

two machines, three months

The two machines

Raspberry Pi 5

8 GB

ARM, NVMe, at home since June
node + miner, inside a hard limit

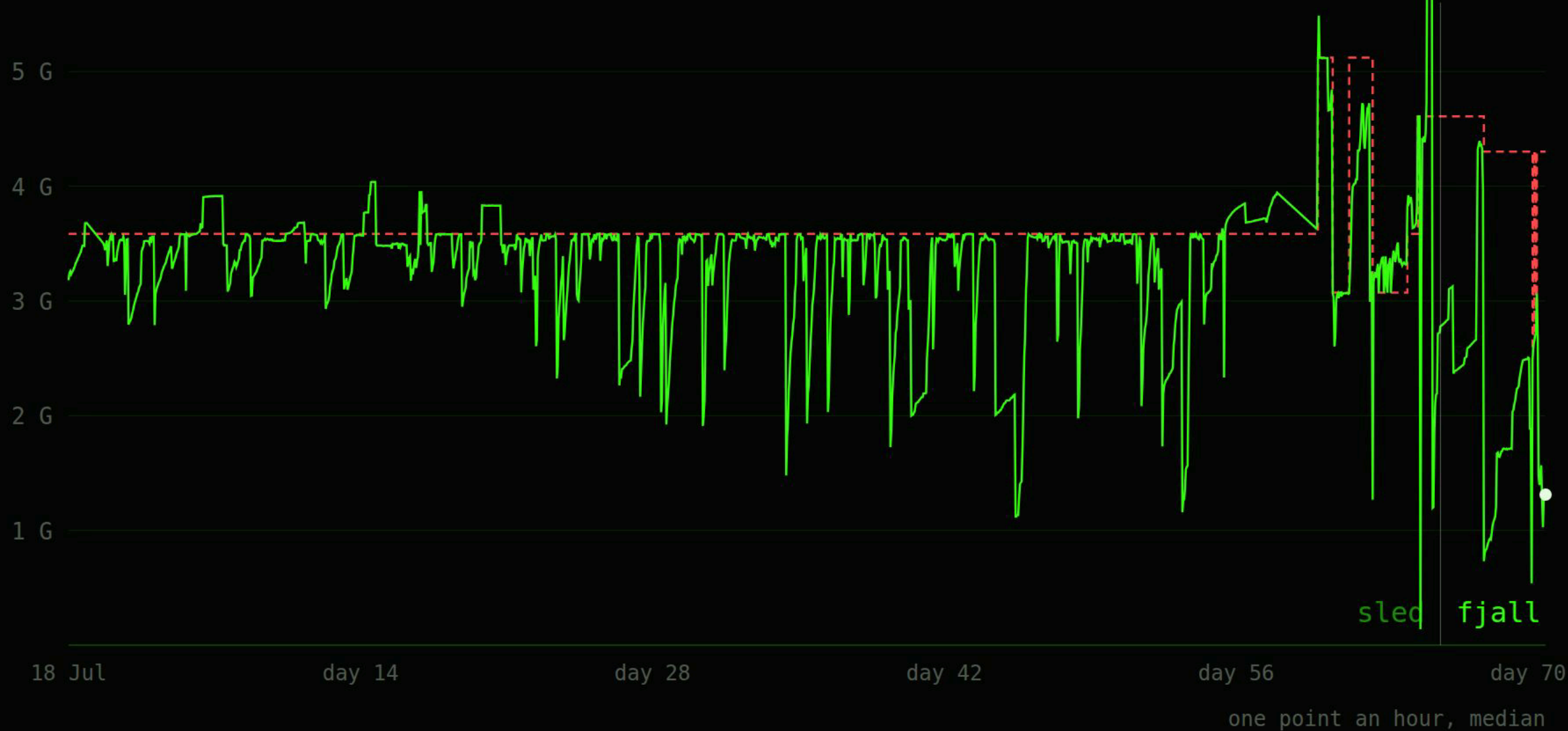
Rented server

4 GB

Helsinki, €6.64 a month, since September
node only, no limit at all

darkfid · memory held
1.28 G

the ceiling it was given



