CenturyLink® CDN Mesh Delivery
live streaming case study

Given the current unprecedented demands on OTT digital platforms, CenturyLink announced a global agreement with Streamroot to offer a peer-to-peer networking platform that can be used in combination with the CenturyLink® Content Delivery Network (CDN). The solution is called CenturyLink CDN Mesh Delivery.

Streamroot's peer-to-peer technology provides a robust, reliable and cost-effective delivery solution that enables broadcasters to scale and offer better Quality-of-Experience (QoE) to users all around the world. This peer-to-peer technology behind CenturyLink CDN Mesh Delivery proved its ability to deliver high-quality services to end-users during a live sporting event that had notable streaming records.

40 million
Peer-to-peer video sessions in Europe and LATAM

62%
Overall traffic delivered with peer-to-peer in Europe during semifinals and finals

2.5 Mbps
Average bitrate watched with peer-to-peer in Europe

[1]

Delivering high-quality video when it matters most

2018 was a monumental year for an international sports tournament that made historic streaming records. Broadcasters around the world faced the high demand on digital platforms to meet the bandwidth needed to support the event. Millions of people tuned in on laptops, mobile devices and connected TVs, multiplying the traffic from the 2014 tournament.

While an important milestone for live online video, broadcasters faced a greater challenge: deliver a quality viewing experience even during the most demanding traffic spikes.

Rising to the live streaming challenge

To scale to the immense growth, rights-holding broadcasters across Europe and Latin America turned to the mesh network to deliver uninterrupted, high-quality service to end-users.

Implementing the peer-to-peer technology allowed these broadcasters to scale with the demanding audience. CenturyLink CDN Mesh Delivery uses this technology and uniquely multi-sources video segments from CDNs as well as nearby viewer devices watching the same content. The platform intelligently acquires video segments from the source that provides them most quickly, either the CDN or local peer-to-peer network, cutting round-trip time, reducing buffering and enabling higher bitrates.

Performance

The peer-to-peer solution was able to provide a flexible and resilient mesh network to decrease looming fears as more viewers tuned in to the live games. Multi-sourcing from the CDNs and a mesh network of devices allowed for greater bandwidth and for broadcasters to scale as the viewing demand increased.

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In addition to supplying the flexible capacity so critical for the event, the peer-to-peer network also helped improve the overall quality of many of the live stream. User location, ISP, network topology, device, type of content and bitrate profiles were all leveraged to determine the fastest and most efficient connections for each individual viewer. Those using the peer-to-peer technology experienced up to 37% less rebuffering in Europe and up to 63% less rebuffering in LATAM[2].

