



Cisco Prime DCNM Release Notes, Release 6.2

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This document provides the release notes for Cisco Prime Data Center Network Manager (DCNM), Release 6.2. Use this document in combination with the documents listed in the “[Obtaining Documentation and Submitting a Service Request](#)” section on page 27.



Note

Release notes are sometimes updated with new information about restrictions and caveats. See the following website for the most recent version of the Cisco DCNM Release Notes:

http://www.cisco.com/en/US/products/ps9369/prod_release_notes_list.html

[Table 1](#) shows the online change history for this document.



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Table 1 Online History Change

Part Number	Revision	Date	Description
OL-29246-01	A0	April 12, 2013	Created release notes for Release 6.2(1).
	B0	April 15, 2013	<ul style="list-style-type: none"> Corrected the ID of resolved caveat CSCug30503. Corrected the list of supported hardware in Table 8. Revised the list and description of new features in the “New Features and Enhancements in Cisco DCNM Release 6.2” section.
	C0	April 17, 2013	<ul style="list-style-type: none"> Updated Table 8. Corrected the “New Features and Enhancements in Cisco DCNM Release 6.2” section.
	D0	April 22, 2013	Moved CSCug30503 to the “ Open Caveats—Cisco DCNM Release 6.2 ” section.
	E0	May 15, 2013	<ul style="list-style-type: none"> Added the Cisco Nexus 5596T switch to Table 8. Added a note about support for Cisco UCS 6100 and 6200 Series Fabric Interconnects to the “Introduction” section.
OL-29246-02	A0	August 8, 2013	Created release notes for Release 6.2(3).
	B0	August 12, 2013	<ul style="list-style-type: none"> Added CSCuf53008 to the “Resolved Caveats—Cisco DCNM Release 6.2(3)” section. Corrected the “Client Requirements” section.
	C0	August 13, 2013	Updated the “ LAN-Only Cisco DCNM Server Requirements ” section.
	D0	September 6, 2013	Added the “ Specific Limitations for Cisco DCNM SAN Release 6.2 ” section.

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Introduction

Cisco Prime DCNM combines the management of Ethernet and storage networks into a single dashboard to help network and storage administrators manage and troubleshoot health and performance across the following product families that run Cisco NX-OS software:

- Cisco MDS 9700 and 9500 Series Multilayer Directors, and Cisco MDS 9200 and 9100 Series Multilayer Switches
- Cisco Nexus 1000V Series Switches and Cisco Nexus 1010 Virtual Services Appliance
- Cisco Nexus 2000 Series Fabric Extenders
- Cisco Nexus 3000, 4000, 5000, 6000, and 7000 Series Switches
- Cisco Catalyst 6500 Series Switches
- Cisco FireWall Service Module (FWSM)
- Cisco UCS 6100 and 6200 Series Fabric Interconnects

Cisco DCNM provides limited support for the following Cisco platforms:

- Cisco Catalyst 6500 Series Switches
- Cisco Firewall Services Module (FWSM)
- Cisco UCS Fabric Interconnects

System Requirements

This section lists the tested and supported hardware and software specifications for Cisco DCNM server and client architecture. The application has been tested in English locales only.

This section includes the following topics:

- [Java Requirements, page 4](#)
- [Server Requirements, page 4](#)
- [Client Requirements, page 6](#)
- [Browsers, page 6](#)
- [Other Supported Software, page 6](#)
- [Software Download Site, page 7](#)
- [Hardware Supported, page 13](#)

Java Requirements

Cisco DCNM Server is distributed with Java JRE 1.6.0_31. Cisco DCNM clients should also use Java JRE 1.6.0_31. The DCNM installer installs JRE 1.6.0_31 to the following directory:
DCNM_root_directory/java/jre1.6.


Note

Starting with Cisco DCNM Release 6.2(3), Cisco DCNM clients support Java JRE 1.7.0_17.

Server Requirements

Cisco DCNM Release 6.2(x) supports the following databases:

- Oracle 10g and Oracle 11g Express (XE), Standard, and Enterprise Editions, and Oracle 11g Real Application Clusters (RAC).
- PostgreSQL 8.3

For deployment best practices, see the [“Deployment Best Practices”](#) section on page 7.


