SAP Basis expert itesys AG upgrades to Arista Networks to improve performance and simplify operational management

Highlights

Challenge

The need to virtualise more of its SAP server estate provided itesys with an opportunity to upgrade its network to a spine and leaf-based design from Arista Networks that boosts performance while simplifying operations.

Solutions

- Arista 7000 series leaf and spine network offering 10/25G and 100G data center switches with wire speed layer 2 and layer 3 features

- CloudVision software delivering a single view of the entire network for visibility and simplified management

- A trusted, local partner to guide through the evaluation and implementation process

Results

- Improved network and attached storage performance

- Simplified network operation via the Arista EOS® single image for all devices

- Open standards-based approach to simplify support, upgrades and future automation

- Seamless future growth with more leaf switches at any time possible

As the largest service provider in Switzerland to deal exclusively with SAP Basis, itesys AG push towards more virtualised environments prompted a major upgrade of its networking infrastructure. Through its move to Arista Networks, itesys has improved performance and simplified its operations to provide the highest levels of service to its clients.

itesys

Project Background

Founded in 2003, itesys AG has built a strong reputation as an expert SAP Basis service provider for all things related to the modern SAP landscape. With an international operation including a headquarters in Switzerland supported by offices in Germany, Romania, and New Zealand, itesys helps to continuously adapt SAP systems to complex and constantly changing requirements.

Challenge

Behind the scenes, the company maintains two separate geo-redundant data centers in Switzerland which are used to host critical managed instances of SAP for its customers. This SAP installation ranges from small, local companies to systems that run major, international conglomerates.

With reliability and performance of paramount importance, itesys has invested heavily in its data center architecture over the last decade and was an early implementor of 40G ethernet mesh technology to interconnect its server estate and network attached storage. In recent years, much of its focus has been on moving its large estate of monolithic SAP implementations onto more virtualised environments.

And as Stefan Dunsch, Head of Service Operations for itesys explains, "Our network was starting to reach its limits of scalability – and was not well suited to a more virtualised environment as it lacked native support for VXLAN." In addition, the complexity of the organically grown network was leading to increased management complexity, "and we know that as things get more difficult to manage, the risk of failure rises – and this is not acceptable for us."

Solution

With the goals to improve performance, reliability and scale at the forefront of its plans, Dunsch and his team began looking at potential upgrade paths. Upgrading to a 100Gb core was a primary consideration, but a move to a simpler and more efficient leaf and spine architecture was also a key aim.

itesys went on to discuss the project requirements with its local Swiss partner. "It was important for us to get input and opinions from our partner before building a shortlist as they have a track record of recommending state-of-the-art technology for our needs." said Dunsch. After examining several vendor solutions, they started a proof of concept with Arista. "…we also liked the idea that the Arista EOS is just one software image for all different kinds of equipment, this allows us to ensure that everything has a consistent feature level and performance – and is far simpler to manage," says Dunsch.

The short PoC allowed the itesys team to assess new software elements including CloudVision®, Arista's network automation and orchestration software that provides a single view of the entire network. "The process allowed us to understand the Arista vision of an open standards-based approach – and it is this vision that aligns with our longer-term strategy."

Conclusion

The subsequent implementation project used a spine based on Arista 7050 series non-blocking 100G data center switches in compact space with wire speed layer 2 and layer 3 features. The leaf utilises mostly 7050 series non-blocking 10/25G data center switches and some 7010 series with 48 ports of 10/100/1000 and 4 integrated 1/10GbE SFP+ ports.

The upgrade processes Dunsch describes as "straightforward and seamless" and the new network is delivering improvements in performance while requiring less day-to-day management. Alongside the visibility, troubleshooting and optimisation benefits his team has gained using CloudVision, Dunsch also highlights the openness of the platform and built-in utilities as aiding its largely virtualised environment.

"A few of these surprised us by just how useful they were." says Dunsch. "For example at first, the VMTracer utility was just a 'nice-to-have' but we have found it extremely useful for deploying new VMs and automatically reconfiguring the VLANs only to the ports they are needed on. It's a really neat feature that we now use regularly."

The upgrade project has been deemed a success, and is transparent to its customer base. Looking to the future, Dunsch believes that although the SAP community has still not yet dived into areas such as DevOps or Kubernetes – the investment it has made in Arista and the new network, "…means we are ready to have that discussion in the future," he concludes.

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