Case Study

HPC Networking

Redefining Gaming and Entertainment Experiences with High-Speed Connection Powered by InfiniBand Solution

FS helps Vietnam's leading tech firm upgrade its network using InfiniBand solutions, enhancing its network system's stability, performance, and user experience for 100 million global customers.



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Country
Vietnam

Industry
Technology

Network Type
InfiniBand Networking

Solutions
HPC Networking

Highlights

- 100% compatibility and usability ensured through scenario-based testing, significantly reducing deployment risks and operational costs.
- Resolve network issues and receive tailored maintenance advice for its data center with FS on-site tech support.
- Established a high-bandwidth, low-latency InfiniBand network to enhance system stability and performance, facilitating the journey toward digital transformation.
- Global customers get reliable, high-speed network connections to enjoy seamless gaming and entertainment experiences.

Key Stats

- 260 FS 400G InfiniBand QSFP112 transceivers are 100% compatible with NVIDIA ConnectX®-7 adapters.
- Singapore warehouse ensures a 100% on-time delivery rate to Vietnam.
- Within 3 days, FS 5x24 technical support teams developed customized troubleshooting solutions and perfectly resolved network issues on-site.
- Serving 100 million customers in Vietnam and globally for connection, transactions, and entertainment.

Overview

As Vietnam's leading tech firm, this company serves over 100 million customers globally with a diverse ecosystem of products. It focuses on four main businesses: online games, communications & media, fintech, and digital business. Committed to long-term development and realizing its mission of "Build Technologies and Grow People. From Vietnam to the world," this company actively explores development opportunities in data centers. In 2022, its new data center received the Uptime Tier III certification.

Although the company has been focusing on constructing its data centers, with the further expansion of its business, its data center network needs to be further upgraded to meet future challenges.

Challenges

To achieve digital transformation, develop more digital products, and meet the challenges posed by growing global customers, this tech company requires a robust, scalable, and secure high-performance computing (HPC) data center. It

needs highly available IT infrastructure to support the adoption of advanced network solutions.

The company aims to pursue advanced technology for high-performance computing to deliver the best network services and entertainment experiences to its customers. This has led the company to consider adopting InfiniBand network technology to achieve high-performance, low-latency, and high-bandwidth data transmission. Moreover, in the fast-paced HPC industry, the company must swiftly establish an efficient data center network and acquire powerful computing capabilities to gain a competitive edge in the market.

This ambitious digital transformation requires a technology partner experienced in HPC InfiniBand solutions. FS stands out as a preferred partner due to its status as a trusted Elite Partner of the NVIDIA Partner Network and its extensive experience in successfully providing InfiniBand solutions to globally renowned enterprises.

Solutions

Having used FS products in Vietnam before, this tech company is very confident in FS, so they sought help from the FS team again to meet their network upgrade needs.

FS tech experts designed a customized topology tailored to the company's existing network and products, precisely matching their application scenarios and requirements. This topology included computing, in-band management, and storage networks, with corresponding product deployment recommendations for each network type.

For the computing network, the company deployed NVIDIA® QM9790 InfiniBand switches and used 800G OSFP InfiniBand modules to achieve high-speed , connections between spine switches, leaf switches, and GPU servers. FS NVIDIA® Quantum-2 InfiniBand facilitated its upgrade to a high-speed, ultra-low latency,

