How Cisco IT Deployed a SAN for ERP Data Storage

Cisco Multilayer Director Switches improve storage usage, system management, and provisioning speed for ERP data storage.

BUSINESS BENEFITS

- Improved data availability
- Lower capital and management costs
- Simplified storage management
- Increased network performance and speed
- Enhanced data security and integrity
- Better positioned for storage growth

Cisco maintains a rapidly growing data infrastructure as its data storage resources have doubled in size every year, reaching more than 2 petabytes (PB) in 2004. In the mid-1990s, 90 percent of data resided on direct-attached storage (DAS), which consists of hard disk drives directly attached to each server. Through the early 2000s, Cisco migrated to storage area networks (SANs), which allowed storage resources to be pooled into a large shared storage facility while improving overall storage utilization and reducing costs. The migration began with the deployment of Cisco MDS 9500 Series Multilayer Director Switches for enterprise resource planning (ERP) and data warehousing business functions at the Cisco data center in Research Triangle Park, North Carolina.

Due to the large scope of Cisco's business functions, it was challenging to build a SAN large enough to support an entire business function. For example, providing storage for the ERP business function would require more than 400 ports. One solution considered, using 64-port director-class switches and two storage subsystems, meant the SAN would rely on a complex and difficult-to-manage architecture. Typically, the more complex the solution, the higher the support costs and Cisco IT did not have the staff to build and support a SAN with this degree of complexity.

The Cisco IT storage group chose the Cisco MDS 9509 Multilayer Director Switch. The Cisco MDS 9509 switch provides up to 224 Fibre Channel ports in a single chassis, creating a SAN that is simple enough to manage and large enough to support the ERP environment. Cisco MDS technology also advances consolidation of storage across all business functions.

In later phases of the SAN migration, Cisco IT began to implement the Cisco MDS 9513 Multilayer Director Switch, which offers the availability, scalability, security, and management capabilities required for large data center storage environments. The Cisco MDS 9513 provides a high-performance, protocol-independent switch fabric and is compatible with Cisco MDS 9000 Family switching modules.

The new SAN architecture better positions the Cisco ERP Oracle 11i environment for growth. Virtual SANs (VSANs) are used for additional network security. Storage management has been consolidated with the SAN islands, and specific tasks, such as storage provisioning within the new SAN, are accomplished with greater flexibility. Servers and storage devices can be added as needed, without the additional expense and lead-time associated with the installation of an additional Fibre Channel switch.

FOR MORE INFORMATION

To read the entire case study or for additional Cisco IT case studies on a variety of business solutions, visit Cisco on Cisco: Inside Cisco IT www.cisco.com/go/ciscoit

NOTE

This publication describes how Cisco has benefited from the deployment of its own products. Many factors may have contributed to the results and benefits described; Cisco does not guarantee comparable results elsewhere.

CISCO PROVIDES THIS PUBLICATION AS IS WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Some jurisdictions do not allow disclaimer of express or implied warranties, therefore this disclaimer may not apply to you.

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

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at **www.cisco.com/go/offices.**