Up to
-37%
Rebuffering
In Europe

Up to
-63%
Rebuffering
In LATAM
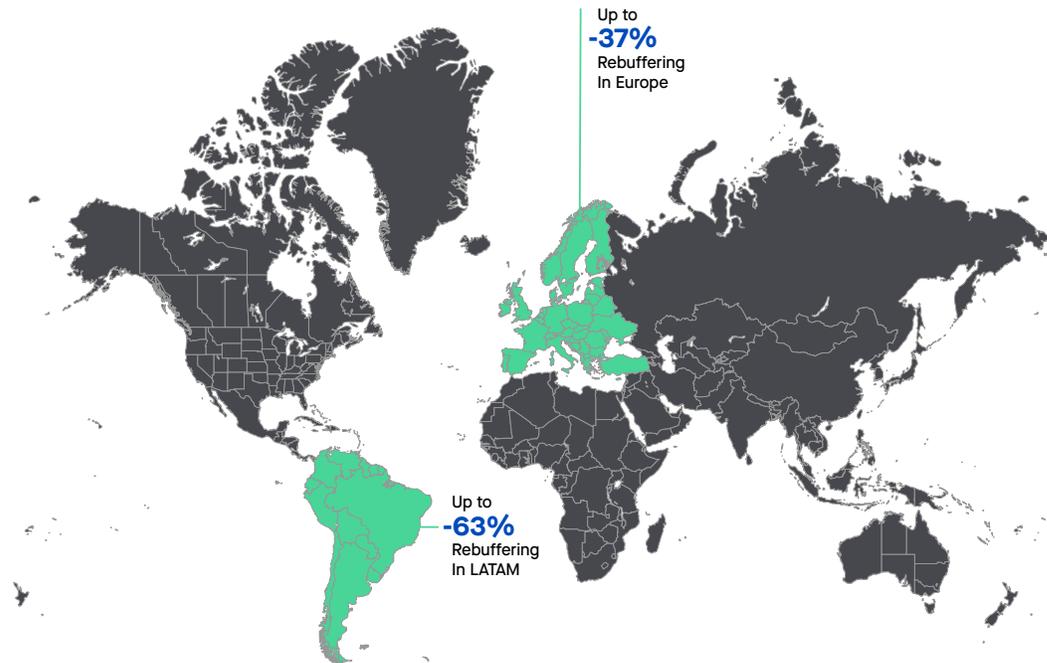
During the event, the mesh network powered over 40 million sessions across Europe and Latin America Throughout the semifinals and finals, 62% of overall traffic in Europe was delivered using the technology.[3]

VOLUME

◯ DNA   ◯ CDN   ❓

62.69 %
DNA

7. Jul   8. Jul   9. Jul   10. Jul   11. Jul   12. Jul   13. Jul   14. Jul   15. Jul   16. Jul

4
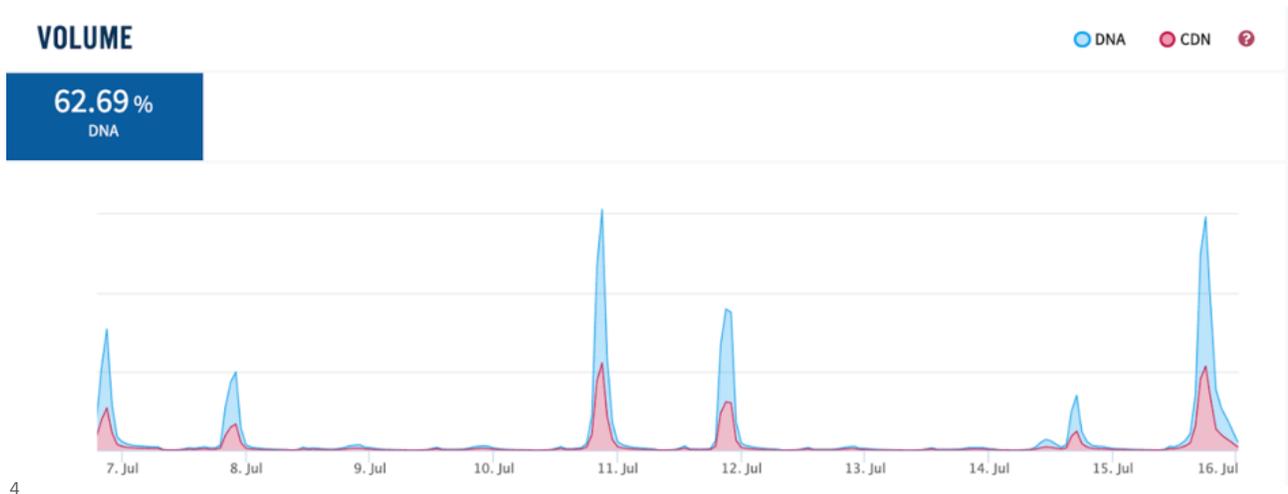
By micro-caching on devices, more segments across all formats and bitrates are available to the network, helping deliver more content with faster download time to a greater regional capacity. As more devices connect to live streams the QoS improves, demonstrating the power of Streamroot's peer-to-peer technology used by CenturyLink CDN Mesh Delivery.

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