

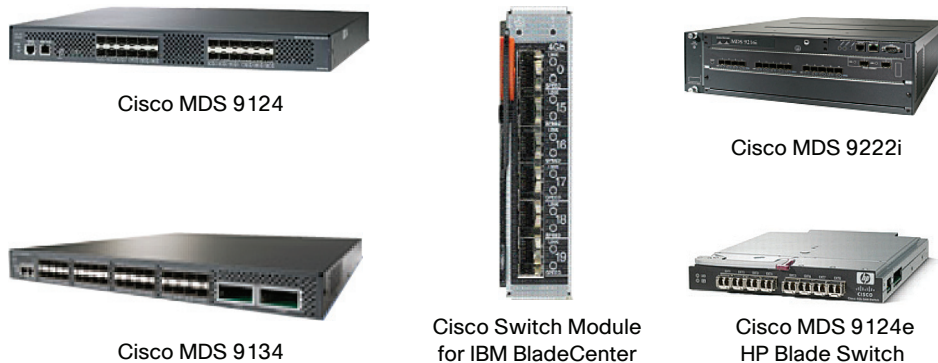
Cisco® MDS 9000 family fabric switches are cost-effective, highly scalable, easy-to-install, and highly configurable Fibre Channel switches that are ideal for small to medium-sized businesses (SMBs) and departmental and remote branch offices needing intelligent storage area networks (SANs).

With deployment options ranging from stand-alone, top-of-the rack, and blade switches for IBM BladeCenter and HP c-Class BladeSystem, the Cisco MDS 9100 Series Multilayer Fabric Switches provide customers with exceptional flexibility, while maintaining consistent feature sets and management capabilities.

In addition, the Cisco MDS 9222i Multiservice Modular Switch offers customers a modular yet highly compact form factor solution that provides an optimized platform for deploying high-performance SAN extension solutions, distributed intelligent fabric services, and cost-effective multiprotocol connectivity for both open and mainframe environments. With the Cisco MDS 9222i expansion slot, enterprise customers with Cisco MDS 9000 family director-class solutions can maximize existing investments and extend the capabilities of their core infrastructure into the fabric space.

Figure 1 shows the Cisco MDS 9000 family multilayer fabric switches.

Figure 1. Cisco MDS 9000 Family Multilayer Fabric Switches



Product Family Highlights

- The Cisco MDS 9000 family fabric switches consist of the following:
- Cisco MDS 9124 Multilayer Fabric Switch: 24-port Fibre Channel 4-Gbps full-fabric switch; supports VSANs and PortChannels
- Cisco MDS 9134 Multilayer Fabric Switch: 32-port Fibre Channel 4-Gbps full-fabric switch with 2 ports of standard 10-Gbps Fibre Channel for uplinks or stacking; supports VSANs, PortChannels, and IBM Fibre Connector (FICON)
- Cisco MDS 9124 blade switches:

- Cisco MDS IBM Blade Switch: Cisco 4-Gbps 10-port and 20-port Fibre Channel switch modules for IBM BladeCenter, BladeCenter T, and BladeCenter H
- Cisco MDS HP Blade Switch: Cisco MDS 9124e 12-port and 24-port fabric switches for HP c-Class BladeSystem
- Cisco MDS 9222i Multiservice Modular Switch: Flexible platform for up to 66 ports of 4-Gbps Fibre Channel and 4 ports of Gigabit Ethernet; multiprotocol support for Fibre Channel, Fibre Channel over IP (FCIP), Small Computer System Interface over IP (iSCSI), and FICON; and capability to support Cisco Storage Media Encryption (SME) natively and the Cisco Data Migration Manager (DMM) with the addition of a storage services module (SSM)

Benefits of Cisco MDS 9000 Family Fabric Switches

The Cisco MDS 9000 family fabric switch portfolio brings nearly all the benefits of Cisco director-class solutions to an entirely new audience, with features such as the following:

- Cisco fabric switches provide more features than competing products and offer the lowest total cost of ownership (TCO) for SMB and branch-office SAN deployments.
- Quick configuration wizard (on the Cisco MDS 9124 and 9134) simplifies and streamlines the deployment process.
- Based on the same Cisco MDS 9000 SAN-OS Software platform as the industry-leading Cisco director-class switches, the fabric switches offer many of the same features as the director-class switches.
- The switches provide a consistent feature set end-to-end. Cisco Fabric Manager and Cisco Device Manager are included in the price of the switch.
- Port licensing is enabled so that organizations can expand their deployments as they grow.
- SAN security is supported for authentication of devices on the fabric, and role-based access control (RBAC) is provided to restrict management access.
- There are no hidden licenses to enable features. The Cisco MDS 9000 family fabric switches support innovative Cisco features such as VSANs, PortChannels, quality of service (QoS), SAN security, SAN management, hardware-enforced zoning, and Cisco In Service Software Upgrade (ISSU) at no additional cost to the user.
- The Cisco MDS 9000 family Fibre Channel blade switch offers up to 20 or 24 autosensing Fibre Channel ports capable of speeds of 4, 2, and 1 Gbps. The Cisco MDS 9000 family Fibre Channel blade switches are designed to meet the performance and scalability requirements of the most demanding environments and have the same features and functions available as those on the Cisco MDS 9124 platform.
- The Cisco MDS 9222i provides SAN extension, disaster recovery, and business continuance, offering cost effectiveness. The Cisco MDS 9222i also provides modularity, allowing multiple blade options. This fabric switch also extends innovative features unique to Cisco, such as the Cisco DMM for heterogeneous data migration from one storage array to another and encryption of data sent through the fabric with Cisco SME.