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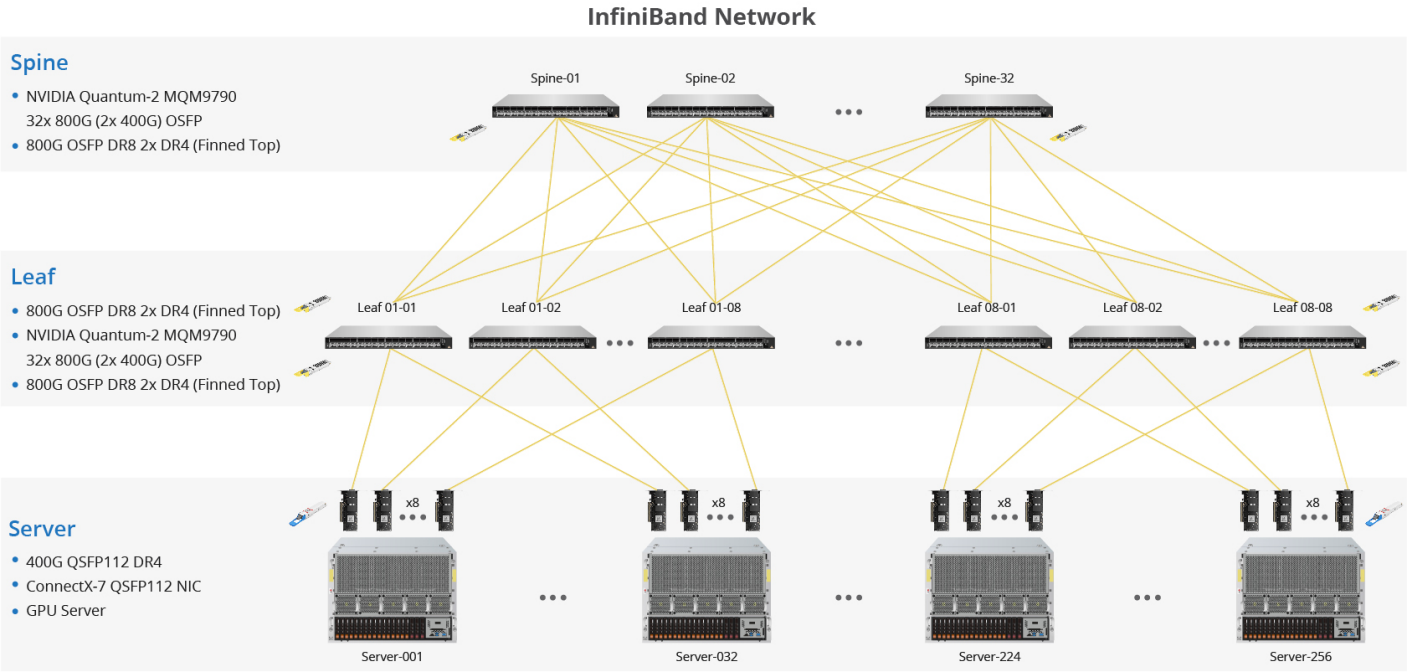
Along with the network topology, infrastructure and accessories are also top of mind for network upgrades. The company turned to FS to provide up to 260 units of 400G InfiniBand QSFP112 transceivers used for NVIDIA® ConnectX-7 QSFP112 network adapters, requiring multi-speed functionality including 400G_4X, 200G_2X, and 100G_1X.

Thanks to FS's customization capabilities and 5×24 services, the FS team tailored the InfiniBand QSFP112 transceivers to their needs and redefined the speed configuration of these optical modules. FS tech experts built an identical network environment to conduct performance and compatibility tests in real-world scenarios, ensuring seamless integration and optimal performance for the company's network.

At a critical phase before operating businesses, their data center encountered network connectivity issues, prompting an urgent need for technical assistance. Multiple FS technical engineers swiftly conducted troubleshooting and diagnostics, promptly visiting the data center site. Within just 3 days, the company's on-site network problems were expertly resolved, ensuring the smooth progress of vital business operations.

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Results

Improvements were immediately obvious. The data throughput has doubled, and the switch system capacity has increased to 3.2 times its previous level. The network speed far exceeds past performance. Even with a doubling of global user access, the network remains free from congestion and lag.

According to its senior purchasing executive, partnering directly with FS enabled rapid acquisition of the necessary products, minimizing purchase time and costs. These competitive InfiniBand switches and 400G modules have also lowered initial investment and operational expenses. Adopting high-performance InfiniBand networks has further advanced the company's digital transformation.

Additionally, the company obtained professional maintenance advice and solutions from the FS technical team based on on-site data center assessment. These solutions encompass strategies to mitigate excessive temperatures in the cooling channels and protect the end faces of optical fiber cables and modules, ultimately enhancing the long-term availability and reliability of data center networks and data transmission.

These impressive results highlight the effectiveness of FS's solutions and the reliability of FS's product delivery and technical support services. This tech company not only meets its customers' expectations for high-speed, stable network connections but also achieves its sustainability goals. For the company, its future mission has now become an achievable goal.



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