

Case Study

Internet Data Center

A Blockchain Customer Established a Unified Multi Data Centre Network with FS 400G Solution

To address growing multi-data centre networking demands, FS delivered a 400G Spine-Leaf solution with EVPN-VXLAN and automated management, enabling a unified, scalable and highly reliable network infrastructure.

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Region  United Kingdom	Industries  ISP
Network Type  Service Provider Data Centers	Solutions  Internet Data Center

Highlights

- Fully redundant architecture ensures continuous business operations.
- EVPN-VXLAN enables unified resource pooling across data centres.
- 400G Spine-Leaf architecture delivers non-blocking, high-performance forwarding.
- AmpCon-DC enables centralised deployment and automated management.

Key Stats

- Established a unified network architecture across 3 data centres.
- Supported seamless network evolution from 10G to 400G.
- Optimised cross-data-centre interconnection for lower deployment cost and complexity.
- Built a scalable network infrastructure for future expansion.

Overview

The customer is a UK-based Web3 infrastructure provider supporting blockchain network services. As its business continued to grow, increasing computing workloads and east-west traffic placed higher demands on data center performance and scalability. After upgrading server connectivity from 20G/100G to 50G/200G and planning a 400G backbone network, the customer expanded its infrastructure by deploying new racks across three data centres as part of the next phase of network evolution.

Challenges

As the infrastructure evolved, the existing network design could no longer efficiently support the next stage of expansion. The customer needed a unified Spine-Leaf architecture to accommodate mixed-speed 10G, 25G, 100G, and 400G connectivity while ensuring consistent deployment across multiple data centers. Meanwhile, varying inter-data-center distances required a more flexible optical connectivity design, and the customer sought to standardize switching, optics, and cabling to simplify future expansion and ongoing operations.

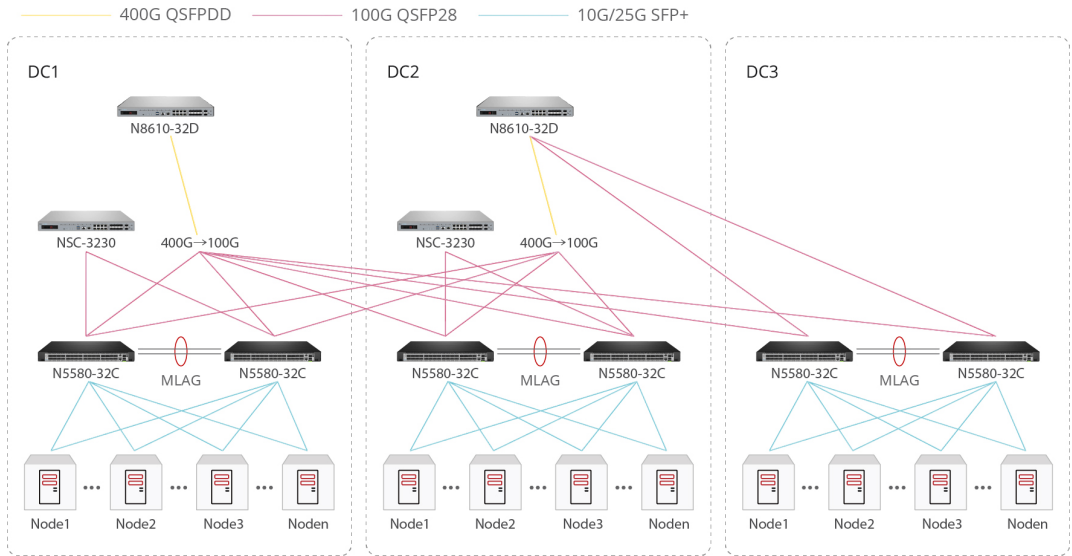
Solutions

The solution adopts the FS N8610-32D as the Spine and the N5580-32C as the Leaf switches to build a 400G Spine-Leaf data centre architecture. Combined with EVPN VXLAN, it delivers a unified high-speed network across three data centres, enabling Layer 2 connectivity, resource pooling and flexible workload deployment. The 400G backbone and full-mesh Spine-Leaf design provide a high-bandwidth, low-latency and scalable network foundation for mission-critical services. MLAG, VRRP and ECMP are deployed to deliver multi-layer redundancy across links, devices and gateways, ensuring continuous business operations. EVPN VXLAN establishes a Layer 2 overlay across data centres, enabling seamless workload mobility while improving resource utilisation and deployment flexibility.

The solution also integrates AmpCon management platform for centralised deployment, automated configuration and unified network management, simplifying multi-data-centre operations, improving management efficiency and providing a unified platform for future network expansion.

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Results

By deploying the FS data centre networking solution, the customer established a unified and scalable multi-data-centre architecture, providing a standardised foundation for future expansion and ongoing infrastructure development. The optimised inter-data-centre design balanced performance, reliability and scalability while reducing deployment costs, implementation complexity and long-term operational overhead.

The solution also enabled a smooth migration from the existing 10G, 25G and 100G server environment towards a 400G network, protecting existing investments while enhancing future scalability. Backed by FS expertise in network planning, solution design and product selection, the customer improved project delivery efficiency and gained a reliable foundation for future data centre growth.



United States

Address: 380 Center Point Blvd, New Castle, DE 19720, United States

Tel: +1 (888) 468-9910

Email: US@fs.com

For more information, welcome to visit www.fs.com