Case Study

Enterprise LAN

Elevate Data Center Core Network Performance with FS Solution

An Internet Service Provider (ISP) built a data center core network with FS solution, allowing them to control costs effectively while realizing the full potential of their data center infrastructure.

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Country
United States

Network Type
Enterprise Data Centers

Industry
ISP

Solutions
Enterprise LAN

Highlights

- FS S5850-48S6Q switches were instrumental in addressing the core network demands of a customer integrating Microsoft Storage Spaces Direct (S2D) project.
- With 1.44Tbps switching capacity, 1071.43Mpps throughput, and 612ns latency, FS switches seamlessly handled 50TB of S2D traffic, ensuring high availability and optimal performance.
- MLAG deployment and LACP configuration provided redundancy and fault tolerance, guaranteeing uninterrupted operations even in the face of switch failures.

Key Stats

- FS S5850-48S6Q switches facilitated the seamless integration of 120 virtual machines (VMs) across 4 Hyper-V hosts, managing a total of 50TB S2D traffic.
- The deployment of 16 10G links per server, coupled with MLAG and LACP configurations, ensured robust connectivity and redundancy, mitigating risks and enhancing network reliability.
- By meeting the client's stringent performance requirements, FS switches offered a cost-effective solution, keeping expenditures within budget while delivering optimal performance.

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Overview

Our client is an Internet Service Provider (ISP) currently setting up a data center core network associated with the Microsoft Storage Spaces Direct (S2D) integration project. They host 120 virtual machines (VMs) utilized by 600 employees. These VMs primarily serve as domain controllers, file servers, and terminal servers, with real-time migration traffic between Hyper-V hosts.

Challenges

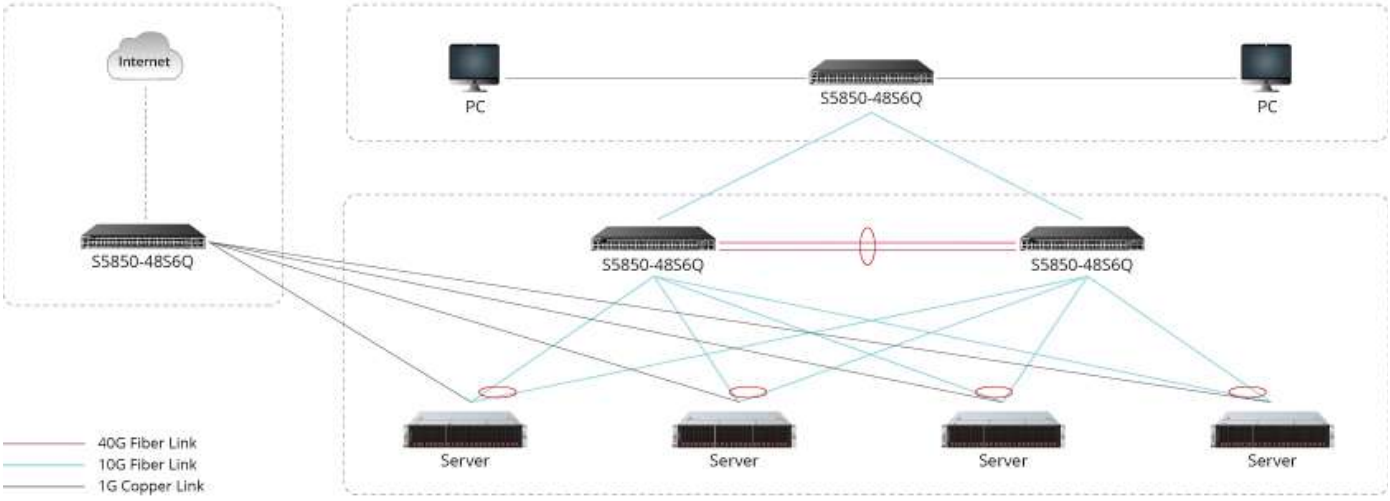
The client faced the challenge of effectively managing and optimizing the flow of S2D traffic totaling 50TB across four virtual machines. Each VM required 4 links to the switches, demanding high throughput, switch capacity, and minimal latency. Moreover, ensuring high availability was imperative, necessitating redundant connections to each host and accommodating management and backup traffic without compromising performance.

Solutions

Following detailed discussions with the client, FS recommended the S5850-48S6Q switches as the ideal solution that boasts a robust feature set, high performance, and competitive pricing. With 1.44Tbps switching capacity, 1071.43Mpps throughput, and 612ns latency, these switches efficiently handled the 50TB S2D traffic load. The deployment of 16 10G links per server, along with MLAG configuration for switch redundancy and LACP setup for link aggregation, ensured seamless connectivity and fault tolerance.

Results

- The deployment of FS S5850-48S6Q switches helped build a highly efficient and reliable data center core network, meeting the client's stringent performance requirements.
- Through meticulous planning and implementation, FS switches provided uninterrupted operations, even in the event of switch failures, thus enhancing network resilience and availability.
- By delivering exceptional performance at a competitive price point, this solution enabled the client to control costs effectively while realizing the full potential of their data center infrastructure.



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