Cisco MDS 9000 Family Fabric Switch Portfolio

At-A-Glance

Table 1 summarizes the features that the Cisco MDS 9000 family fabric switch platforms offer to meet the storage network requirements of campus, SMB, and enterprise data centers.

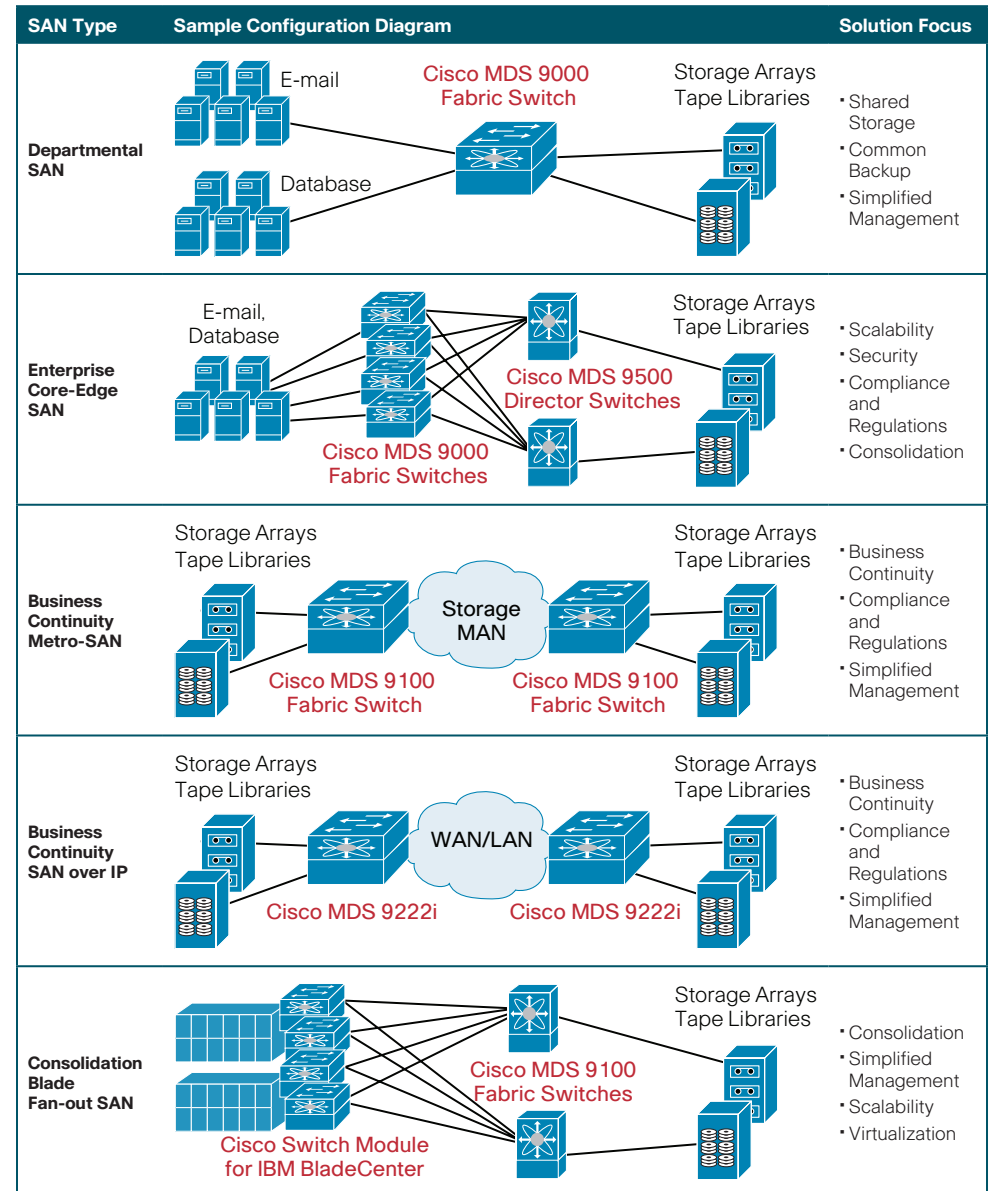
Table 1. Cisco MDS 9000 Family Fabric Switch Platform Features