Note

Customers are responsible for all support associated with Oracle and PostgreSQL databases, including maintenance, troubleshooting, and recovery. Cisco recommends that customers perform regular database backups, either daily or weekly, to ensure that all data is preserved.

Cisco DCNM Release 6.2(x) supports running the Cisco DCNM server on these operating systems:

- Microsoft Windows 2008 R2 SP1 and Windows 2008 Standard SP2 (32-bit and 64-bit)
- Red Hat Enterprise Linux Release 5.6 and 5.7 (32-bit and 64-bit) or a lower version


Note

If a service pack for the Windows operating system is not listed, the service pack is not supported.

[Table 2](#) lists the minimum and recommended database server system requirements for running Cisco DCNM.

Table 2 Database Server System Requirements

Component	Minimum Requirements	Recommended Requirements
RAM (free)	2 GB	3 GB
CPU speed	2.5 GHz with dual-processor or dual-core CPU	3.45 GHz with dual-processor or dual-core CPU
Disk space (free)	80 GB	100 GB

SAN-Only Cisco DCNM Server Requirements

Table 3 lists the server resource requirements for deploying Cisco DCNM in a SAN-only environment. Follow these requirements when you are running only the Cisco DCNM server and the database is remote. If you want to run the database locally with the server, which is not a best practice, include the additional resources from Table 2.

Table 3 Cisco DCNM Server Resources for a SAN-Only Environment

Small SAN: Up to 50 Switches and Up to 2000 Ports	Medium SAN: Up to 200 Switches and Up to 5000 Ports	Large SAN: More than 200 Switches and More than 5000 Ports
Dual Core CPUs, 2 GHz (or faster)	Quad Core CPUs, 2 GHz (or faster)	Quad Core CPUs, 2 GHz (or faster)
4-GB memory, 60-GB free hard disk	8-GB memory, 80-GB free hard disk	12-GB memory, 100-GB hard disk
PostgreSQL, Oracle 10g, and Oracle11g Express (XE)	Oracle 10g and Oracle11g Express (XE) or Standard	Oracle11g Standard or Enterprise

LAN-Only Cisco DCNM Server Requirements

Table 4 lists the server resource requirements for deploying Cisco DCNM in a LAN-only environment. These server requirements apply to the Cisco DCNM web client when used to collect monitoring, performance, and health information with lightweight discovery through SNMP.



Note

The Cisco DCNM desktop client that manages vPC, VDC, and FabricPath features using deep discovery through XML can manage a maximum of 50 devices (2500 ports) with one Cisco DCNM server or a cluster of two servers. A cluster of two servers provides High Availability (HA) (Active-Active) in case one of the Cisco DCNM servers fails.

Table 4 Cisco DCNM Server Resources for a LAN-Only Environment

Small LAN: Up to 25 Switches and Up to 1000 Ports	Medium LAN: Up to 100 Switches and Up to 3000 Ports	Large LAN: More than 100 Switches and More than 3000 Ports
Dual Core CPUs, 2 GHz (or faster)	Quad Core CPUs, 2 GHz (or faster)	Quad Core CPUs, 2 GHz (or faster)
4-GB memory, 60-GB free hard disk	8-GB memory, 80-GB free hard disk	12-GB memory, 100-GB hard disk
PostgreSQL, Oracle 10g, and Oracle11g Express (XE)	Oracle 10g and Oracle11g Express (XE) or Standard	Oracle11g Standard or Enterprise

LAN and SAN Cisco DCNM Server Requirements

Table 5 lists the server resource requirements for deploying Cisco DCNM in a LAN and SAN environment.

