QuickSpecs

Overview

Feature List

- Virtual SANs (VSANs) for FICON and FCP
- FICON Control Unit Port (CUP)
- Fabric Binding
- Switch Cascading
- IBM TotalStorage Virtual Tape Server
- IBM TotalStorage Extended Remote Copy (XRC)
- Additional features
  - FICON Native Mode and Native Mode Channel-to-Channel operation
  - Persistent FICON FCID assignment
  - Port swapping for host-channel cable connections

Introduction

The Cisco MDS 9000 Family Mainframe package is a comprehensive collection of features required for using the Cisco MDS 9000 Family switches in mainframe storage networks. IBM Fibre Connection (FICON) is an architecture for high-speed connectivity between mainframe systems and I/O devices. The Cisco MDS 9000 Family can support the FICON protocol with an upgrade to Cisco MDS 9000 Family SAN-OS 1.3(4a) or later software. However, HP support for IBM FICON is currently limited to MDS 9200 and 9500 series switches running SAN-OS 3.0(2) software when used with HP XP arrays.
With the Mainframe package, the Cisco MDS 9000 Family has the capability to simultaneously support the Fibre Channel Protocol (FCP), Small Computer System Interface over IP (iSCSI), Fibre Channel over IP (FCIP), and FICON protocols. Providing support for all these protocols within a single, high-availability platform simplifies purchasing and deployment, reduces management costs, and leads to optimal usage of storage resources across open systems and mainframes.

Customer Benefits

- Provides Mainframe Fibre Channel switch connectivity and support to storage arrays such as HP's XP Series.
- Allows intermixing of FICON and FCP traffic on the same switch without compromising scalability, availability, manageability, and network security.
- Allows in-band management of the switch from FICON hosts and IBM Tivoli.
- Provides Fabric Binding to prevent unauthorized switches from joining the network and disrupting any current fabric operations.
- Switch Cascading facilitates creation of mainframe storage networks consisting of multiple switches with ISLs between them.
- Fully qualified with IBM TotalStorage Virtual Tape Server (VTS) and IBM TotalStorage Peer-to-Peer Virtual Tape Server. Which enhance FICON capabilities for data backup and recovery, and data availability.
- Qualified with IBM TotalStorage XRC application simplifies business-continuance implementation strategies by allowing asynchronous replication of data over extended distances.

Features/Functionality

VSAN hardware-based partitioning of a single physical SAN fabric	VSANs provide hardware-based partitioning of a single physical SAN into multiple VSANs that can be used to provide true hardware-based separation of FICON and FCP traffic.
Switch Management Using CUP	Implementation of a special control device called the FICON Control Device, also known as CUP, in the Cisco MDS 9000 Family allows in-band management of the switch from FICON hosts.
Fabric Binding and Switch-Switch Authentication	Fabric Binding feature helps ensure that Inter-Switch Links (ISLs) are only enabled between switches that have been authorized in the fabric binding configuration. This feature helps prevent unauthorized switches from joining the fabric or disrupting current fabric operations.
Switch Cascading	Switch Cascading feature supports a topology for FICON devices wherein ISLs can be used between a host and an I/O device. Thus, Switch Cascading facilitates creation of mainframe storage networks consisting of multiple switches.
Qualified with HP XP arrays	The Cisco MDS 9000 Family is fully qualified for use with HP XP arrays for both Open systems and Mainframe support using FICON.
	NOTE: Initially the use of SAN-OS version 3.0(2) is restricted to MDS 9200 and 9500 for Mainframe connectivity only, no mixing of Open Systems and Mainframes on the same switch when using this specific version of SAN-OS, Intermixing may be supported in a future release of SAN-OS which has been qualified by IBM for FICON support and also supports the Open System Tape Acceleration features currently available in other versions of SAN-OS
Qualified with IBM TotalSorage (VTS) and Peer-to-Peer VTS	The Cisco MDS 9000 Family is fully qualified by IBM with IBM TotalStorage Virtual Tape Server (VTS) and IBM TotalStorage Peer-to-Peer Virtual Tape Server. These FICON capabilities enhance data backup and recovery, and data availability. Deploying VTS on VSAN-enabled networks protects the local mainframe environment from instability or excessive control traffic introduced by the metropolitan-area network (MAN), WAN, and remote network.
Qualified with IBM TotalStorage XRC	The Cisco MDS 9000 Family is fully qualified by IBM with the IBM TotalStorage XRC application. XRC simplifies business-continuance implementation strategies by allowing asynchronous replication of data over extended distances. Deploying XRC on VSAN-enabled networks protects the local mainframe environment from instability or excessive control traffic introduced by the MAN, WAN, and remote network.
Supported with 9200 and 9500 series MDS switches	The Cisco MDS 9000 Mainframe Connectivity package is supported with all Cisco MDS 9200 and 9500 series modular switches.