Feature	Cisco MDS IBM Blade Switch for IBM BladeCenter	Cisco MDS HP Blade Switch for HP c-Class BladeSystem	Cisco MDS 9124	Cisco MDS 9134	Cisco MDS 9222i	Benefit
4-Gbps Fibre Channel Ports	10 or 20	12 or 24	8 to 24	24 to 64	18 to 66	Buy what you need, pay as you grow
10-Gbps Fibre Channel Ports	No	No	No	Yes	No	Scalability with high performance
Gigabit Ethernet Ports	No	No	No	No	4	Transparent integration of FCIP and iSCSI storage
Modular Expansion Slot	N/A	N/A	No	No	1	High flexibility, smooth migration, and investment protection with fabric storage services modules
Trunking or PortChannels and Safe Code Upgrades	Yes	Yes	Yes	Yes	Yes	High-availability features to minimize disruption
Extended Distance Support	Yes	Yes	Yes	Yes	Yes	Capability for business continuity solutions
Redundant Power Supplies	–	–	Yes	Yes	Yes	Critical for high availability
Virtual Fabric or VSAN	Yes	Yes	Yes	Yes	Yes	Isolation of fabric disruption without the need to spend money on isolated SAN islands
Port Security	Yes	Yes	Yes	Yes	Yes	Secure port-level access
Easy Configuration, Event Monitoring, and Fabric Management	Configuration wizard and Cisco Fabric and Device Managers	Configuration wizard and Cisco Fabric and Device Managers	Configuration wizard and Cisco Fabric and Device Managers	Configuration wizard and Cisco Fabric and Device Managers	Cisco Fabric and Device Managers	Time-efficient, easy setup and network monitoring and fabric management
QoS	Yes	Yes	Yes	Yes	Yes	Prioritization of business-critical applications in the fabric
Cisco SME and DMM	No	No	No	No	Yes	Data encryption for centralized security and transparent data movement with minimal application disruption

Storage Networking Solutions with Cisco Fabric Switches

Figure 2 shows sample configurations using Cisco MDS 9000 family fabric switches.

Figure 2. Sample SAN Configurations Using Cisco MDS 9000 Family Fabric Switches





Cisco MDS 9000 Family Fabric Switch Portfolio

Ordering Information

Table 2 lists ordering information for the Cisco MDS 9124, 9134, and 9222i. Table 3 lists ordering information for Cisco MDS IBM and HP Blade Switches.

Table 2. Ordering Information for Cisco MDS 9124, 9134, and 9222i Fabric Switches

Description	Part Number
Cisco MDS 9222i Multiservice Modular Switch	DS-C9222i-K9
Cisco MDS 9134 32-Port Multilayer Fabric Switch with 24 4-Gbps active ports, VSANs, PortChannels, and Cisco Fabric Manager	DS-C9134-K9
Cisco MDS 9134 32-Port Multilayer Fabric Switch with 32 4-Gbps active ports, VSANs, PortChannels, and Cisco Fabric Manager	DS-C9134-1K9
Cisco MDS 9134 24-Port Multilayer Fabric Switch with VSANs, PortChannels, Cisco Fabric Manager, 2x10G License pre-installed, 2 copper X2 CX4 transceivers, and 1 copper cable. Must be ordered as a pair of units to enable 48-ports.	DS-9134G-K9
Cisco MDS 9134 32-Port Multilayer Fabric Switch with VSANs, PortChannels, Cisco Fabric Manager, 2x10G License pre-installed, 2 copper X2 CX4 transceivers, and 1 copper cable. Must be ordered as a pair of units to enable 64-ports.	DS-9134G-1K9
Cisco MDS 9124 24-Port Multilayer Fabric Switch	DS-C9124-K9
Cisco MDS 9124 On-Demand Ports (8), 4-Gbps Activation License	M9124PL8-4G and M9124PL8-4G=

Table 3. Ordering information for Cisco MDS IBM and HP Blade Switches

Description	Part Number
Cisco MDS Fibre Channel Blade Switch for IBM BladeCenter, BladeCenter T, and BladeCenter H	
	IBM Part Number
Cisco 4Gb 20-port FC switch module for IBM Blade Center	39Y9280
Cisco 4Gb 10-port FC switch module for IBM Blade Center	30Y9284
Cisco 10-port License Upgrade for IBM Blade Center 4GB Modules	39Y9290
SFP Optics Options	
Cisco 4Gb Short-Wave length 4-pack SFP Modules for IBM BladeCenter	41Y8596
Cisco 4Gb Short-Wave length SFP Modules for IBM BladeCenter	41Y8498
Cisco 4Gb Long-Wave length SFP Modules for IBM BladeCenter	41Y8600
Cisco MDS Fibre Channel Blade Switch for HP c-Class BladeSystem	
	HP Part Number
Cisco MDS 9124e 12-port fabric switch	AG641-63001
Cisco MDS 9124e 24-port fabric switch	AG642-63001
Cisco MDS 9124e 12-port license upgrade	T5169-63101