Table 5 Cisco DCNM Server Resources for a LAN and SAN Environment

LAN: 25 Switches and up to 1000 Ports SAN: 50 Switches and up to 2000 Ports	LAN: 75 Switches and up to 3000 Ports SAN: 200 Switches and up to 5000 Ports
Dual Core CPUs, 2 GHz (or faster)	Quad Core CPUs, 2 GHz (or faster)

Table 5 Cisco DCNM Server Resources for a LAN and SAN Environment

LAN: 25 Switches and up to 1000 Ports SAN: 50 Switches and up to 2000 Ports	LAN: 75 Switches and up to 3000 Ports SAN: 200 Switches and up to 5000 Ports
8-GB memory, 80-GB free hard disk	12-GB memory, 100-GB free hard disk
	2 servers, LAN or SAN cluster or federation
Oracle 10g, Oracle 11g Standard or Enterprise	Oracle 11g Standard or Enterprise

**Note**

Although it is not required, it is a good practice to register the server system with DNS servers.

Client Requirements

Cisco DCNM clients support Windows 7, Windows 2008, and Red Hat Linux. [Table 6](#) lists the minimum hardware requirements for these client systems.

Table 6 Client Hardware Requirements

Hardware	Minimum Requirements
RAM (free)	1 GB
CPU speed	2.16 GHz (or faster) with one dual core processor or two single-core processors
Disk space (free)	2 GB

If Cisco DCNM-LAN and DCNM-SAN clients are launched together, the need for more CPU and memory rises to 2.0 GHz, 2 GB of free RAM, and 4 GB of free disk space.

**Note**

If you install Cisco DCNM-SAN in a virtual machine, we recommend that you reserve resources equal to the server resource requirements to ensure a baseline with physical machines.

Some Cisco DCNM features require a license. Before you can use the licensed features, you must install the Cisco DCNM license. For more information, see the *Cisco DCNM Installation and Licensing Guide, Release 6.x*.

Be sure to set the correct time zone value on the system clock (for example, UTC). Otherwise, Cisco DCNM-LAN cannot manage the switch properly.

Browsers

Web browsers that support Adobe Flash 10 are qualified for use with Cisco DCNM. These include Internet Explorer, Firefox, and Safari.

Other Supported Software

[Table 7](#) lists other software supported by Cisco DCNM Release 6.2(x).

Table 7 **Other Software Supported by Cisco DCNM**

Other Supported Software
Security:
ACS Versions, 4.0, and 5.1
Firewall/Cisco DCNM-SANServer Proxy: PIX Firewall, IP Tables
Telnet Disabled: SSH version 1, SSH version 2, Global Enforce SNMP Privacy Encryption
Web Client and Cisco DCNM-SAN Server Encryption: HTTPS
Performance Manager:
SNMP over UDP
SNMP over TCP
Virtual Machines:
ESX Server version 4.x or 5.x.
VMs that run any qualified or supported operating system version can run Cisco DCNM.

In addition, Cisco DCNM supports the following types of events: EMC Call Home events, fabric change events, and events that are forwarded by traps and e-mail.

Software Download Site

To download the latest Cisco DCNM software, go to <http://www.cisco.com/go/dcnm> and click Download Software.

Deployment Best Practices

Observe the following guidelines when deploying Cisco DCNM:

- Windows Operating System
 - During the initial installation, disable all security and antivirus tools that are running on your Windows server.
 - Do not run any other management applications on the Cisco DCNM server or the Cisco DCNM database server.
- Virtual Machines
 - When Cisco DCNM is deployed as a virtual machine (VM), do not share CPU and memory resources with other VMs on the virtual host.
 - When Cisco DCMM is deployed as a VM, do not share the data store with other VMs.
- Database
 - We recommend PostgreSQL for small, nonproduction and lab environments.

- Deploy an Oracle database when managing production or mission critical environments.
- Deploy an Oracle database on a separate server from the Cisco DCNM application server.
- If you plan to use an Oracle 11g database, configure the Oracle database as follows:
 - Increase the number of sessions and processes to 150 each from the default of 50.
 - Increase the number of open cursors to 500 from the default of 300.
- We recommend deploying Oracle 10g or Oracle11g for mission-critical production environments.



Note The password for the Oracle 11g Express (XE) database expires after 180 days. You must change this setting by using the following steps.

