Deepfield case study
Top cable operator deploys Nokia Deepfield solution, dramatically improves streaming rates of webscale content and rises in the Netflix ISP Speed Index

Introduction
For today’s savvy subscribers, ‘slow’ is the new ‘down’ when it comes to streaming speed and quality of over-the-top (OTT) traffic.

To maintain a competitive edge, cable operators must meet subscriber expectations for a high-quality video experience. If quality levels drop, subscribers will flood call centers with complaints. If problems persist, subscribers will leave for the competition.

Challenge
As video content consumes increasing amounts of available bandwidth, cable operators must build out their networks to keep subscribers happy. However, they have a severe lack of visibility that prevents them from solving or proactively avoiding problems. Operators need a way to understand how applications perform across all parts of the network so they can quickly identify the right locations to place bandwidth, caches and other network resources.

Unfortunately, IP network analytics were not built with webscale services in mind. Cable operators have historically collected both application and network data. But they have stored this data in silos, and have not had sufficient cross-correlation to identify the specific OTT streaming issues caused by congestion on a particular link. This lack of insight has made troubleshooting a very costly and inefficient process that has done little to improve overall service quality.

One top cable operator attempted to solve this problem with deep packet inspection (DPI) appliances. But it was far too expensive to deploy DPI across an entire network, and large swaths of the network remained unmonitored. And since DPI is blinded by encryption, it provided no visibility into well over half of all video traffic flowing through the network.

The operator recognized that it needed a new software-based solution that could provide full multi-dimensional visibility and be far more cost effective than customized hardware.
Top cable operator boosts streaming quality with Deepfield

Nokia Deepfield is a software-based solution that can be deployed swiftly and scaled to support the world's largest networks. Using the patented Cloud Genome® data feed, it identifies applications and rapidly correlates this information with all network data to immediately identify problems. Unlike DPI, it does all of this without looking at a single packet. It is not hindered by encryption and provides the most complete view of network health.

The Deepfield solution enabled the cable operator to instantly visualize the impact of video traffic across any part of its network. The operator categorized every single flow to gauge performance and used this information to dramatically improve network performance by surgically adding the exact amount of bandwidth needed in just the right places. This ensured that all subscribers were receiving their desired content with the best possible quality.

The operator also uses this visibility in a real-time context. It slices and dices complex data sets in moments, accurately monitors performance, pinpoints configuration issues and solves problems proactively, before they impact customers.

These changes have resulted in increased customer satisfaction, reduced churn and a dramatic increase in traffic delivery speeds as tracked by the Netflix ISP Speed Index.
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