



CHAPTER 3

Cisco MDS NX-OS Release 4.x Feature Lists

This chapter describes the new features that are included in the following 4.x NX-OS release:

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- [New Features for NX-OS Release 4.2\(3a\), page 3-1](#)
- [New Features for NX-OS Release 4.2\(3\), page 3-2](#)
- [New Features for NX-OS Release 4.2\(1b\), page 3-2](#)
- [New Features for NX-OS Release 4.2\(1a\), page 3-2](#)
- [New Features for NX-OS Release 4.1\(3a\), page 3-3](#)
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New Features for NX-OS Release 4.2(5)

4.2(5) Features

There are no new features for this release. The new features for this release are the same as those listed in the Cisco MDS 9000 Family Release Notes for Cisco MDS NX-OS Release 4.2(3a).

[Release Notes for NX-OS Release 4.2\(5\)](#)

New Features for NX-OS Release 4.2(3a)

4.2(3a) Features

There are no new features for this release. The new features for this release are the same as those listed in the Cisco MDS 9000 Family Release Notes for Cisco MDS NX-OS Release 4.2(1a).

[Release Notes for NX-OS Release 4.2\(3a\)](#)

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New Features for NX-OS Release 4.2(3)

4.2(3) Features

There are no new features for this release. The new features for this release are the same as those listed in the Cisco MDS 9000 Family Release Notes for Cisco MDS NX-OS Release 4.2(1a).

[Release Notes for NX-OS Release 4.2\(3\)](#)

New Features for NX-OS Release 4.2(1b)

4.2(1b) Features

There are no new features for this release. The new features for this release are the same as those listed in the Cisco MDS 9000 Family Release Notes for Cisco MDS NX-OS Release 4.2(1a).

[Release Notes for NX-OS Release 4.2\(1b\)](#)

New Features for NX-OS Release 4.2(1a)

4.2(1a) Features	Description
Cisco TrustSec Fibre Channel Link Encryption	Beginning with Cisco MDS NX-OS Release 4.2(1a), Fibre Channel data that is passed between E ports of 8-Gbps modules can be encrypted. The encryption algorithm is a 128-bit Advanced Encryption Standard (AES) and enables either AES-Galois Counter Mode (GCM) or AES-Galois Message Authentication Code (GMAC) for an interface.
FICON XRC Acceleration	eXtended Remote Copy (XRC) is a mainframe-based software replication solution in widespread use in financial institutions worldwide. Cisco previously supported XRC over FCIP at distances up to 200 km on the MSM-18/4 module. Beginning with NX-OS Release 4.2(1a), Cisco supports XRC over virtually unlimited distances.
I/O Accelerator (IOA)	Cisco MDS NX-OS 4.2(1a) supports the I/O Accelerator (IOA) on the MDS 900018/4-port Multiservice Module (MSM-18/4) and the 16-port Storage Service Node (SSN-16).
SAN Extension Support on the SSN-16	Beginning with MDS NX-OS Release 4.2(1a), you can deploy Fibre Channel Interface Protocol (FCIP) on the new 16-port Storage Services Node (SSN-16).

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4.2(1a) Features	Description
Port Group Monitoring	The new port-group-monitor command allows you to monitor port groups that go above and below a configurable bandwidth threshold.
X2 Transceiver Support on the MDS 9134 Fabric Switch	Beginning with MDS NX-OS Release 4.2(1a), the MDS 9134 Fabric Switch supports the 10-Gbps Ethernet DWDM Transceiver and the 10-Gbps Ethernet Transceiver X2 pluggable modules.

[Release Notes for NX-OS Release 4.2\(1a\)](#)

New Features for NX-OS Release 4.1(3a)

4.1(3a) Features
There are no new features for this release. The new features for this release are the same as those listed in the Cisco MDS 9000 Family Release Notes for Cisco MDS NX-OS Release 4.1(3).

[Release Notes for NX-OS Release 4.1\(3a\)](#)

New Features for NX-OS Release 4.1(3)

4.1(3) Features	Description
Smart Call Home Enhancement	MDS 9000 Family switches previously required an e-mail gateway to send notifications. Beginning with Cisco MDS NX-OS Release 4.1(3), all MDS switches are capable of sending notifications via https.
F port Trunking and F port channelling with NPV	Cisco MDS NX-OS Release 4.1(3) introduces F port trunking and F port channeling. These features are already available for E ports and are now available for F ports connected to NP ports on a switch where N port virtualization (NPV) is enabled.
Port Owner	The port owner feature is intended for environments where there is more than one administrator. Port owner allows an administrator to mark some ports so that they appear as reserved in Device Manager.
Port Guard	Beginning with NX-OS 4.1(3), you can hold a port down after a failure or a series of flaps that are rapid enough to exceed a configured threshold. This capability can help keep the malfunctioning port down to avoid a flood of error reports.
Cisco Data Mobility Manager Enhancements	The Cisco MDS NX-OS Release 4.1(3) includes several enhancements to Cisco Data Mobility Manger (DMM).