1. Log in to the Oracle database.
2. Enter the commands as shown in this example:

```
SQL> GRANT CONNECT,RESOURCE,UNLIMITED TABLESPACE TO username IDENTIFIED BY password;
Grant succeeded.
SQL> select username,password from dba_users where username='username';
SQL> ALTER PROFILE DEFAULT LIMIT
      2 FAILED_LOG_ATTEMPTS UNLIMITED
      3 PASSWORD_LIFE_TIME UNLIMITED;
Profile altered.
SQL> EXIT
```

- Network Time Protocol
 - We recommend that the Cisco DCNM server run the Network Time Protocol (NTP) to synchronize its clock with those of the managed devices.
- General Guidelines
 - Do not deploy Cisco DCNM when network latency is more than 50 ms from the switch management subnet to the Cisco DCNM server and Cisco DCNM database.
 - Deploy Cisco DCNM on high-performance tier storage (2 ms to 4 ms response time).
 - Deploy Cisco DCNM SAN in a federated configuration when the switch count exceeds 150 switches or the port count exceeds 15,000 connected ports per management server (whichever comes first).
 - Create users with the same password digest (for example, MD5) and encryption algorithm (for example, DES) for the same user on all switches in the Fibre Channel fabric. (MD5 and DES are the defaults.) Otherwise, Cisco DCNM-SAN will not be able to authenticate a user on the fabric if that user has different digest and encryption algorithms.

Installation Notes

The following installation notes apply to Cisco DCNM Release 6.2:

- The Cisco DCNM Installer includes the Cisco DCNM server and clients, Device Manager, SMI-S provider, PostgreSQL 8.3, and Strawberry Perl version 5.10.0.
- Cisco DCNM installers are available in 32-bit and 64-bit versions.
- Upgrade support is available from Cisco DCNM Release 6.1 to Cisco DCNM Release 6.2.

For information about installing and uninstalling Cisco DCNM Release 6.(x), see the *Cisco DCNM Installation and Licensing Guide*. You can find this publication on Cisco.com at this location:

http://www.cisco.com/en/US/products/ps9369/tsd_products_support_series_home.html

New Features and Enhancements in Cisco DCNM Release 6.2

Cisco DCNM Release 6.2 includes the new features, enhancements, and hardware support that are described in the following sections:

- [Common LAN and SAN Features and Enhancements, page 9](#)
- [LAN Features, page 9](#)
- [SAN Features, page 10](#)
- [Platform-Specific Features, page 10](#)
- [Key Product Features in Cisco Prime DCNM Release 6.2\(1\), page 10](#)
- [Key Product Features in Cisco Prime DCNM Release 6.2\(3\), page 12](#)

Common LAN and SAN Features and Enhancements

The following features are available in the Cisco DCNM web client for LAN and SAN functionality:

- Redundant Cisco DCNM architecture with automated failover and load balancing
- Archive backup enhancement
- Enhancement to Web Services API
- Enhanced event forwarding based on syslog description
- Delete switches from Cisco DCNM that have been decommissioned
- Enhanced performance export based on a consistent unit of measure
- Multi-switch terminal access through single or multiple commands from the Cisco DCNM thin client
- Enhancement to Host and Storage dashboards for multi-device selection
- LAN discovery dashboard enhancement—device and task view support

LAN Features

Cisco DCNM Release 6.2 supports these LAN features:

- Discovery enhancement--there is a soft limit of 50 LAN devices that can be discovered and a hard limit of 75 devices
- Cisco Nexus 3000 buffer usage charts and tabular data for microburst monitoring
- Traffic by VLAN report
- Generic online diagnostics (GOLD) report generation support

SAN Features

Cisco DCNM Release 6.2 supports these features for Cisco DCNM SAN:

- Fibre Channel flow wizard enhancement based on end-port traffic utilization
- Enhanced inactive path report adding device-alias login check
- Enhanced zone and alias discrepancy report now provides suggestion on how to fix identified discrepancy
- VSAN traffic enhancement enabling host device report only
- Array discovery for EMC and NetApp block storage using SMI-S
- Host redundancy check reports
- VCenter plugin for host dashboard
- Traffic utilization in hosts and storage dashboards
- VSAN traffic report fabric comparison and dual fabric report
- Support host to storage reports for SAN group
- Snooze event support

