

Hyperscale Weekly

Split the work, not the world

18–24 May 2026

Milestone 1 · Adaptive Sharding

Week 4 · ~month 1 of 4

MILESTONE 1 PROGRESS

24%

Previously: Milestone 1 had just kicked off — the 18-month build was officially underway, but the first week was a quiet one with no code landing yet.

The quiet week is over — real code is now landing. flighttothefox scaffolded the beacon — the slow coordination chain that tracks validators and the shard map — along with its sub-consensus machinery, and reshaped the production node around a 'thread-per-shard' model. The foundations of M1 are starting to take visible shape.

252
COMMITTS

+17k -3.5k
LINES CHANGED

300
FILES TOUCHED

8
DAY COMMIT STREAK

COMMITTS / DAY



peak 70/day · 7/7 days active

WHAT FLIGHTTOTHEFOX BUILT

The beacon finds its footing

flighttothefox scaffolded the beacon crate — the slow chain that tracks validators and topology — with sub-consensus state machines, randomness reveals, recovery machinery, and stake accounting. This is the Census of the network coming into existence.

['see "The Census" on hyperscale.rs](#)

One thread per shard

The production node was reworked so each hosted shard runs on its own pinned thread, with its own state, metrics, and event loop. This is the operational skeleton that lets many shards run side by side cleanly.

['see "The System" on hyperscale.rs](#)

Cleaner cross-shard paths

flighttothefox tightened the logic for cross-shard transactions: ownership, provisions, and dedup paths are now more reliable. Transactions that touch multiple shards should commit more predictably.

['see "The Generals" on hyperscale.rs](#)

THE BOTTOM LINE

STANDOUT CHANGE

The beacon crate — the slow coordination chain that tracks validators and the shard map — is now scaffolded with its sub-consensus state machines.

WHAT'S NEXT

Likely next: wiring the beacon into the production node and expanding the recovery and witness machinery so validators can be safely rotated in and out.

From the community

What people are saying, and the words behind the work.

HEARD IN THE CHAT

The mood: A quiet week in the chat — flightofthefox heads-down on code, no public messages.

THIS WEEK'S CONCEPT

The Census — *The beacon that tracks validators & topology.* The beacon is the slow chain that tracks validators, stake, and the shard map — the heart of the system's coordination. Scaffolding it this week means the foundations of M1 are now visible in code.

hyperscale.rs/census

JARGON, DECODED

VRF — A cryptographic lottery ticket — a number anyone can verify was generated fairly, used here to randomly assign validators to jobs.

Epoch — A fixed time window after which the network reshuffles which validators are in charge of which shard.

Quorum certificate — A signed receipt from a majority of validators that a decision has been agreed upon.

The bigger picture

Where the work landed, and the map to read along on hyperscale.rs.

MOMENTUM • LINES CHANGED / WEEK



last 8 weeks • newest right

THIS WEEK'S WORK



96% Rust 3% Config

WHERE THE WORK LANDED

beacon • The Census

crate scaffolded, sub-consensus state machines added

node • The System

reworked around a thread-per-shard model

shard • The Generals

cross-shard provisions and ownership tightened

THE FULL PICTURE

The System

The whole sharded design at a glance.

The Census

The leaderless beacon of validators, stake and shards.

The Archive

Every published byte is preserved or provably expired.

The Lottery

Random, ever-moving committees; proven cheats are jailed.

The Crash Lab

The simulator that replays any failure byte-for-byte.

The Journey

One transaction's trip through the network.

The Overlap

Why two conflicting blocks can never both commit.

The Library

All state in one merkle tree; a shard is a subtree.

The Triage

Under overload, urgent traffic never waits for bulk.

The Proof

Proving safety with maths, not just tests.

The Clock

Consensus-attested time across independent shards.

The Generals

All-or-nothing cross-shard commits, computed not voted.

The Will

How in-flight transactions settle when a shard dies.

The Governor

Validator entry is re-priced every epoch, like a market.

The Asterisks

Every design's trade-offs — including Hyperscale's own.

THE ROAD TO MAINNET



Now: Milestone 1 • Adaptive Sharding — Week 4 • ~month 1 of 4 • 24%. Since day one: 2,324 commits — one developer, fully in public.

LINKS

WEBSITE

hyperscale.rs

CODE (PUBLIC)

github.com/hyperscalers/hyperscale-rs

MILESTONE PROPOSAL (PDF)

hyperscale.rs/xian_proposal.pdf

COMMUNITY (TELEGRAM)

t.me/hyperscale_rs

AUTHOR

[flightofthefox](https://github.com/flightofthefox)



scan for

hyperscale.rs

Questions? *flightofthefox* is always happy to discuss in the community Telegram — t.me/hyperscale_rs.