

ENTERPRISE-CLASS SAN SOLUTIONS FOR SMALL AND MEDIUM BUSINESSES

BY BALA NAGESH

Storage area networks (SANs) have traditionally been reserved for large enterprises with the budgets and IT staff resources to handle them. Now, Dell and Cisco have collaborated to create SAN solutions designed specifically for small and medium businesses, allowing them to deploy high-performance, enterprise-class storage in a cost-effective, easy-to-manage way.



The collaboration between Dell and Cisco stems in part from their shared commitment to small and medium businesses (SMBs). SMBs often need the advantages of enterprise-class systems, but face data management challenges magnified by faster growth rates, smaller budgets, and smaller IT staffs than are typically present in large enterprises.

Although SMBs can clearly benefit from consolidating resources in storage area networks (SANs), many obstacles make it difficult for them to do so. For example, the complexity and high cost of entry of SANs can be a major roadblock, and SMBs that implement them can face similarly high ongoing costs for support and maintenance.

The Cisco® MDS 9124 multilayer fabric switch can help SMBs meet these challenges and enable a painless transition to a SAN (see Figure 1). To help simplify adoption even further for SMBs, Dell is working with Cisco to offer pretested, pre-configured SAN solutions built on Dell™ hardware and the Cisco MDS 9124 switch.

Creating integrated SAN solutions for small and medium businesses

In the past, SMBs have typically had to choose between low-cost, entry-level SAN systems that limited expandability, and expensive, high-capacity SAN systems that required purchasing more hardware than necessary. Dell SMB SAN solutions

help eliminate this trade-off, enabling a SAN strategy that can scale appropriately as needed.

Combining Dell hardware with the Cisco MDS 9124 switch, these solutions incorporate simplified selection, installation, and management to help SMBs deploy enterprise-class storage without a dedicated team of storage experts. And the building-block approach of these solutions lets SMBs easily configure server and SAN components to meet capacity and feature requirements.

The Cisco MDS 9124 SAN switch, a key component of these solutions, has been designed with SMBs in mind. Its features include the following:

- **High performance:** The switch can deliver throughput of up to 4 Gbps on each port and up to 192 Gbps aggregate with 24-port configurations. This level of performance enables the switch to work with both current and future high-performance drives, helping maximize its useful lifetime and increase its long-term value.
- **High port density:** With 8–16 ports or 16–24 ports in each 1U rack-mountable switch, Dell SMB SAN solutions are designed to fit into small offices and minimize power and cooling requirements (see Figure 2). The switch's density/price ratio provides cost-effectiveness while allowing administrators to add to the SAN as needed.

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- **High availability:** A reduced number of internal parts helps increase reliability, while redundant hot-swappable power supplies contribute to high availability. Administrators can also integrate multiple switches into each SAN to avoid single points of failure. To help avoid fabric disruptions, the switch supports adding servers and storage through on-demand port activation as well as performing common configuration tasks—such as upgrading firmware or optical transceivers—without taking the switch offline.
- **Multi-layer fabric support:** The switch supports both Fibre Channel and virtual SANs (VSANs). VSANs enable administrators to partition a switch into multiple logical or virtual switches, and each VSAN can have its own fabric services and zoning.
- **Simplified setup and management:** An integrated configuration wizard that lists servers and storage allows administrators to quickly bring SANs online. Administrators can also use the point-and-click provisioning menu to easily configure zoning, VSANs, and other configuration options without having to know device World Wide Names (WWNs). In addition, the pretested configurations of Dell SMB SAN solutions incorporating the Cisco MDS 9124 switch help greatly simplify deployment, and integrated graphical SAN management tools and diagnostics help reduce the time required for ongoing management.

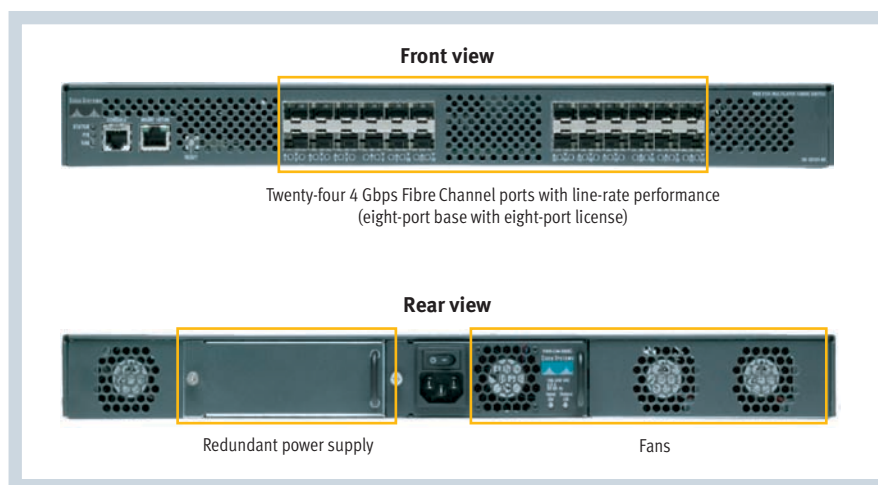


Figure 2. Front and rear views of the Cisco MDS 9124 switch

- **Integrated security:** The switch includes features such as secure management access control, role-based access control, hardware-enforced zoning, physical port lockdown, and audit trails to monitor configuration and policy changes.

Enabling cost-effective, enterprise-class SANs

Dell SMB SAN solutions with the Cisco MDS 9124 switch are designed to help SMBs deploy and scale enterprise-class storage cost-effectively while minimizing the management complexity and cost overhead that can be impediments for small IT teams. In addition, because the collaboration between Dell and Cisco has created an end-to-end supply chain,

SMBs can order SAN solutions through familiar channels, with the solutions then integrated at the factory and preconfigured for rapid deployment. These solutions are complemented by world-class support from Dell service teams backed by Cisco global support organizations. Dell and Cisco both hope that their collaboration will continue to provide industry-leading joint solutions like these in the future for both SMBs and other enterprises. [u](#)

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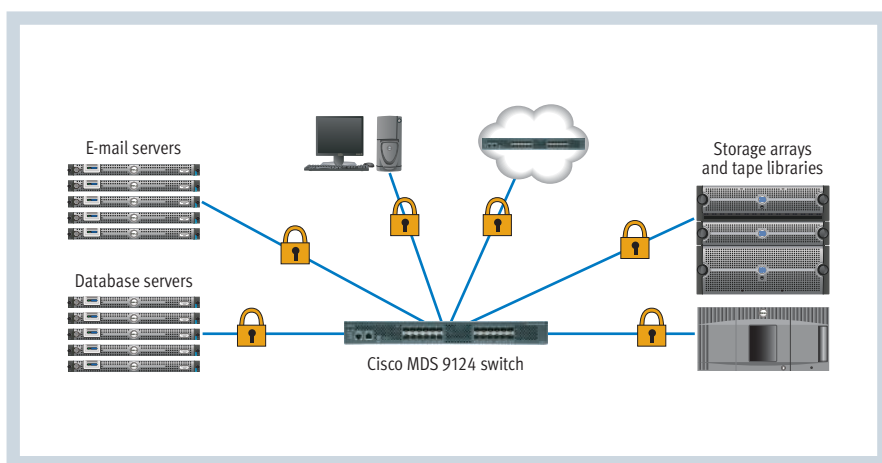


Figure 1. Cisco MDS 9124 multilayer fabric switch in an SMB environment

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