

CDN Load Balancer Use Case Scenario

Localized errors and performance degradation

In Summer 2021, one of Lumen's CDN Load Balancer customers, a major national broadcasting network in Western Europe, experienced a drop in quality of service from one of its primary CDN vendors for live video delivery. At the time that the issue occurred, this CDN (**CDN 2** in the graphic below) was delivering a little less than half of the broadcaster's overall live content, which is consistent with its usual bandwidth and delivery load within their CDN stack.

The incident, which was later attributed to a DNS resolution problem caused by some backend changes made by the CDN vendor, did not affect all users that were getting content from that CDN. For those that were affected, however, the drop in quality was quickly detected by CDN Load Balancer, which then switched those users to one of the other two CDNs in the stack.

Most of the redistributed traffic went to the other primary CDN (**CDN 1** below), but some was directed to the one that is typically ranked third and serves as a backup.

This sort of micro-outage is one that could go unnoticed in the course of a broadcasters' regular CDN monitoring. By automatically re-sourcing live video from a better performing CDN based on real-time feedback from the devices, CDN Load Balancer helped preserve the viewer experience and ensure that the performance degradation was identified and circumvented.

We can also see that after the incident was corrected, CDN 2's global score slowly normalized, and users returned so that the customary split between CDN 1 and CDN 2 were respected.



Source: Lumen CDN Load Balancer customer data, July 2021

If we zoom in to the afternoon in question, we see that several micro-incidents of this kind occurred, in which a percentage of users began to experience errors. Depending on the severity perceived by the device and on the sensitivity of this broadcasters' business scores to changes in QOS, CDN Load Balancer switched certain users over to the other CDN until the incident had passed.

For more information about CDN Load Balancer and how switching decisions are made, consult our product data sheet or contact application.delivery@lumen.com.



Source: Lumen CDN Load Balancer customer data, July 2021

Why Lumen

From content acquisition to encoding, distribution and security, Lumen's end-to-end solutions for media companies can help you deliver secure and lightning-fast experiences to your audiences. Benefiting from more than 30 years of experience building technology for some of the largest global enterprises, Lumen today serves nine of the world's ten largest media companies. The company was named a Leader in the IDC MarketScape Worldwide Commercial CDN 2019 Vendor Assessment for both the scope and scale of its deeply peered global network, but also for its technology innovation.

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