Platform-Specific Features

Cisco DCNM Release 6.2(1) supports the following platform-specific features:

- Cisco MDS 9000 Series
 - Cisco MDS 9710 Director 10-slot chassis
 - Cisco MDS 9000 48-port 16-Gbps Fibre Channel switching module
- Cisco Nexus 6004P-96Q switch
 - N6004P LEM module 12xQSFP+
- Cisco Nexus 3548P switch
 - Cisco Nexus 3000 buffer usage charts and tabular data for microburst monitoring
- UCS B-series enhanced visibility into blade attributes and LAN features
- Cisco Nexus 1000v Hyper-V

Cisco DCNM Release 6.2(3) supports the following platform-specific features:

- Cisco Nexus 7000 Series
 - Cisco Nexus 7718 18-slot chassis
 - Cisco Nexus 7710 10-slot chassis
 - Cisco Nexus 7700 Enhanced 48-port 1/10 Gigabit Ethernet SFP+ I/O module (F2 Series)
- Cisco Nexus 2000 Series,
- Cisco Nexus 1000V for Microsoft Hyper-V

Key Product Features in Cisco Prime DCNM Release 6.2(1)

This section provides additional details about some of the key product features in Release 6.2(1).

Redundant DCNM Architecture with Automated Failover and Load Balancing

The Cisco DCNM federated architecture allows for automated failover of the Cisco DCNM server to another active or standby Cisco DCNM server within the federated setup, if one of the servers goes offline. The federated architecture also enables you to move the acquisition of switches and fabrics between servers within the federation for load balancing.

Fibre Channel Flow Wizard Enhancement Based on End-Port Traffic Utilization.

The enhancement to the Fibre Channel Flow wizard adds a way for you to find the source devices based on traffic utilization percentage and adds the flows to the targets that they talk to. You can customize the percentage utilization threshold based on peak or averages to identify the Fibre Channel flows of interest and configure them for collection.

Enhanced Zone and Alias Discrepancy Report

The report now provides suggested resolution configuration to fix identified discrepancies. The suggested configuration is presented through a shell command that can be executed directly on the switch.

Archive and Backup Enhancement

Backup of configuration files has been enhanced to leverage a built-in TFTP server rather than requiring a separate SFTP server to be installed. The TFTP server is embedded with Cisco DCNM.

Enhanced Event Forwarding Based on Syslog Description

If you want to forward only events that match a certain description, such as port down events that match a particular interface (such as fc1/6), you need to look for a description string or regex that needs to be matched. A blank description is a wildcard. This feature allows you to specify an event-forwarding rule for certain ports, failure types, and severity.

Multi-Switch Terminal Access Through Single or Multiple Commands from the Cisco DCNM Thin Client

This feature allows you to work with multiple CLI windows at the same time. You can use a CLI command on multiple switches at the same time in the web client without using a Telnet session. For example, you can export the **show tech support** command on multiple switches and upload it to an FTP server at the same time while watching the output in each of the switch terminals.

Enhancement to Host and Storage Dashboards for Multi-Device Selection

This enhancement allow you to select multiple hosts or storage arrays to display the aggregate of these selections in the topology, event, and combined performance chart views, such as if you want to visualize traffic and topology for a given application cluster.

Cisco Nexus 3500 Buffer Usage Charts and Tabular Data for Microburst Monitoring

You can now monitor active buffers on a second-by-second basis and visualize statistics in a histogram and tabular view. This feature leverages the statistics buckets on the switch to enable collection of granular buffer usage from the low-latency Cisco Nexus 3500 switch.

Key Product Features in Cisco Prime DCNM Release 6.2(3)

This section provides additional details about some of the key product features in Release 6.2(3).

SAN Host Redundancy Check

The SAN host redundancy feature checks for path redundancy by taking into account switch and port status, and path configuration. It leverages multi-domain visibility to look beyond data center networks into storage arrays and into the hypervisor.

Storage Array Discovery

Heterogeneous array discovery provides visibility from the host down to the LUN across block- and file-based storage. In addition, Cisco DCNM provides a snapshot of capacity utilization, and a logical and physical array inventory, and it maps the inventory to hosts connected to the storage array. This feature is available on the Storage Dashboard.

