High-quality video experiences are critical to attracting, engaging, and retaining viewers, therefore organizations need their services to perform well in all regions and at all times. To accommodate global audiences and improve performance, organizations are employing multiple CDNs. However, adding more video delivery capacity from more locations does not automatically guarantee improved experiences for every viewer. A more intelligent and data-driven approach to viewer traffic steering across multiple CDNs is needed.

NS1’s Pulsar solution automates active traffic steering across multiple CDNs based on location, availability, performance, and many other business variables. This delivers a significant improvement in viewer experience than simply using round-robin rules to select the closest point of presence.

Mux Data is a real-time analytics platform that helps engineering and operations teams monitor and improve video streaming performance by measuring the Quality of Experience, which includes startup time, rebuffering, video quality, and playback failure, of every stream.

The integration between NS1 and Mux Data combines CDN performance telemetry collected by Pulsar and viewer quality of experience metrics delivered by Mux to improve viewer routing decisions in real-time. By using a wider range of data inputs, organizations can be more precise in evaluating which CDN will deliver a superior experience. Pulsar uses this improved performance insight to automatically adjust routing decisions for each viewer at the time they are connecting, thereby ensuring the best experience.
**How the Integration Works**

**Data Collection**

Pulsar gathers network specific metrics like throughput, latency, and availability from multiple CDNs around the world as well as viewer quality of experience metrics from Mux Data.

Mux Data monitors viewer quality of experience metrics such as playback failures, startup time, rebuffering and video quality from viewer platforms/devices accessing each CDN. Mux streamlines and simplifies data collection with documented SDKs for a wide range of players and devices.

**CDN Performance Scoring**

Pulsar combines CDN telemetry and Mux Data metrics in real-time into an overall performance score for each CDN. These scores inform dynamic viewer routing decisions. Organizations have complete control over the scoring configuration, including which metrics are used and how they are combined.

**Customizable Decision Making**

Pulsar makes the performance scores actionable with easily configurable routing policies. The policies are configured by chaining together single purpose algorithms for different business priorities such as minimizing CDN costs, meeting CDN usage commits, or upholding geographic content licensing restrictions. As a result, organizations have a simple yet powerful means of managing both their viewers’ experience and business KPIs.

**Optimized Viewer Routing**

Every viewer is automatically routed to the best CDN based on real-time performance scores and decision-making policies. Changes in CDN performance are detected and routing decisions adjusted automatically to ensure the best experience for every viewer.

**Review Results**

Review traffic distribution across all CDNs to understand and improve policy effectiveness. Full visibility into record-level routing decisions also provides insights for capacity planning and vendor management.