two months of moving the limit · the memory moved with it

how much of the room it was given

the same node, one point an hour · the ceiling was moved between 3.0 and 5.0 G

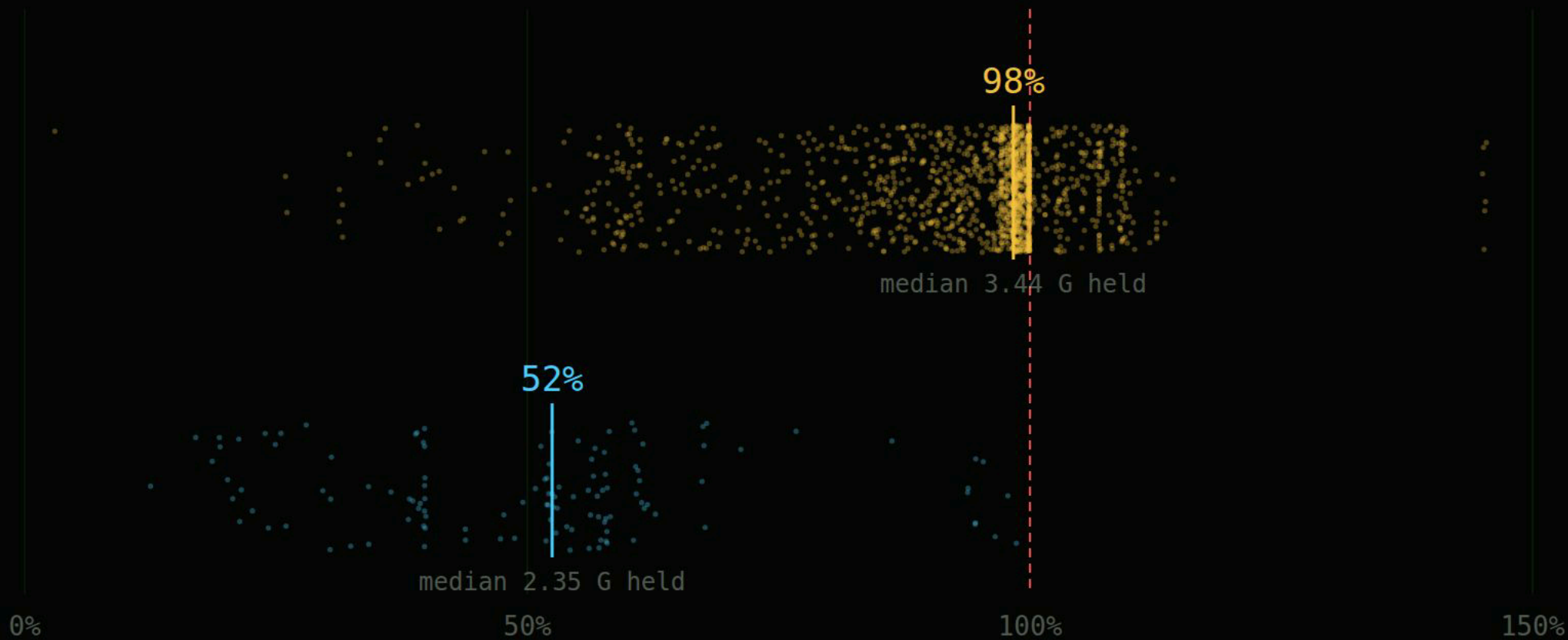
the limit it was given

sled

63 days

fjall

5 days



the same machine, the same chain. only the storage engine changed.