VMware vCenter Plug-in

Cisco DCNM provides a plug-in for VMware vCenter to provide a host-centric view of network connectivity that includes topology, path configuration, alerts, and traffic across LAN, SAN, and the unified fabric. The unified fabric consists of Cisco Nexus, Cisco UCS, and Cisco MDS platforms.

UCS Blade Inventory

Cisco DCNM provides visibility into UCS server blades in the B-series chassis. The location of the blade in the chassis can be displayed, along with the service profile designation, and the server specification of the blade.

Generic Online Diagnostics

Starting with Release 6.2(3), Cisco DCNM supports the generic online diagnostics (GOLD) feature. With online diagnostics, you can test and verify the hardware functionality of a device while the device is connected to a live network. In particular, the online diagnostics help you verify that hardware and internal data paths are operating as designed so that you can rapidly isolate faults. Cisco DCNM provides a summary output report from the GOLD tests that can be run on Cisco Nexus 7000 Series devices and Cisco MDS 9000 Series devices.

Deep Discovery of Devices

Deep discovery and rediscovery of selected devices can be performed from the Cisco DCNM web client. In Cisco DCNM Release 6.2(3), the option for deep discovery and rediscovery of devices has been added to the Cisco DCNM LAN client. You can see all the tasks and devices in shallow discovery and then trigger various operations either collectively on discovery tasks or on individual devices. The device status screen has a history feature where you can see the status of the discoveries for the devices. For scalability reasons, the total number of devices that can be discovered through deep discovery is limited to 50 devices.

VSAN Dual Fabrics Report

The report allows you to see the distribution of traffic between two fabrics and their end devices. It helps identify potential multipathing software failures and unbalanced redundant links.

Snooze Feature

When configured, the snooze feature prevents forwarding of configured alerts during a specified time range.

Supported Cisco Platforms and Software Versions

For information about the software platforms and versions that Cisco DCNM supports, see the [Cisco DCNM Release Compatibility Matrix](#).



Note

For compatibility reasons, we recommend that you run the same version (or a later version) of Cisco DCNM as Cisco NX-OS software.

Hardware Supported

Table 8 lists the products and components that Cisco DCNM Release 6.2 supports.

Table 8 Hardware Features Supported by Cisco DCNM Release 6.2

Product/Component	Part Number
Cisco MDS 9000 Family	
Cisco MDS 9710 Multilayer Director	DS-C9710
Cisco MDS 9513 Multilayer Director	DS-C9513
Cisco MDS 9509 Multilayer Director	DS-C9509
Cisco MDS 9506 Multilayer Director	DS-C9506
Cisco MDS 9222i Multilayer Fabric Switch	DS-C9222i-K9
Cisco MDS 9216i Multilayer Fabric Switch	DS-C9216i-K9
Cisco MDS 9148 48-Port Multilayer Fabric Switch	DS-C9148-K9
Cisco MDS 9134 34-Port Multilayer Fabric Switch	DS-C9134-K9

Table 8 Hardware Features Supported by Cisco DCNM Release 6.2 (continued)