Ordering Information

MDS 9200 Mainframe Fibre Connection license-To-Use - for 1 Cisco MDS 9200 series switch	T4409A
MDS 9500 Mainframe Fibre Connection license-To-Use - for 1 Cisco MDS 9500 series switch	T4408A
HP Services Installation and Startup Statement of Work is required	HA546A1

Software Prerequisites SAN-OS Version 3.0(2)

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Features/Functionality

Hardware Prerequisites	• 1 MDS 9200, or 9500 series Cisco switch with V3.0(2) firmware • 2 MDS 9200, or 9500 series Cisco switches with V3.0(2) firmware for cascaded configuration • 2Gb FC connections require 16-port, 2Gb FC modules or 12 or 24-port FC module • 2Gb Fibre Channel SFP, Long Wave Transceivers are required for IBM Z/Series servers connecting to 16-Port FC modules • 4Gb Fibre Channel SFP, medium range or Long range transceivers are required for IBM mainframe connections to MDS switches. • All 4Gb ports used for FICON must use port bandwidth reservation feature for full rate subscription
Distribution Media	Cisco MDS 9000 Mainframe connectivity package is software resident in the MDS 9000 series switch firmware which is called SAN-OS. A software license to use is distributed with a license key and is activated on a switch through Cisco Fabric Manager.
Software Licensing	Cisco MDS 9000 Mainframe Fibre Channel Connection package is licensed per MDS 9000 series switch
Software Product Services	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. **Software standard services** • Standard 1-year 24x7 phone support, service packs, right to new versions. **Additional services** • Subscription services to provide automatic distribution of new releases on a renewable annual contract basis • Tailored support contracts based on personalized statement of work: contact your local support center via http://www.hp.com/support/.
Software Warranty	HP warrants that the software media will be free of physical defects for a period of 90 days from delivery.

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Service and Support, HP Care Pack, and Warranty Information

- Software Support (Stand-alone software advisory and remedial 24x7 software telephone support)
- Software Product Subscription (New version license rights, and Media and documentation distribution service)
- Installation services are required (HA546A1) through a statement of work and must be purchased separately

These software product services are sold under HP Care Pack Services program and via customized contract-based services.

- HP Care Pack is defined as an upgrade to the product warranty attribute, available for a specific duration and hours of coverage.
- HP Care Pack is available for sale anytime during the warranty period for most products, but the commencement date will be the same as the Warranty Start Date (delivery date to end user customer). Proof of purchase may be required.
- HP Care Pack services are prepaid.
- Customers will have the ability to purchase additional years (3,4 and 5) of 24x7 HP Care Pack services and rights to new versions.

Contact your local Services department for more details

For additional information on Software Product Services and HP Care Pack, as well as orderable part numbers, please refer to the URL: http://h20219.www2.hp.com/services/cache/11171-0-0-225-121.aspx

For additional HP Care Pack (hardware & software and installation support) information for European and other countries, as well as orderable part numbers, please refer to the URL listed below and select the country of your choice
If you have specific questions about availability or how to obtain services contact your local HP representative. Contact information for your local area can be found at http://h18006.www1.hp.com/storage/sanworks-support.html.