block 65,070



transaction calls



glibc

2 arenas

1 arena

jemalloc

■ darknode

Raspberry Pi 5
8 GB, ARM, NVMe
a home line

39s old

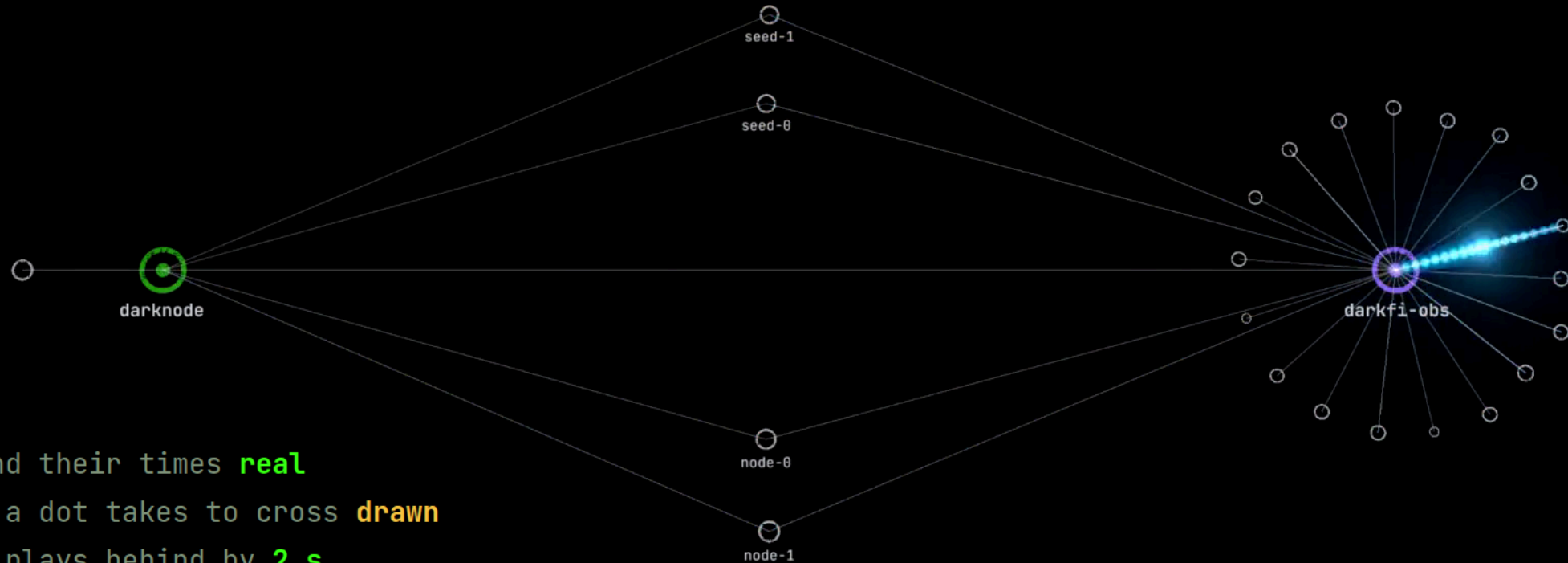
HEIGHT	MEMORY HELD	PEERS	UPTIME
74,902	1.47 G	4	1h 27m
at tip	of 4.80 G		

