Executive summary

Four steps to scaling OTT delivery to world-class live streaming events

To prepare for a new decade of unprecedented demand, CenturyLink examines the importance of optimizing one’s network from origin to end-user device, discussing best practices for scaling live video delivery to millions of concurrent users.

1. Choose the right CDNs
   Key considerations when choosing a delivery partner include geographic reach, encryption, DRM, workflow integration, and video format support. Most importantly for live streaming, however, is network scale and topology, as every millisecond impacts viewer experience.

   Choose a provider that can serve via the most efficient paths, can avoid public peering and congestion points and has relationships with the regional ISPs where you are delivering.

2. Mitigate risk with multi-CDN architecture
   A multi-CDN approach offers redundancy and protects against outages and degraded performance. For high-profile live streaming events, quality criteria should outweigh commitment or other cost considerations.

   A combination of a DNS-based session initiation tool provides a solid static foundation to ensure optimal choice at the start of a video session. This combined with a midstream selector based on real-time device telemetry is optimal.

3. Bring delivery to the outer edge with a mesh network solution
   Offering additional flexibility and scale, peer-to-peer or mesh delivery networks incorporate consumer devices into the delivery architecture. They work in tandem with the CDN infrastructure, allowing devices to source video segments from the CDN point of presence or from another device viewing the same content at the same time.

   A mesh overlay can offer greater regional capacity, improved footprint, flexibility in provisioning, reduced reliance on ISP peering and overall performance enhancement. As many of mesh delivery solutions are newer technologies, choose a provider with proven prime-time results and algorithms that optimize quality.

4. Provide pre-event agility & game day support
   The stakes are high in live streaming. Demand operational excellence from your partners from day one up to and after game day. Choose partners that have local or in-region support, network professionals who work hand-in-hand with your SRE teams and routinely intervene in complex workflows. While SLAs are an important benchmark, understand exactly how your providers will monitor and react to anomalies during the event.

Why CenturyLink?

Over the course of 2019, CenturyLink strengthened its global content delivery network (CDN) service capabilities across Europe, APAC and Latin America. As both a CDN and a tier-1 network provider, CenturyLink can leverage its extensive network to provide connectivity into ISPs, avoid public peering points and optimally route traffic. The company was named a Leader in the IDC MarketScape’s first Worldwide Commercial CDN Vendors Report for both the scope and scale of its global network, but also for its technology innovation, notably in its acquisition of mesh delivery provider Streamroot. In 2019, CenturyLink served many of the world’s largest media companies and is known for supporting complex deployments for large-scale live streaming events. For more information, visit centurylink.com.