LivePerson selects Arista as infrastructure foundation to support rapid growth through software defined and highly automated network architecture

Highlights

Challenge

Strong growth prompted LivePerson to consider a network upgrade and redesign with the aim of reducing management complexity through software defined automation while enabling the infrastructure to scale in line with the business.

Solutions

- Arista 7050, 7160, 7260 and 7280 Switches
- Arista EOS®

Results

- Network updates and configuration changes take place in minutes instead of days
- EOS architecture supported installation of additional data monitoring and flow analytics functions
- Lower latency, higher reliability and room to scale to a 100Gbps capable network design

LivePerson is a pioneer in cloud mobile and online business messaging solutions that has grown rapidly over the last two decades. As the market for brand-to-consumer messaging continues to expand, LivePerson has upgraded its infrastructure to include Arista Network's technology which offers enhanced performance while delivering reduced cost of ownership through simplified network operation and new levels of service automation.

LIVEPERSON

Project Background

For more than 20 years, LivePerson has been the pioneer at delivering mobile and online business messaging solutions, transforming the connection between brands and consumers. Today, over 18,000 businesses, including Citibank, HSBC, EE, IBM, L'Oreal, Orange, PNC and The Home Depot rely on the intelligence, security and scalability of its LiveEngage platform to reduce costs, increase lifetime value, and create meaningful connection with consumers.

LivePerson solves some of the most challenging engagement problems, not only within the realm of customer service, but also with online sales and online marketing, allowing brands with tens of millions of customers to communicate via messaging in a really simple and personal way. LivePerson's clients are engaging their customers across mobile apps, websites, voice assistants like Alexa, social media, and even print media via QR code. And rather than just offering a static button on a web page, LivePerson's clients are able to harness the extraordinary amount of available data to gain a real-time understanding of each visitor's needs, intent, and expected value, enabling them to proactively engage their visitors at the right time.

To deliver the software as a service platform, LivePerson maintains seven data centres across the world that house thousands of physical and virtual servers. During peak periods, LivePerson will manage millions of concurrent visitors.

Challenge

As a true cloud centric company, LivePerson has adopted an agile approach to software development and infrastructure deployment and is a vocal champion of open source technologies. More than just a technical fashion statement, its investment in agility is a requirement to meet the massive growth it has experienced that has seen revenues jump from $18.5 million in 2004 to over $220 million in 2017.

The explosive growth and high demand for its service has been matched by a continual upgrade of the core technologies needed to service millions of chat sessions. "Our platform helps to improve the relationships between consumers and brands and it needs to be reliable, always available and delivered with the highest levels of performance," explains Yaniv Katz, Director for Data Center Engineering at LivePerson, "This means we are constantly evaluating how we can deliver the best experience while ensuring that we can scale to meet growing demand."

Behind the scenes, the engineering team are continually monitoring around 1 million metrics such as server utilisation, memory, connection, latency and a whole host of other data sets to ensure that the service is running as expected. With data centre expansion planned over the next few years, in late 2016, Katz and his teams began examining the possibility of upgrading and optimising its network architecture to meet the future trends.

"We always need to be ahead of where our customers want to go," he explains, "support for new drivers like increased use of video and chatbots are areas that we must cater for and as such the network needs to be able to scale in line with our needs."

Solution

One of the clear goals of the network upgrade was a move toward a software defined architecture that would allow more dynamic resource allocation and increased automation.

"One of our major pain points was the complexity of carrying out upgrades to our network infrastructure with multiple operating systems and patches causing significant management challenges," says Katz. "Another issue was our dependency on several proprietary software elements that we had little control over, which were not as flexible as we would have liked."

Over a 12 month period, the engineering team at LivePerson began a deep technical evaluation on a long list of networking kit from multiple vendors.

"We got it down to a shortlist of just two, but even then it was clear that Arista offered many more benefits in terms of total cost of ownership, support for open standards and a compelling longer term technology roadmap," explains Katz.

In early 2017, LivePerson began to upgrade its data centres with Arista 7050, 7260, 7160 and 7280 switches based on a 100Gbps core as part of a spine and leaf architecture.

"One of the most pleasant surprises was that there was no learning curve," says Katz, "because there is a single operating system for every switch along with a highly automated provisioning platform. It meant we could apply updates or makes changes in a few minutes instead of the lengthy and complex process needed for our previous network."

Conclusion

The level of Arista's automation and programmability has led to a significant improvement in day to day operational processes. "We have gained a clear reduction in total cost of ownership," says Katz, "And even though we have a faster, more scalable network connecting more servers and customers, our network engineer can now automate the network instead of manually managing devices, which has brought a major operational efficiency."

"In fact, we are now looking at creating more automation and programing in our network as part of a move toward a NetOps centric environment that further simplifies many of the management tasks to allow us to focus on adding more value to the business," Katz adds.

With the upgrade now progressing to data centre locations around the world, Katz and his team have, on occasion, contacted Arista for guidance, "I have to add that the Arista TAC team are simply fantastic," he says. "We have had to deal with a lot of big vendor TACs in the past and the team at Arista are simply on another level which has made the rollout process smooth sailing."

Looking to the future, Katz and his team are exploring the possibility of moving to an entirely layer 3 driven network architecture as well as embedding additional custom modules within the Arista switches to deliver more granular reporting metrics.

"Overall, this has been a very successful project for us that has removed much of the complexity of our network while building a solid foundation that allows us to keep scaling the network to better serve the business," he concludes.

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