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4.1(3) Features	Description
Cisco Data Mobility Manager Method 3	Cisco Data Mobility Manager Method 3 is a new method introduced in Cisco NX-OS Release 4.1(3), that enables DMM to be used in topologies where there is a Dual Fabric SAN for server-to-storage Fibre Channel traffic and a third SAN (or VSAN) for migration traffic.
Support for DMM on the MDS 9222i Switch	Beginning with Cisco NX-OS Release 4.1(3), the MDS 9222i Multiservice Modular Switch supports Cisco DMM without requiring an SSM module in the MDS 9222i switch.
Cisco Storage Media Encryption Enhancements	The Cisco MDS NX-OS Release 4.1(3) includes several enhancements to Cisco Storage Media Encryption (SME).
Media Key Auto-replication	Beginning with NX-OS Release 4.1(3), SME users can set up automatic replication of media keys from a Cisco SME cluster to one or more other clusters. Cisco SME media key auto-replication is configured on a per tape volume group basis.
High availability KMC	Enhancements in Cisco NX-OS Release 4.1(3) enable the KMC to be used in high availability environments where unattended operation is a requirement.
Cisco Fabric Manager Release 4.1(3) New Features	Cisco Fabric Manager Release 4.1(3) includes new features and enhancements.
Web Client Real-time Performance Charts	The Cisco Fabric Manager Server (FMS) web client performance charts have been enhanced to display real-time interface statistics in addition to the historical data.
Zone Database Backup Enhancements	The Cisco Fabric Manager Zone edit tool allows users to backup the zone database information. File Transfer Protocol (FTP), secure FTP (SFTP), and Secure Copy Protocol (SCP) are now supported in addition to Trivial File Transfer Protocol (TFTP) to back up the zone database.
Find in table Command	A find in table command has been added in Cisco NX-OS Release 4.1(3) to locate rows in the Cisco Fabric Manager information table that is currently displayed.
Tools Menu Reorganization	The Cisco Fabric Manager Tools menu has been reorganized to group related tools under the following new submenus: Health, Connectivity, NPV, Data Mobility Manager, IP San, Security, and Install.
Flow Wizard List Filtering	The Fabric Manager Server flow wizard now allows new flow creation to be limited to a specific zone, rather than to an entire VSAN.
Fabric Manager Installer Changes	The following changes have been made to the Cisco Fabric Manager installer in Cisco NX-OS Release 4.1(3): The Fabric Manager components shared with Cisco DCNM were relocated to a common directory. The Oracle JDBC component is no longer distributed with Fabric Manager.
Fabric Manager Platform Support	Cisco NX-OS Release 4.1(3) is the last release to support Fabric Manager Solaris 8 and Red Hat Enterprise AS4 Linux.

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[Release Notes for NX-OS Release 4.1\(3\)](#)

New Features for NX-OS Release 4.1(1c)

4.1(1c) Features

There are no new features for this release. The new features for this release are the same as those listed in the Cisco MDS 9000 Family Release Notes for Cisco MDS NX-OS Release 4.1(1b).

[Release Notes for NX-OS Release 4.1\(1c\)](#)

New Features for NX-OS Release 4.1(1b)

4.1(1b) Features	Description
New 8-Gbps Performance Fibre Channel Module Support	Cisco NX-OS Release 4.1(1b) supports the following new switch hardware platforms and modules: <ul style="list-style-type: none"> • 48-port 8-Gbps Fibre Channel Switching Module • 24-port 8-Gbps Fibre Channel Switching Module • 4/44-port 8-Gbps Host-Optimized Fibre Channel Switching Module
Call Home Delayed Traps Feature	Cisco NX-OS Release 4.1(1b) provides the ability to generate a delayed trap so that the number of generated email messages is reduced. This method filters server reboots and avoids generating unnecessary Call Home email messages.
Smart Call Home Enhancement	Cisco NX-OS Software offers a Call Home feature for proactive fault management. Beginning with NX-OS Release 4.1(1b), all MDS switches are capable of sending notifications using HTTPS and can be integrated with Cisco Smart Call Home software.
SANTap Enhancements	SANTap is now supported on the MSM-18/4 module and the MDS 9222i switch. Third party applications like Recoverpoint and NetApp ReplicatorX are now able to take advantage of Generation 2 line cards.
IPv6 Support	Beginning with NX-OS Release 4.1(1b), IPv6 is supported on the MSM-18/4 module and the MDS 9222i switch.
NPV Traffic Management	Cisco NX-OS Software supports industry-standard N-port identifier virtualization (NPIV), which allows multiple N-port fabric logins concurrently on a single physical Fibre Channel link. HBAs that support NPIV can help improve SAN security by enabling zoning and port security to be configured independently for each virtual machine (OS partition) on a host. In addition to being useful for server connections, NPIV is beneficial for connectivity between core and edge SAN switches.

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4.1(1b) Features	Description
CFS Distribution Using Static List	Cisco NX-OS Release 4.1(1b), combines the Cisco Fabric Services (CFS) static list feature with the Fabric Manager's NPV device discovery feature and provides a near-seamless user experience of managing NPV devices using CFS.
Cisco Data Mobility Manager Enhancements	Beginning with NX-OS Release 4.1(1b), the Cisco MDS Data Mobility Manager (DMM) application is supported on the Cisco MDS 18/4-Port Multiservice Module. DMM is supported on the following cluster configurations: <ul style="list-style-type: none"> • Sun Cluster • HACMP(IBM) • VCS (Veritas) • MSCS (Microsoft)
Cisco Storage Media Encryption Enhancements	Beginning in NX-OS Release 4.1(1b), SME key management and provisioning are decoupled, which enables the KMC to be installed on a separate server from Fabric Manager Server (FMS). In addition, new roles are available to allow separate administration privileges. The new roles enable key management to be handled by a security group instead rather than the SAN administrators.
Switch Interoperability with Brocade 5.x and McData 9.07.	Cisco NX-OS software supports interoperability between Brocade 5.x and McData 9.07.

[Release Notes for NX-OS Release 4.1\(1b\)](#)