■ darkfi-obs

Hetzner CX23, 4 GB, x86
a datacentre in Helsinki
€6.64/month

33s old

HEIGHT	MEMORY HELD	PEERS	UPTIME
74,902	2.22 G	15	1d 17h 32m
at tip			



events and their times **real**

how long a dot takes to cross **drawn**

the feed plays behind by **2 s**

peers are pseudonyms + counts, never addresses

■ darknode

Raspberry Pi 5
8 GB, ARM, NVMe
a home line

28s old

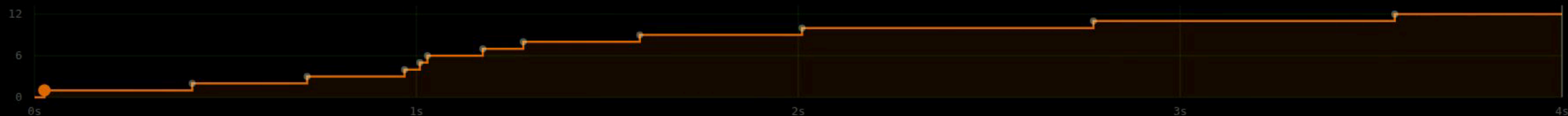
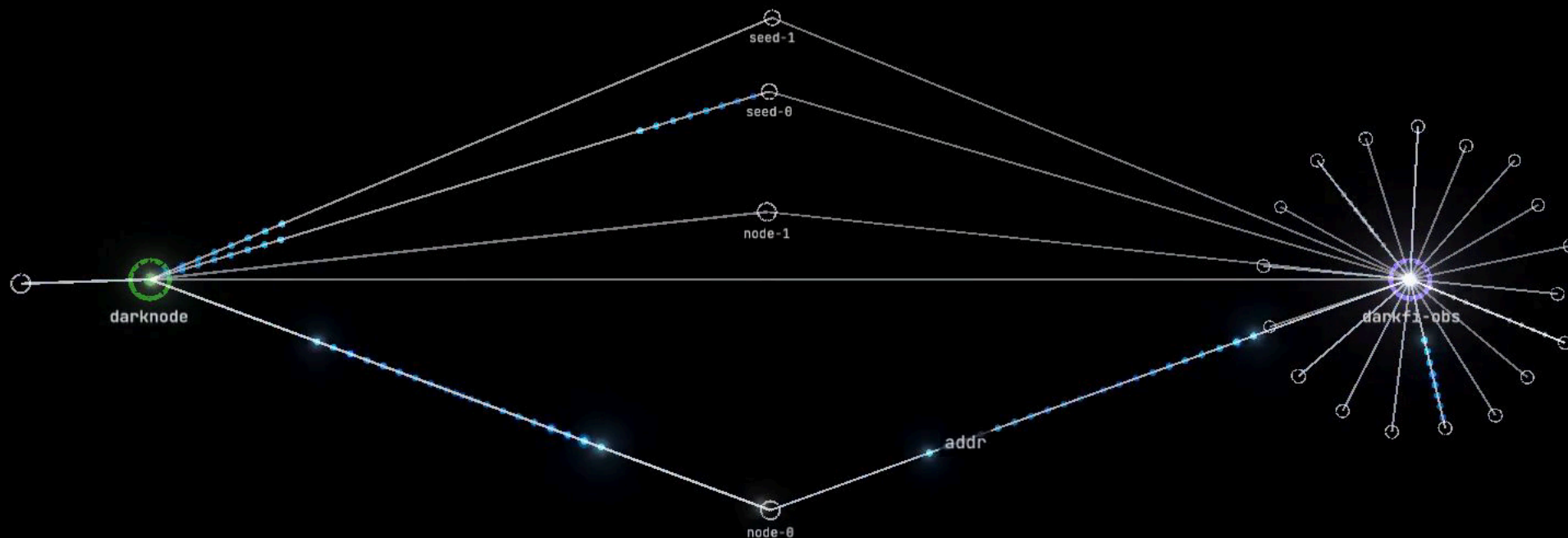
HEIGHT	MEMORY HELD	PEERS	UPTIME
75,114	0.99 G	4	4m 43s
at tip	of 1.08 G		

■ darkfi-obs

Hetzner CX23, 4 GB, x86
a datacentre in Helsinki
€6.64/month

29s old

HEIGHT	MEMORY HELD	PEERS	UPTIME
75,114	1.64 G	17	1d 21h 37m
at tip			



N discovery 68% ● keepalive 26% ● chain 3% ● transaction 3%

tx of one DRK to my own machine

telemetry recorded

939 messages, last 5 min
replay of 2024-09-27 12:16 UTC

Who told my server first

the node that sent it

27 ms

any other peer

638 ms

The amount is hidden and the owner is hidden. Which machine it came from is not.

