

### Overview

## Cisco MDS 9000 Enterprise Package

Cisco's SAN-OS is the underlying system software that powers the award winning Cisco MDS 9000 Family of multilayer switches. The standard SAN-OS software package is bundled at no charge with the Cisco MDS 9000 series switches and includes a base set of features. Cisco Systems believes the standard features are required by most customers to build storage area networks (SAN). The Cisco MDS switch also has a set of additional advanced traffic engineering and advanced security features recommended for all Enterprise SANs. The additional features are bundled together in the Cisco MDS 9000 Enterprise package.

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## Feature List

- Inter VSAN Routing
  - Quality of Service (QoS) levels
  - Switch-Switch and Host-Switch Authentication
  - Host to LUN Zoning
  - Read-Only Zoning
  - Individual Port Security
  - VSAN Based Access Control
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## Customer Benefits

- Inter-VSAN Routing enables sharing of resources across VSANs without compromising the VSAN benefits of scalability, reliability, availability and security.
- Inter-VSAN Routing can be used in conjunction with FCIP to create more efficient business continuity and disaster recovery solutions.
- The QoS feature in Cisco SAN-OS allows for data traffic to be classified into distinct levels for service differentiation.
- Switch to switch and host to switch authentication helps to eliminate disruptions that may occur due to unauthorized devices connecting to a large enterprise fabric.
- LUN Zoning provides a single point of control for managing secure access to LUNs across heterogeneous storage subsystems.
- Read only zoning is especially useful for sharing volumes across servers for read-only operations for backup, data-warehousing etc.
- Individual port security assures SAN security is not compromised due to unauthorized devices connecting to a switch port.
- VSAN-based access control adds a layer of security where only administrators can configure switches within specified VSANs.

### Features/Functionality

**Inter VSAN Routing** Inter-VSAN routing enables selective transfer of data traffic between specific initiators and targets on different virtual SANs (VSANs) without merging VSANs into a single logical fabric. Fibre Channel control traffic does not flow between VSANs, nor can initiators access resources except for the ones designated with Inter-VSAN Routing.

**Quality of Service (QoS)** The QoS feature allows for data traffic to be classified into distinct levels for service differentiation.

**Switch-Switch and Host-Switch Authentication** Fibre Channel Security Protocol (FC-SP) capabilities in Cisco SAN-OS provide switch-switch and host-switch authentication.

**LUN Zoning** Cisco SAN-OS hardware enforced LUN Zoning ensures LUNs (Logical Unit Numbers) are accessible only by specified hosts.

**Read-Only Zones** Cisco MDS switches support a type of Small Computer System Interface (SCSI) command as a zoning attribute. In conjunction with other zoning attributes, when a SCSI command type attribute is restricted to SCSI read commands, read-only zones can be created.

**Port Security** Locks down the mapping of an entity to a switch port. The entity can be a host, target, or switch and is identified by its Worldwide Number (WWN).

**VSAN Based Access Control** Enables customers to define roles where the scope of the roles is limited to certain VSANs. For example, a network administrator role can be set up to allow configuration of all platform-specific capabilities, while VSAN-administrator roles can be set up to only allow configuration and management of specific VSANs.

<b>Ordering Information</b>	MDS 9100 Enterprise Package license for 1 Cisco MDS 9100 series switch	A7515A
	MDS 9200 Enterprise Package license for 1 Cisco MDS 9200 series switch	A7516A
	MDS 9500 Enterprise Package license for 1 Cisco MDS 9500 series switch	A7517A

<b>Software Prerequisites</b>	Cisco Fabric Manager	V1.3 or later firmware
	Java Virtual Machine	V1.4 or later
	Windows®	2000/XP
	Solaris	V2.8
	Red Hat Linux	

**Hardware Prerequisites**

- 1 MDS 9100, 9200, or 9500 series Cisco switch with V1.3 or later firmware
- PC, Workstation, or server – Intel Pentium III 500 MHz minimum
- 128 MB system memory min.

**Distribution Media** Cisco MDS 9000 Enterprise Package is a firmware resident Java based application within an MDS 9000 series switch.

**Software Licensing** Cisco MDS 9000 Enterprise package is licensed per MDS 9000 series switch



### Service and Support, HP Care Pack and Warranty Information

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<b>Software Warranty</b>	HP warrants that the software media will be free of physical defects for a period of 90 days from delivery.
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<b>Software Product Services</b>	Product Support gives the customer access to HP's experienced technical support resources as well as access to HP's Information Services database for support on a variety of multi-vendor/multi-platform software products. Product support includes escalations and problem coordination with the appropriate engineering group. HP Services offer a variety of options to allow you to tailor your product service to meet the needs of your organization. Basic warranty on products can be uplifted from day one to ensure you receive the service you need when you need it.
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<b>Software Product Services</b> (included with product)	Standard 1 year 8x5 phone support, service packs, right to new versions
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<b>Additional Services</b>	<p>The following services are offered as HP Care Pack Services:</p> <ul style="list-style-type: none"><li>• HP Care Pack services are available to upgrade the one year of Software Support included with the product to 3 full years.</li><li>• HP Care Pack services are available to upgrade the one year of Software Support included with the product to either 1 or 3 years of Support Plus 24, which provides 24x7 coverage (24 hours per day, 7 days per week, including holidays).</li><li>• HP Care Pack services are available to upgrade the one year of Software Support included with the product to either 1 or 3 years of Support Plus, which provides 13x5 coverage.</li><li>• Basic installation service is available.</li></ul>
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<b>Contractual Software Support Services</b>	Tailored support contracts based on personalized statement of work: contact your local support center via <a href="http://www.hp.com/support/">http://www.hp.com/support/</a> .
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### Contact your local Services department for more details

Software Support HP Care Pack Services:

[http://www.hp.com/hps/carepack/software/cp\\_storage.html](http://www.hp.com/hps/carepack/software/cp_storage.html)

Installation and Startup Service:

[http://www.hp.com/hps/storage/ns\\_replication.html](http://www.hp.com/hps/storage/ns_replication.html)

For additional HP Care Pack services information (hardware, software and installation support) for Europe and other geographies, as well as orderable part numbers, please go to <http://www.hp.com> and select the country of your choice.

If you have specific service questions contact your local HP representative. Contact information for your local area can be found at: <http://www.hp.com/hps>.

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