

Case Study Data Center VXLANSolut

Seamless Entertainment Industry Network Upgrades with FS VXLAN Solution

A top Japanese computing company deployed the FS Data Center VXLAN Solution to build a video streaming data center with hot migration capabilities for virtual machines, eliminating business disruptions and ensuring the continuity and stability of end users' operations. **Case Study** Data Center VXLAN Solution



Seamless Entertainment Industry Network Upgrades with FS VXLAN Solution

Country

🕄 Japan

Industry

Sports, Media and Entertainment

Network Type

Data Center Interconnect

Solutions

💮 Internet Data Center

Thanks to the excellent support offered by FS's local service team, I intend to recommend this company to my business friends strongly.

- From the company representative

Highlights

- A virtual two-layer network spanning various three-layer networks was built for the customer with VXLAN tunneling technology, while MLAG technology and redundancy algorithms improved network dependability.
- FS's service team, equipped with specialized devices, visits customers' business sites to verify the possibility of VXLAN connections between spine switches and virtual servers running RHEL (Red Hat Enterprise Linux).

Key Stats

- Virtual machines can be migrated between physically distributed data centers, ensuring uninterrupted business operations during the migration process.
- The video streaming platform continues to operate stably throughout the migration, users watch videos uninterrupted on their devices.
- The customer's future expansion requirements for the next five years have been met, minimizing disruption to business operations during expansion.

Overview

The company, known for excellence and innovation, is one of the top companies in Japan's computing field. It has established a long-term partnership with FS and primarily engages in the development, manufacturing, and sale of equipment and software in industries such as supply chain, public services, life infrastructure, and entertainment. Additionally, the company provides comprehensive solutions including system integration, construction, maintenance, and services.

The company intends to facilitate the hot migration of virtual machines to establish a video streaming data center. Furthermore, the consumer seeks strong network stability and low latency. FS offers a Spine-Leaf architecture and VXLAN technology to provide a dependable virtual machine migration solution that minimizes business disruptions while assuring the continuity and stability of customer operations.

Case Study

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Challenges

The company's current problem is that it needs to build a data center, yet doing so will disrupt operations because of virtual machine migrations.

Since the client's network serves as a platform for live video media, there is a significant delay between the transmission of video data and the real-time replay at the receiving end. This excessive latency could lead to playback pauses, stuttering in the video, or even bad-quality images. The user experience and business continuity may be significantly impacted by this.

Solutions

FS provides customers with free network solution consultations, as well as free technical and testing support services. When the customer stated their difficulties and network requirements, our staff replied swiftly. Subsequently, the local FS service team brings dedicated equipment to the customer's business site to support VXLAN compatibility testing. The team collaborated with the customer to verify the feasibility of establishing VXLAN connections between spine switches and virtual servers. These validations helped us determine the ultimate solution.

This solution adopts a Spine-Leaf architecture, using VXLAN technology to achieve large-scale two-layer connectivity across networks. The Spine-Leaf architecture offers advantages such as faster data transmission, higher scalability, and greater reliability. VXLAN technology also provides ample network isolation space, allowing flexible traversal of different networks. Additionally, it is compatible with existing networks, enabling hot migration of virtual machines without interruption and meeting the customer's need for quick virtual machine migration. Deploying VXLAN enables flexible movement of virtual machines in the network, minimizing business interruptions and impact on users.



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MLAG technology is used between Leaf switches, allowing multiple switches to work together to create a logical aggregated connection. It guarantees that business operations won't be disrupted if some links or switches malfunction. All of this guarantees great redundancy and reliability while maintaining network stability.

In this solution, the N8560-32C switch provided by FS supports PFC, DCBX, ECN, which helps achieve low latency, zero packet loss, non-blocking, lossless network, VXLAN, EVPN. The N5860-48SC switch is a compact 1U form factor ToR high-density switch with 48 1/10GbE ports and 8 40/100GbE ports, providing zero packet loss, low latency, lossless Ethernet non-blocking performance. Building a solution with VXLAN using the N8560-32C switch and N5860-48SC switch improves transmission performance while saving server CPU resources.



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Results

Utilizing the Spine-Leaf network architecture to enhance network scalability and performance while minimizing business interruptions. Building a virtual network with VXLAN tunneling technology to ensure stable video playback and uninterrupted viewing experience. FS is committed not only to product excellence but also to solution design to improve cost-effectiveness, and providing comprehensive support such as technical and testing support.





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