FullSave selects Arista Networks to empower continued data center scale and resiliency to support ongoing growth

Highlights

Challenge

As a major telecommunications infrastructure operator, FullSave migrated its legacy data centers to an IP

fabric over MPLS design using spine and leaf-based switches from Arista to deliver improved scalability,

performance and reliability whilst supporting standards-based automation.

Solution

- Arista 7000 Series spine and leaf switches for high performance, low latency, and scalability

- Scalable 100G spine and 25G leaf within fully layer 2 IP Fabric over MPLS architecture

- Virtualised remote PoC streamlined design testing and rollout during pandemic lockdown

Results

- Improved network performance, reliability and scalability

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

- Consistent Extensible Operating System (EOS®) across entire network simplifies management tasks

As a leading telecommunications infrastructure operator serving clients across France, FullSave's legacy data center architecture was starting to inhibit its growth. In response, FullSave selected Arista to improve performance, reliability and scalability within its data center infrastructure whilst enabling advanced automation and synchronous layer 2 interconnectivity for high availability services.

fullsave

Company Background

FullSave is a telecommunications infrastructure operator that provides connectivity, cloud infrastructure and shared hosting services in data centers. With an exclusively professional clientele, FullSave offers tailor-made services and relies on its own infrastructures to support clients in various industries. As a specialist in telecoms since 2004, FullSave was the first regional operator in Toulouse to deploy its own fibre network and a pioneer in helping clients to benefit from very high-speed Internet access.

Challenge

FullSave has grown considerably over the last decade, from the launch of its initial TLS00 data center in Toulouse in 2014, to points-of-presence on several Internet exchanges including Paris, Marseille and Lyon that help serve clients across France. Alongside geographic expansion, FullSave has grown its service offering to include private cloud where it designs scalable, custom architectures on behalf of customers. This allows them to outsource all or part of their services, whilst having full control of the applications installed.

To accelerate its development and perpetuate its base, FullSave joined the Eurofiber group in early 2021. As part of Eurofiber, FullSave has enhanced its connectivity for all its FTTx solutions with access to a 38,000 km fibre optic network spanning the Netherlands, Belgium, France, and Germany.

"From when we first launched, our strategy was to build everything from the ground up ourselves," explains Vincent Zafra, Head of the network team at FullSave. "We want the best technologies and providers within a design put together and maintained by our internal team. This approach allows us to always ensure quality, and this is what many people associate with FullSave – quality."

With this approach, FullSave has adopted a multi-vendor infrastructure with different vendor solutions across its data centers, WAN networks and client edges. "We also tend to stay with partners for a very long time, so it is important to test everything in detail before we deploy or change our infrastructure," he adds.

With strong client growth in the proceeding 6 years to 2020, the original data center architecture was starting to hit capacity and performance constraints. "When we built our data center, it was the right technology and design for that time," says Zafra. "Yet, we could see with our continued growth that we were reaching limits. It was starting to require a lot more maintenance and provisioning new services was a challenge so we wanted a solution that would allow us to not only grow, but also benefit from more automation."

Solution

FullSave issued an RFP in 2020 and after evaluating over a dozen proposals, shortlisted three based on price, performance and suitability to deliver a highly scalable spine and leaf architecture to replace its legacy three-tier approach.

FullSave then started a round of Proof-of-Concepts with several vendors. This process was complicated by the pandemic but Arista met the challenge as Zafra explains, "Arista created a virtualised environment for us to initially test our data center design, which later was built as a remote instance using physical switches. This was a very innovative approach and allowed us to really test the platform at a time when it was difficult for our teams to gather on site."

Following a detailed evaluation of the PoCs, Arista was deemed the clear winner. "Our most important consideration was that we wanted the IP fabric to be transported over MPLS," he says. "This is the architecture that we identified was best suited to our strategy, other vendors claimed they could deliver on this requirement but Arista was the first to demonstrate it for our project. The competition tried to push their own solution using their own architecture. Arista delivered on the goal of the PoC with an open architecture that we felt was by far the best solution we had evaluated."

Another stand-out benefit was the simplicity and openness of the Arista platform. "It was also very easy for our engineering teams to learn, configure and manage the platforms, which was also well suited to our automation goals," he adds. FullSave also built playbooks using Ansible to help automate key tasks such as configuration management and network validation that seamlessly incorporated Arista within its multi-vendor environment.

During 2021 and early 2022, FullSave deployed Arista 7368X switches for the 100G Spine and Arista 7050SX3 switches for 25G leafs across its three main data centers. The first phase upgraded core and critical switches with the plan to carry out a migration of remaining legacy devices to Arista over the next year.

"It was a challenge to not only do an upgrade across three data centers without downtime, but to also do it all during the pandemic lockdown. Our team and the engineers from Arista really worked well together to deliver the project on time," says Zafra.

Conclusion

The new network went live in early 2022, with a new 100G core and 25g Edge as an IP fabric transported over an MPLS core within a spine and leaf design. In terms of benefits, the hard capacity limitations have been removed and reliability has also improved. "Where we might have had 1 or 2 network issues a month due to capacity constraints, since the migration, we have had none," says Zafra. "The solution has also proven incredibly easy to integrate into our automation framework and we are now moving over legacy switches on an ongoing basis."

The new solution also offers the ability to extend layer 2 connectivity between multiple data centers allowing FullSave to offer its clients high availability and fully synchronous replication services.

"Overall, it has been a good project," says Zafra, "The Arista team has been with us along this journey, and post-pandemic, it was great to finally meet the team in person after nearly a year working closely via Zoom calls. For FullSave, we now have an architecture in place that will better serve our clients and allow us to continue our strong growth."

Santa Clara—Corporate Headquarters
5453 Great America Parkway,
Santa Clara, CA 95054

Phone: +1-408-547-5500
Fax: +1-408-538-8920
Email: info@arista.com

Ireland—International Headquarters
3130 Atlantic Avenue
Westpark Business Campus
Shannon, Co. Clare
Ireland

Vancouver—R&D Office
9200 Glenlyon Pkwy, Unit 300
Burnaby, British Columbia
Canada V5J 5J8

San Francisco—R&D and Sales Office 1390
Market Street, Suite 800
San Francisco, CA 94102

India—R&D Office
Global Tech Park, Tower A & B, 11th Floor

Marathahalli Outer Ring Road
Devarabeesanahalli Village, Varthur Hobli
Bangalore, India 560103

Singapore—APAC Administrative Office
9 Temasek Boulevard

#29-01, Suntec Tower Two
Singapore 038989

Nashua—R&D Office
10 Tara Boulevard
Nashua, NH 03062