Product/Component	Part Number
Cisco MDS 9124 24-Port Multilayer Fabric Switch	DS-C9124-K9
Cisco MDS 9500 Series Supervisor-2 Module	DS-X9530-SF2-K9
Cisco MDS 9500 Series Supervisor-2A Module	DS-X9530-SF2A-K9
Cisco MDS 9500 Series Supervisor-1 Module	DS-X9530-SF1-K9
Cisco MDS 9000 12-port 4-Gbps Fibre Channel Switching Module	DS-X9112
Cisco MDS 9000 24-port 4-Gbps Fibre Channel Switching Module	DS-X9124
Cisco MDS 9000 48-port 4-Gbps Fibre Channel Switching Module	DS-X9148
Cisco MDS 9000 Family 4-Port 10-Gbps Fibre Channel Switching Module	DS-X9704
Cisco MDS 9000 Family 14-Port Fibre Channel and 2-port Gigabit Ethernet Module	DS-X9302-14K9
Cisco MDS 9000 16-Port 2-Gbps Fibre Channel Switching Module	DS-X9016
Cisco MDS 9000 32-Port 2-Gbps Fibre Channel Switching Module	DS-X9032
Cisco MDS 9000 32-Port Storage Services Module	DS-X9032-SSM
Cisco MDS 9000 8-port 1-Gbps IP Storage Module	DS-X9308-SMIP
Cisco MDS 9000 4-port 1-Gbps IP Storage Module	DS-X9304-SMIP
Cisco MDS 9000 24-Port 8-Gbps Fibre Channel Switching Module	DS-X9224-96K9
Cisco MDS 9000 48-Port 8-Gbps Fibre Channel Switching Module	DS-X9248-96K9
Cisco MDS 9000 4/44-Port Host-Optimized 8-Gbps Fibre Channel Switching Module	DS-X9248-48K9
Cisco MDS 9000 8-port 10-Gbps Fibre Channel over Ethernet (FCoE) Module	DS-X9708-K9
Cisco MDS 9000 32-port 8-Gbps Advanced Fibre Channel Switching Module	DS-X9232-256K9
Cisco MDS 9000 48-port 8-Gbps Advanced Fibre Channel Switching Module	DS-X9248-256K9
Cisco MDS 9000 48-port 16-Gbps Fibre Channel Switching Module	DS-X9448-768K9
Cisco MDS 9000 Family 16-Port Storage Services Node (SSN-16)	DS-X9316-SSNK9
Cisco MDS 9000 18/4-Port Multiservice Module (MSM-18/4)	DS-X9304-18K9
Cisco Nexus 7000 Series	
Cisco Nexus 7710 chassis	N7K-C7710
Cisco Nexus 7718 chassis	N7K-C7718
Cisco Nexus 7004 chassis	N7K-C7004
Cisco Nexus 7009 chassis	N7K-C7009
Cisco Nexus 7010 chassis	N7K-C7010
Cisco Nexus 7018 chassis	N7K-C7018
Supervisor 1 module	N7K-SUP1
Supervisor 2 module	N7K-SUP2

Table 8 Hardware Features Supported by Cisco DCNM Release 6.2 (continued)

Product/Component	Part Number
Supervisor 2 Enhanced module	N7K-SUP2E
Cisco Nexus 7700 Supervisor 2 Enhanced module	N77-SUP2E
Fabric module, Cisco Nexus 7718 chassis	M77-C7718-FAB-2
Fabric module, Cisco Nexus 7710 chassis	M77-C7710-FAB-2
Fabric module, Cisco Nexus 7018 chassis	N7K-C7018-FAB-2
Fabric module, Cisco Nexus 7018 chassis	N7K-C7018-FAB-1
Fabric module, Cisco Nexus 7010 chassis	N7K-C7010-FAB-2
Fabric module, Cisco Nexus 7010 chassis	N7K-C7018-FAB-1
Fabric module, Cisco Nexus 7009 chassis	N7K-C7009-FAB-2
48-port 10/100/1000 Ethernet I/O module	N7K-M148GT-11
48-port 1-Gigabit Ethernet SFP I/O module	N7K-M148GS-11
48-port 1-Gigabit Ethernet Module with XL Option	N7K-M148GS-11L
32-port 10-Gigabit Ethernet SFP+ I/O module	N7K-M132XP-12
32-port 10-Gigabit Ethernet SFP+ I/O module with XL Option	N7K-M132XP-12L
8-Port 10-Gigabit Ethernet Module with XL Option (requires X2)	N7K-M108X2-12L
2-port 100-Gigabit Ethernet I/O module with XL option	N7K-M202CF-22L
6-port 40-Gigabit Ethernet I/O module with XL option	N7K-M206FQ-23L
24-port 10-Gigabit Ethernet I/O module with XL option	N7K-M224XP-23L
32-port 1- and 10-Gigabit Ethernet SFP+ I/O module	N7K-F132XP-15
48-port 1/10 Gigabit Ethernet SFP+ I/O module (F2 Series)	N7K-F248XP-25
48-port 1/10 Gigabit Ethernet SFP+ I/O module (Enhanced F2 Series)	N7K-F248XP-25E
Cisco Nexus 7700 Enhanced 48-port 1/10 Gigabit Ethernet SFP+ I/O module (F2 Series)	N77-F248XP-23E
48 Port 1/10 GBase-T RJ45 Module (Enhanced F2-Series)	N7K-F248XT-25E
Cisco Nexus 6000 Series Switches	
Cisco Nexus 6001-64P Switch	N6K-C6001-64P
Cisco Nexus 6004P-96Q Switch	N6K-6004-96Q
Cisco Nexus 5000 Series Switches	
Cisco Nexus 5596T Switch	N5K-C5596T-FA
Cisco Nexus 5596UP Switch	N5K-C5596UP-FA
Cisco Nexus 5548UP Switch	N5K-C5548UP-FA
Cisco Nexus 5548P Switch	N5K-C5548P-FA
Cisco Nexus 5010 chassis	N5K-C5010P-BF
Cisco Nexus 5020 chassis	N5K-C5020P-BF
	N5K-C5020P-BF-XL
Cisco Nexus 0296-UPT chassis and GEM N55-M12T support	N5K-C5596T-FA-SUP

