How Cisco Migrated to a SAN Environment in Small European Data Center

Cisco MDS 9000 Family Multilayer Director Switches improve manageability, speed deployment, and reduce costs in smaller data center

BUSINESS BENEFITS
• Reduced risk for networked storage • Increased productivity for storage management tasks • Easier access to stored data • Ability to add storage easily and quickly • Lower total cost of ownership (TCO) • Faster reaction to business changes • Advanced troubleshooting • Total storage device "visibility" "We are seeing cost and time savings from consolidating all disparate SAN islands into one virtual SAN." **Marcus Chambers, Cisco Storage Sales Operations Director**

The Cisco Amsterdam data center hosts much of Cisco IT production, sales, and business applications, as well as many Web development environments for the company's Europe, the Middle East, and Africa (EMEA) region. This data center represents a raw data capacity of more than 60 terabytes, and demand for storage resources is growing. Most of this storage was direct-attached storage (DAS), a limited architecture with significant problems, including underutilization of storage, high equipment costs, and limited management capabilities.

To overcome these challenges, a Cisco hosting team initiated the migration toward a storage model based on storage area networks (SANs). However, the storage demands of Cisco soon reached the physical limitations of the SAN islands model, which was used because of the small size of SAN switches at the time. This limited model nearly exhausted the available data center floor space, and switch interconnections used up much of the port capacity on the individual Fibre Channel switches.

The Cisco IT team realized that the new SANs would be as severely limited as the previous DAS systems unless the team found a new solution. In early 2003, the team began migrating from individual SAN islands based on smaller Fibre Channel switches to a single, shared SAN service based on the larger Cisco MDS 9509 Multilayer Director switch. The Cisco MDS 9509 supports virtual SANs (VSANs) on a single switch, allows separate SANs within a single shared storage pool, and offers enhanced features that help to greatly reduce storage complexity and increase operational efficiency.

The benefits of the new storage switches were immediately apparent, and included:

- Reduced risks through the use of VSANs, which help protect the storage network environment
- Expansion of storage subsystems based on the high port density of the Cisco MDS 9509 switch and the possibility of aggregated uplinks
- Increased productivity through more efficient execution of daily storage management tasks
- A single network management view for all storage subsystems, including the backup library and all connected application hosts

FOR MORE INFORMATION

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NOTE

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Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV
Amsterdam, The Netherlands

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