■ darknode

Raspberry Pi 5
8 GB, ARM, NVMe
a home line

HEIGHT	MEMORY HELD	PEERS	UPTIME
75,509	0.52 G	3	3m 33s
at tip of 4.20 G			

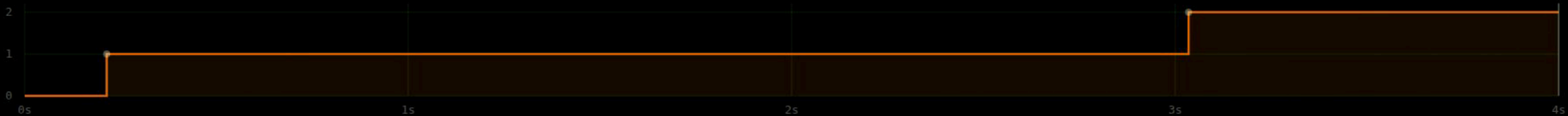
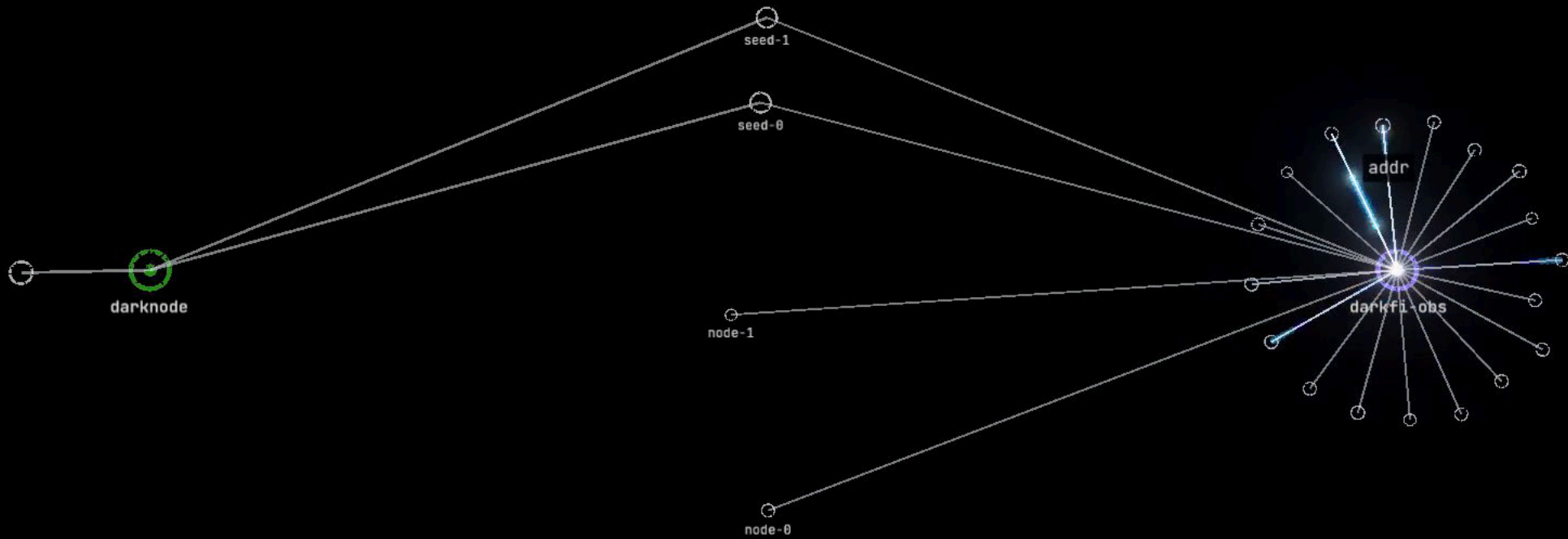
9s old

■ darkfi-obs

Hetzner CX23, 4 GB, x86
a datacentre in Helsinki
€6.64/month

HEIGHT	MEMORY HELD	PEERS	UPTIME
75,509	1.79 G	17	2d 9h 14m
at tip			

3s old



Next

this panel can deanonymize me
experimenting over Tor
keep exploring memory and network

reymom.xyz/darknode



darkscope



the panel