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FIS-ASP selects Arista Networks to deliver high resiliency, scalability and automation to support sustained growth

Highlights

Challenge

As a major service provider and application hosting service, FIS-ASP migrated its legacy network to a spine and leaf-based design from Arista to deliver improved performance, reliability and scale while supporting standards-based automation.

Solutions

- Arista 7000 Series spine and leaf switches for high performance, low latency, and scale
- Arista Cloud Engineer (ACE)
 Certification Program training course to refresh skills
- CloudVision software delivering single view of the entire network for simplified management and automation

Results

- Improved network and application performance, reliability and scalability
- Open standards-based approach to simplify support, upgrades, and automation
- Consistent Arista EOS™ (Extensible Operating System) across the entire network simplifies management tasks

As a leading application service provider in Germany, FIS-ASP sustained growth was starting to place strains on its legacy network. In response, FIS-ASP selected Arista to deliver improved performance, reliability, and software defined automation technology to meet the high availability requirement of its clients.



Company Background

Over 25 years, FIS-ASP GmbH has become a leading company in the field of application service provision, IT outsourcing and hosting, serving many enterprises across the DACH region and beyond. With a reputation for quality, security and stability, FIS-ASP maintains both DIN EN ISO 9001 and DIN ISO/IEC 27001 certifications as well as three modern data centers on its campus and within 20 km of the campus, using state-of-the-art technology and redundant systems.

Challenge

As part of the FIS GmbH Group, one of the largest IT service providers in northern Bavaria and a SAP "Gold" partner, FIS-ASP has developed a broad portfolio of hosting and managed service solutions with a particularly strong reputation for excellence within the realm of SAP where it looks after over 1000 hosted SAP systems for enterprises across the region and a 24/7 availability of the systems.

From its two dedicated data centres at its campus in Grafenrheinfeld, supported by a third 'off-site' data centre 20km away for added resilience, FIS-ASP had experienced strong growth including more demand for its own private cloud and Microsoft environments and an expansion of its Azure migration services.

With demand increasing, senior leadership began to become concerned about its underlying networking infrastructure. As Heiko Friedlein at FIS-ASP, explains, "Our layer two topology with our legacy networking vendor was reaching a point where it was no longer scalable. We were also locked into proprietary technology which had limited redundancy capabilities, so we were keen to not just expand our capacity, but to also move towards an open standards approach."

There was a desire to upgrade from its 10G based architecture to a 100G core and with this in mind, the network team of FIS-ASP began evaluating several networking vendors based on performance, reliability and ability to seamlessly scale using open standards.

The team were impressed by the performance and latency offered by Arista but as Heiko Friedlein explains, "We also liked the fact that the Arista EOS is the same across all the switches, it's easy to operate and low maintenance. Another benefit was the centralised orchestration capability which was very powerful."



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Solution

The spine and leaf, layer 3 implementation uses highly resilient pairs of 7280R Series fixed configuration switches. These offer a flexible arrangement of 10/25/40/100GbE ports with up to 12 terabits per second throughput and ultra-deep packet buffer. The network Leaf's use mostly 7050 series switches offering an ultra-low latency 1RU platform to serve different requirements around 10G, 25G and 100G connectivity.

For the highest levels of resiliency, FIS-ASP runs full synchronous replication between its data centres via their own 2x100G DWDM ring to give its customers outstanding data protection and recovery time objects (RTO's) measured in seconds. In addition, scalability of this solution will provide investment protection for the foreseeable future. The entire network uses a full Ethernet Virtual Private Network (EVPN) implementation with VXLAN to ensure segmentation of traffic for the highest levels of data security. With these technologies it is still possible to provide the same subnet in all three data centers.

All Arista 7000 series products run the same Arista EOS software and binary image simplifying network administration with a single standard across all switches. The installation was supplemented with Arista CloudVision[™], a turnkey solution for network-wide workload orchestration, workflow automation, real-time visibility into network operations.



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Conclusion

The network installation and testing took place over a two-month period followed by a phased migration of its clients hosted environments over to the new network over a further 4-month period.

As part of the project, key members of the FIS-ASP networking team also undertook the Arista Cloud Engineer (ACE) Certification Program to provide training on the new capabilities of the Arista networking technology. "It was very useful for the engineers, and it gave them some hands-on experience," says Heiko Friedlein, "the syntax of the Arista technology is very similar to our legacy network, but it was useful to gain a refresher on the BGP and EVPN parts – it was worthwhile."

Another major benefit for the FIS-ASP team was the implementation of CloudVision, "It gives us very deep visibility into almost every aspect of the network, and it is a big change from the previous polling technology we used," says Heiko Friedlein. "We can see all changes and telemetry in near real time, and this helps to pin down issues quickly and also historically go back in time to look at anything on the network if we have a query from our customer – it is a very helpful tool for us now."

With the new Arista network fully deployed and delivering improved performance and ability to scale, the team is now looking at the use of more automation. This is enabled through the Arista Extensible API which allows it to generate standard scripts to automate tasks such as spinning up new SAP instances, in a very short time. "Optimization with the API's is definitely a thing that we are working on this year," says Heiko Friedlein. "We are at the beginning of that process, but it is a capability that we know the Arista technology can deliver and overall, we are in a great position to meet our longer-term goals," Heiko Friedlein concludes.

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