Metrics and SLA Foundations for NaaP

speedybird **22h**

Thank you to everyone who reviewed the **earlier pre-proposal** and shared detailed feedback in the forum and during the Watercooler. The concerns raised around scope, cost, architectural risk, and MVP clarity were well-founded and directly informed this revision.

This updated pre-proposal reflects a deliberate reset toward a **smaller, clearer Network-as-a-Product MVP**. The scope has been significantly narrowed, the budget reduced, and the architecture simplified to prioritize time-to-value, reuse of existing Livepeer infrastructure, and immediate usefulness to gateways, orchestrators, and ecosystem teams.

Below is the revised pre-proposal. We welcome the community's review and feedback on the updated scope, design, and framing. We will be present on this coming Monday's Water Cooler for discussion.

Cloud SPE Pre-Proposal: Network-as-a-Product (NaaP) MVP – SLA Metrics, Analytics, and Public Infrastructure

Abstract

This pre-proposal seeks treasury funding for the Livepeer Cloud Special Purpose Entity (SPE) to design, build, and operate a **focused Network-as-a-Product (NaaP) MVP** for SLA metrics, analytics, and public visibility.

The objective of this work is to make the Livepeer network measurable, comparable, and trustworthy at a network level by delivering a small but complete set of standardized performance, reliability, and demand **metrics**. These metrics will be publicly observable and designed to support gateway providers, orchestrators, and ecosystem builders evaluating Livepeer as production infrastructure.

This MVP intentionally prioritizes **time-to-value, architectural simplicity, and reuse of existing Livepeer infrastructure**, while establishing a durable foundation for future SLA-aware routing, scaling, and productization efforts led by Livepeer Inc, the Livepeer Foundation, and the community.

Rationale

As Livepeer advances toward the **Network-as-a-Product vision**, predictable service characteristics and transparent performance signals become essential. While the network supports real workloads today, participants lack a **shared, network-wide view of performance, reliability, and demand** that can be used to assess suitability for production use.

Community discussions around earlier **drafts** of this initiative strongly aligned on the *problem*, while raising important concerns around scope, cost, architectural risk, and MVP clarity. This pre-proposal reflects that feedback by narrowing focus to a practical MVP that:

- Demonstrates clear value with minimal complexity
- Leverages existing data sources and pipelines wherever possible
- Avoids protocol changes, enforcement mechanisms, or premature decentralization
- Produces immediately usable outputs for real network participants

Key challenges addressed by this proposal include:

- **Fragmented metrics:** Existing performance and reliability data is dispersed across systems and difficult for non-core teams to consume.
- **Limited network-level visibility:** Gateway providers and orchestrators cannot easily compare performance across regions, workloads, or peers.
- **Adoption friction:** Without transparent, shared metrics, external developers and partners struggle to evaluate Livepeer for serious workloads.
- **Missing foundation for NaaP evolution:** Future SLA-aware routing, scaling, and automation require a trusted measurement layer first.

The Cloud SPE is well positioned to deliver this work as neutral, public infrastructure, building on its prior experience operating gateways, test tooling, dashboards, and analytics for the Livepeer network.

Importantly, this proposal **does not attempt to enforce SLAs, modify protocol incentives, or introduce new routing logic**. Its purpose is to establish shared measurement and learning infrastructure as a prerequisite for those future decisions.

Deliverables

The NaaP MVP will deliver a constrained, end-to-end metrics system focused on observability and learning inspired by the NaaP product **MVP** and Foundation **roadmap**.

1. Core SLA Metrics (MVP Scope)

- A standardized set of network, performance, and reliability **metrics** sufficient to evaluate orchestrator and GPU behavior across workflows.
- Metrics sourced primarily from job tester gateway and orchestrator-emitted telemetry, with targeted additions only when other Gateways opt-in.

2. Network Test & Verification Signals

- Operation of one or more reference load-test gateways to generate consistent, reproducible performance signals for live AI video pipelines.
- Public test scenarios (aka test datasets) designed to reflect real workloads while remaining transparent and community-verifiable. These will be captured in Github.
- Test results contributed into the same analytics layer as organic network traffic to enable comparison (when other Gateways participate).

3. Analytics & Aggregation Layer

- Lightweight ETL and aggregation pipelines to transform raw metrics into network-level views.
- Computation of a small number of derived indicators as outlined in the **Metrics Catalog**
- Data structured for efficient querying without requiring dashboards to load raw job data.

4. Public Dashboard & APIs

- A standalone public dashboard presenting live and historical metrics.
- Public, read-only APIs for aggregate SLA scores and hardware.
- Clear paths for gateways and ecosystem teams to consume the data directly or mirror it into their own analytics systems.

5. Operations & Stewardship

- Ongoing operation of testing, analytics, and dashboard infrastructure.
- Maintenance, monitoring, and community support for the MVP for 1 year.

Any scope not outlined here is not part of the Deliverables and out of the scope of this proposal.

Key Milestones

Milestone 1 – Metrics Collection & Aggregation

- Define and implement the minimal metrics set
- Aggregate existing telemetry into a unified analytics layer
- A basic dashboard showing sample data flowing end to end

Milestone 2 – Test Signals & Derived Analytics

- Deploy reference load-test gateways
- Launch a public dashboard with core views
- APIs for ecosystem consumption

Milestone 3 – Stabilization & Review

- Harden infrastructure for reliability and cost efficiency
- Document metrics, assumptions, and known gaps
- Review outcomes with the community to determine next steps

Timeline

Delivery is anticipated to take approximately six months (and already underway as of November 2025). This is dependent on the team's development velocity and subject to change. Preliminary design and validation work has begun to reduce delivery risk.

- **November 2025** - Works began on original proposal and discovery process
- **February 2026** – Milestone 1: Metrics Collection & Aggregation
- **March 2026** – Milestone 2 – Test Signals & Derived Analytics
- **April 2026** – Milestone 3 – Stabilization & Review

Budget

Total Requested Budget: $90,000

This budget supports:

- Engineering work to aggregate, validate, and expose SLA-relevant metrics
- Development of Load Testing Gateway (AI Job Tester + Gateway enhancements) and Network Data Scraper
- Development of minimal analytics and public-facing dashboards
- Development of DevOps infrastructure and automation
- Operation of testing, analytics, and storage infrastructure for approximately one year

- Ongoing maintenance, documentation, and community support

The budget is intentionally sized for a thin but complete MVP, designed to validate assumptions, inform future investment, and avoid long-term commitments before value is demonstrated.

Closing Note

This pre-proposal reflects extensive community and Livepeer Inc feedback and represents a deliberate step toward a simpler, clearer, and more actionable NaaP MVP.

By focusing on shared measurement rather than enforcement or protocol change, this work aims to give the Livepeer ecosystem a common understanding of network behavior today — and a solid foundation for deciding what to build next.

✨ Related topics

Topic	Replies	Activity
Decentralized Metrics and SLA Foundations for Livepeer	7	3d
Livepeer.Cloud Pre-Proposal - AI Metrics and Visibility	6	Aug 2024
2024 End of Year Update - Livepeer.Cloud SPE	2	Jun 2025
[UPDATE] Expanding Live Video Metrics and Testing Capabilities Across the Livepeer Network	0	Oct 2025
Defining the Livepeer Network Value Proposition(s)	1	Oct 2025