TWT selects Arista Networks to support VoIP upgrade delivering improved performance and resiliency with enhanced visibility

Highlights

Challenge
TWT needed to improve throughput and resiliency of its VoIP SoftSwitch and decided to replace its legacy switches with higher performance Arista technology.

Solutions
- Arista 7280 Series spine / leaf switches for high performance, low latency, and scale

- MultiChassis Link Aggregation (MLAG) configuration to remove traditional bottlenecks of a spanning tree design

- Arista telemetry including sFlow to improve visibility, capacity planning and troubleshooting

Results
- Rapid migration that has delivered improved performance and reliability with the ability to quickly scale to meet demand

- Minimal learning curve allowing networking teams to transition skill sets without formal training

TWT, a fast growing, innovative ICT services provider has selected Arista to improve its core network to support its voice services. The Arista solution has improved both performance and reliability with the added ability to quickly scale to meet demand.

Project Background

Since it launched in 1995, TWT has evolved into a leading Italian ICT services provider specialising in B2B activities and digital transformation. TWT offers a full range of integrated communication services, tailored to the specific needs of its customers including voice, Internet broadband, VPN networks, IT security, Web design. TWT follows companies step by step, from the drawing board phase to after-sales assistance, in order to optimize production processes.

Challenge

Although Headquartered in Milan where it maintains its core data centres, TWT also provides ICT services across Italy and maintains 40 points of presence to enable service delivery in every region in the country.

Ensuring reliable voice and data services, whilst allowing for a growing customer base, requires TWT to continually assess and upgrade its core technology stack. For its voice-over-IP infrastructure, TWT uses a GENBAND C20 SoftSwitch to manage communications, control IP phones and Voice over IP (VoIP) gateways to deliver SIP-based multimedia services. As part of an upgrade process, it was necessary to update its switching architecture to handle more capacity and to improve the resiliency of its services in line with industry best practice.

Solution

"We are continually evaluating new technologies and potential vendors and we had read good reports about Arista in this space," says Brian Turnbow, CTO for TWT. "We also spoke to contacts within the Italian and international community that had successfully deployed Arista. Following these discussions we decided to include Arista in a PoC as Arista's technology seemed like a perfect fit for our requirement."

Although Turnbow and his team evaluated several vendors, following the PoC, "…it was clear that Arista had all the features we needed, but also delivered a level of insight and telemetry that was far superior to what we currently had – and all at a very compelling price point."

The initial project focused on its Milan data centres and implemented a redundant pair of Arista 7280 Series fixed configuration switches that combine dynamic and deep buffering for lossless forwarding that are connected to the TWT backbone to enable internet peering and MPLS services. The units were deployed using Arista's MultiChassis Link Aggregation (MLAG) feature that removes the traditional bottlenecks of a spanning tree design and allows the utilization of all interconnects in an active/active mode and provided a testbed for the evaluation of the arista solution.

TWT also decided to renew their C20 SoftSwitch infrastructure and implemented two pairs of 7020R Series switches to leverage deep buffers but with low speed copper ports at 1G and fibre ports at 10G.

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Conclusion

"The upgrade project has been very successful," says Turnbow, "We have achieved a high packet rate and great stability with no issues. The fact that all the switches use a common architecture and software also aids with management."

As an organisation that historically only used a single switching vendor, the use of Arista has been a positive experience. One of the most significant benefits Turnbow highlights is visibility including Arista's use of sFlow, a multi-vendor sampling technology that continuously monitors application level traffic flow at wire speed simultaneously on all interfaces. TWT uses sFlow to provide gigabit speed quantitative traffic measurements without impacting network performance. "Arista telemetry features have been particularly useful for service optimisation and troubleshooting," he adds.

Although new projects have been put on hold during the current health emergency, Turnbow is starting to look ahead. "Moving to Arista was an easy learning curve for our network engineers," he says, "and looking to the future, we see Arista as an important vendor for ongoing infrastructure improvements."
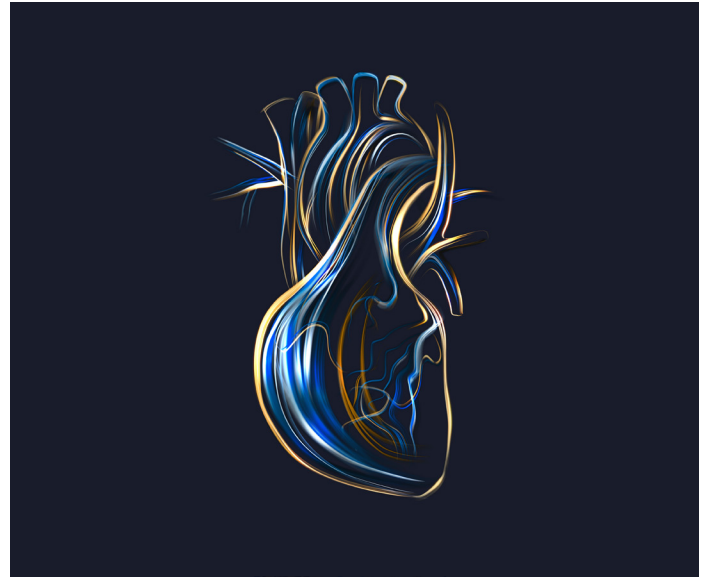
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