Nokia Deepfield enables cable MSO to quickly identify problems, resolve network issues and restore service to subscribers

Use case

Multiple service operators (MSOs) provide cable or direct-broadcast satellite television services, often bundled with internet service offerings. This means that they provide content from their own networks, along with high-speed connectivity that allows their subscribers to access internet-based cloud applications and services. Subscribers expect premium quality for all services delivered to them by MSOs. The main challenge for MSOs is to meet these expectations for over-the-top (OTT) content that originates from the internet.

Without effective tools and systems, an MSO may have little knowledge about the content or impact of the OTT services that flow across its networks to subscribers. When OTT services degrade or are interrupted, it is nearly impossible for the MSO to determine what is causing the degradation and what immediate steps to take to solve the problem.

When service degradation occurs, subscribers expect fast resolution—regardless of whether the service is fully controlled by an MSO (e.g., IPTV) or delivered to its subscribers as OTT traffic. If network performance issues degrade or disrupt an OTT service (for example, when millions of users are trying to stream a new episode of Game of Thrones), the MSO can expect to receive a lot of customer complaints—and experience significant operational pressure.

Challenge

A top-tier cable MSO received a surge of customer complaints that an OTT video service was down in one of its service areas. In the past, the MSO relied on deep packet inspection (DPI) technology to gain a better understanding of traffic patterns in its network.

But this time, the DPI-based solution wasn't helpful because:

- It was too expensive to deploy a probe-based (DPI) solution throughout the whole network, so it wasn't deployed in the affected service area
- It didn't give the MSO a clear view of the magnitude or impact of the reported incidents
- DPI-based solutions may not provide detailed end-to-end insight into encrypted traffic flows, and manual troubleshooting can take days

Solution

Nokia Deepfield Cloud Intelligence and Deepfield Service Intelligence enabled the MSO to get a real-time, multidimensional view of its entire infrastructure. It also eliminated the need to rely on manual coordination across systems that ingest siloed data. The solution gives the MSO a holistic and detailed view of OTT flows from their CDN origins, across transit and peering, and all the way to end systems.

With Deepfield, the MSO can quickly execute complex queries that correlate the key pieces of desired information in real time. As a result, the MSO can quickly zoom in on impacted services, a geographic location and the delivery infrastructure, such as a specific cable modem termination system (CMTS).

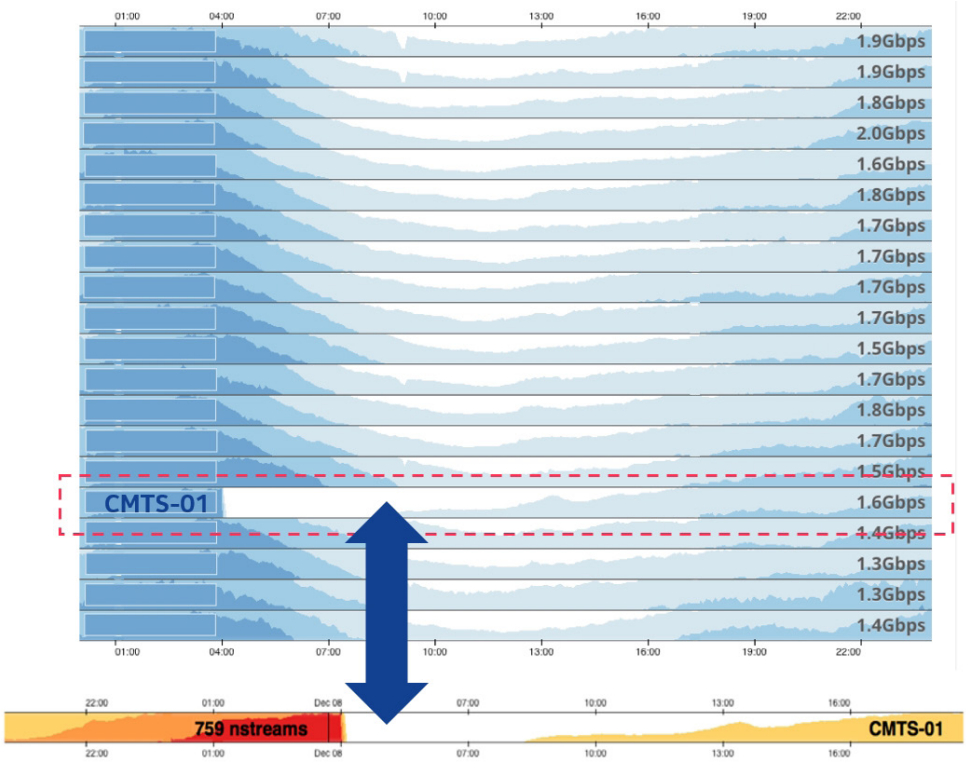
In one case, Deepfield's network insight allowed the MSO to quickly troubleshoot a major drop in the OTT video service on one of its CMTS systems, which impacted almost 800 users. Using Deepfield, the MSO identified and fixed the system that was causing the issue. Service returned to normal in a short period of time.

With the Deepfield solution, the MSO can identify which parts of the network or end systems are having problems and see how many OTT streams are affected in real time.

Benefits

The MSO has improved network performance and service quality through continuous use of the Deepfield solution and by embedding network intelligence obtained by Deepfield into its operations and customer service workflows. The insight provided by Deepfield enables the MSO to deliver a better customer experience for all OTT services, and across all service areas in its network.

The Deepfield solution allows the MSO to get a real-time, multidimensional view of its entire infrastructure and quickly identify problems and resolve network issues.



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Nokia OYJ
Karakaari 7
02610 Espoo
Finland
Tel. +358 (0) 10 44 88 000

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