Splunk® Embedded for Velocix CDN

Alcatel-Lucent Builds in Analytics to Deliver Video Content to Consumers

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Liam Crilly, Senior Product Manager for Velocix CDN,
Alcatel-Lucent

OVERVIEW

INDUSTRY
• Media provider

SPLUNK USE CASES
• Application delivery
• Business analytics
• Internet of Things
• IT operations

BUSINESS IMPACT
• End-to-end visibility of content delivery from origination to subscribers' devices
• Diagnostics across public and third-party infrastructures
• Market leadership and intelligence to determine consumer preferences
• Cost-effective development of critical functionality
• Seamlessly integrated solution enhancements
• More efficient and reliable delivery of content
• Insights into efficiencies and returns on investment
• Superior user experience

DATA SOURCES
• All servers and devices at every node comprising a content delivery network

The Business

Alcatel-Lucent offers Internet Service Providers (ISPs) and media providers one of the most innovative content delivery technologies in the industry. Specifically, Alcatel-Lucent provides a next-generation Content Delivery Network (CDN) that is optimized for streaming video over the Internet. Rather than deliver content from a single, central source, Alcatel-Lucent's Velocix CDN caches copies of popular films and TV shows on distributed servers located closer to subscribers. By using these localized copies, service providers reduce the number of hops content must traverse to reach consumers. As a result, they conserve network bandwidth whilst delivering a superior viewing experience to consumers.

Challenges

Demand for video content is exploding. Rather than simply connect to a broadcast video stream, consumers watch what they want, when they want, on the devices they want. As a result, each person requires a unique video stream. This dramatic increase in scale greatly strained the Velocix legacy reporting platform. Built-in reporting capabilities—functionality that competing CDNs lack—have been a key advantage of the Velocix CDN. By presenting log data, the Velocix CDN gives media providers visibility into the performance and efficiencies of their networks.

ISPs can identify troublesome equipment or connections across large and complex network topologies before delivery issues impact consumers. They can assess the efficiencies of their caching policies, and determine what content consumes the most bandwidth and is popular with subscribers. Moreover, they can assess the loads on their networks at peak times, enabling them to perform capacity planning.

Alcatel-Lucent needed a far more scalable solution, yet one flexible enough to meet its needs and support its existing user interface for managing its Velocix CDN. The firm wanted reporting to continue appearing in its own application.

"Though we produce huge amounts of data, Alcatel-Lucent is in the business of video delivery, not big data," says Liam Crilly, senior product manager for Velocix. "Consequently, we didn't want to invest our internal engineering resources to continually develop and maintain a robust reporting platform. Instead, we looked for an OEM partner to provide a big data solution."

Enter Splunk

Alcatel-Lucent evaluated several vendors for its reporting system and found that Splunk Embedded best met its requirements for scalability and flexibility. Velocix CDN embeds Splunk's technology to tailor a solution to its specific needs. Its developers worked with Splunk Professional Services to design and validate an architecture for integrating Splunk Embedded into its CDN management tools. They then used Splunk's Software Developers Kit (SDK) and application programming interfaces (APIs) to build the platform, optimizing it so customers can rapidly generate reports on commonly accessed log data as well as customizable reports for any data they want. Reports are delivered in seconds, not minutes or hours.

"We completed the work ourselves using Splunk's SDK and APIs," says Crilly. "We seamlessly integrated Splunk Embedded's reporting capabilities behind our user interface." Alcatel-Lucent then installed its Splunk Embedded-powered reporting system into its physical and virtual appliances, which are deployed on-premises with the customer. One appliance indexes and stores logs; the other performs searches and reporting. The logs are captured from servers and devices deployed at every node comprising the CDN.

Breakthroughs

Thanks to Splunk Embedded's reporting engine and development tools, Alcatel-Lucent offers its Velocix CDN customers market-leading analytics. Its fully integrated reporting platform enables the company to quickly and easily capture and analyze the data needed to ensure subscribers consistently enjoy their video content.

"Our customers are very positive about our Splunk Embedded analytics," says Crilly. "Whether they want to isolate issues or determine metrics like usage trends, they simply follow the data. Splunk Embedded enables us to deliver reporting that is richer and more versatile than anything a provider can achieve by bolting a third-party solution onto existing management tools. This value proposition gives Alcatel-Lucent a powerful competitive advantage."

Diagnostics and marketing metrics

The use cases for Velocix CDN's reporting are many because logs provide multiple views of content delivery. Operations teams rely on diagnostics to troubleshoot alerts and identify potential issues. Because media providers may not own their networks end-to-end, the insights powered by Splunk Embedded empower them to document issues to third-party suppliers, both upstream and downstream, so remedial actions can be taken promptly. Additionally, network managers have the metrics to perform short- and long-term capacity planning, ensuring their networks always meet demands.

Content owners can determine what programming subscribers are watching and how they consume the video, enabling them to make informed decisions regarding the services and content they offer. They can track which movies are popular and how their streams are performing. Are there delivery delays in certain parts of the network? Content providers can obtain reports detailing how their programming is being delivered.

Assessing value

Business managers have the intelligence to assess the efficiencies of their networks. They can see how the CDN reduces loads on their central video servers, lowering operational costs and reducing the need for scaling. They also can determine returns on investment by evaluating how well the CDN delivers their video streams to subscribers' devices.

Scalability

With Splunk Embedded under the hood, Alcatel-Lucent has built a carrier-class reporting solution, designed to handle the volumes of data generated by the multitude of connected devices inside and outside the home. "Our reporting platform scales horizontally so when our customers need more capacity, they simply install additional appliances," notes Crilly. "Scalability is simple with no bottlenecks limiting expansion, a vital consideration considering the growth of today's video market."

Splunk Embedded

By embedding Splunk technology into its Velocix CDN solution, Alcatel-Lucent gains a competitive edge, as do its customers who now have the visibility and insights to improve their content delivery. "We're leveraging our Splunk Embedded functionality even further," concludes Crilly. "For example, we have a road map to offer quality of experience metrics as part of our reporting platform."

Free Download

If you're interested in embedding Splunk into your product, contact us at oem@ splunk.com.