

Netwo selects Arista Networks to power innovative SaaS-enabled b2b marketplace for telecom operators at unprecedented scale

Highlights

Challenge

As a pioneer in SaaS-enabled b2b marketplace for telecom operators, Netwo needed a scalable yet flexible

network architecture to allow it to integrate disparate connectivity providers into a unified service. The

Virtual Private Wire Service (VPWS) on EVPN-MPLS solution from Arista Networks delivers improved

performance, reliability and scale while supporting standards-based automation.

Solution

- Arista 7000 Series spine and leaf switches for high performance, low latency, and scalability
- Virtual operating platform allowed design, development, and integration ahead of deployment
- Unified architecture supported by a full-scale Ethernet VPN (EVPN) deployment

Results

- Improved performance, reliability and scalability across every type of circuit combination
- Open standards-based approach to simplify automation and ongoing service delivery
- Consistent Extensible Operating System (EOS®) across entire network simplifies management tasks

As the first SaaS-enabled b2b marketplace for telecom operators in France, Netwo needed to build a robust and scalable network architecture, able to integrate seamlessly with its highly automated provisioning platform. Netwo selected Arista Networks to deliver a solution using Virtual Private Wire Service (VPWS) that has provided seamless interoperability, performance, reliability, and visibility able to rapidly scale to over 2 million circuits and growing.



Company Background

Netwo uses its own backbone network to aggregate connectivity from multiple providers. The Network-as-a-Service platform is based on advanced automation to remove repetitive, low added value tasks such as order management, deployment, invoicing, after-sales and service, in order to help clients focus on delivering revenue generating connectivity.

When it launched in 2020, Netwo was one of the first telecoms marketplaces in Europe and as Gaëtan Ferez, CTO for Netwo explains, "Our goal is to simplify the business of an ISP (Internet Service Provider) and an MSP (Managed Service Provider) by handling all of the integration between different connectivity providers through a unified marketplace."

Challenge

Netwo's cloud-based portal allows ISPs and MSPs to find all the connectivity offers within the market from approximately twenty telecommunication service providers including Orange, Colt and Bouygues telecom, providing the ISP or MSP with a variety of different circuit choices including FTTH, FTTE, FTTO and xDSL. Netwo manages the physical integration within its own regional point-of-presence (PoPs) network. "With just a few clicks, a customer can set up links between multiple sites using different service providers and we handle all of the provisioning, billing and support," explains Ferez.

With the proof of concept for Netwo working well, in May 2021, the company began an expansion project to deploy to seven key PoPs across France and Germany.

"Scalability is important, and we needed to build a network architecture able to grow to between 2 to 3 million circuits," explains Ferez. "Another key requirement was an architecture based on open standards with a flexible API so we can easily integrate our automation engine, as that is the foundation of the Netwo service." With these aims in mind, Netwo began looking for a solution.

Solution

The company evaluated a variety of network vendors, but it was clear early on that Arista offered the best fit. “Arista’s performance and scale easily met our needs,” explains Ferez, “But more importantly, the Arista platform uses a single extensible operating system that allowed us to tightly integrate our management and automation platform with the network. In addition, the design delivers detailed telemetry that is vital for efficient service delivery.”

Another key consideration was interoperability with third party networking equipment. “Arista has been a vocal supporter of open standards,” says Ferez, “This is important as we don’t necessarily have control over customer premise equipment, so we were keen to avoid any proprietary elements that might make integration more difficult.”

In terms of implementation, Arista’s virtual operating environment platform also proved useful. “We were able to design the entire infrastructure virtually and have our development teams begin the integration project before we even received the first physical switch,” says Ferez, “This capability alone allowed us to go live several months earlier than we planned.”

Over a 4-month period during the summer of 2021, Netwo began physically deploying switches at PoPs in Paris, Lyon and Frankfurt. The core of the new network uses Arista 7280 series switches, which provide a flexible arrangement of 10/25/40/100GbE ports with up to 12 terabits per second throughput and ultra-deep packet buffers.



Conclusion

The design uses Virtual Private Wire Service (VPWS) on EVPN-MPLS. This brings the benefits of EVPN to Point-to-Point (P2P) services with Single-Active redundancy as well as All-Active redundancy with flow-based load-balancing. This approach eliminates the need for the traditional way of PW signalling for P2P Ethernet services and provides the ability to forward customer traffic to/from a given customer Attachment Circuit (AC), without any Media Access Control (MAC) lookup. This capability is ideal in providing the types of seamless connectivity offered by Netwo.

Despite the pandemic, the Arista-powered Netwo platform went fully live in October 2021. "We have the first customers on the new platform, and it is delivering the level of connectivity and ease of use we envisioned," says Ferez.

The company is planning additional PoPs across France and internationally while expanding its telecoms provider relationships as demand for its services grows. "During this project, we have developed a good relationship with the Arista team," Ferez adds, "The technical support has been fantastic and when we have wanted to do things in a slightly unconventional way, they have always found a way to help us. For us, Arista is a strategic partner for our future expansion," he concludes.



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