Table 8 Hardware Features Supported by Cisco DCNM Release 6.2 (continued)

Product/Component	Part Number
16-port Universal GEM, Cisco Nexus 5500	N5K-M16UP
Version 2, Layer 3 daughter card	N55-D160L3-V2
N5000 1000 Series Module 6port 10GE	N5K-M1600(=)
N5000 1000 Series Mod 4x10GE 4xFC 4/2/1G	N5K-M1404=
N5000 1000 Series Module 8port 4/2/1G	N5K-M1008=
N5000 1000 Series Module 6port 8/4/2G	N5K-M1060=
Cisco Nexus 4000 Series Switches	
Cisco Nexus 4001I Switch Module	N4K-4001I-XPX
Cisco Nexus 4005I Switch Module	N4K-4005I-XPX
Cisco Nexus 3000 Series Switches	
Cisco Nexus 3016 Switch	N3K-C3016Q-40GE
Cisco Nexus 3048 Switch	N3K-C3048TP-1GE
Cisco Nexus 3064-E Switch	N3K-C3064PQ-10GE
Cisco Nexus 3064-T Switch	N3K-C3064TQ-10GT
Cisco Nexus 3064-X Switch	N3K-C3064PQ-10GX
Cisco Nexus 3548 Switch	N3K-C3548P-10G
Cisco Nexus 2000 Series Fabric Extenders	
Cisco Nexus 2148 1 GE Fabric Extender	N2K-C2148T-1GE
Cisco Nexus 2224TP Fabric Extender	N2K-C2224TP-1GE
Cisco Nexus 2232TM 10GE Fabric Extender	N2K-C2232TM-10GE
Cisco Nexus 2232TM 10GE Fabric Extender	N2K-C2232TM-E-10GE
Cisco Nexus 2232PP 10 GE Fabric Extender	N2K-C2232PP-10GE
Cisco Nexus 2248TP 1 GE Fabric Extender	N2K-C2248TP-1GE
Cisco Nexus 2248TP E GE Fabric Extender	N2K-C2248TP-E GE
Cisco Nexus 2248PQ Fabric Extender	N2K-C2248PQ-10GE
Cisco Nexus B22 Fabric Extender for HP	N2K-B22HP-P
Cisco Nexus B22 Fabric Extender for Fujitsu	N2K-B22FTS-P
Cisco Nexus B22 Fabric Extender for Dell	N2K-B22DELL-P
Cisco Nexus 1000V Series Switch	
Cisco Nexus 1010 Virtual Services Appliance	N1K-C1010
Cisco Nexus 1010-X Virtual Services Appliance	N1K-C1010-X
Cisco Nexus 1110-S Virtual Services Appliance ¹	N1K-1110-S
Cisco Nexus 1110-X Virtual Services Appliance ¹	N1K-1110-X
Catalyst 6500 Switches	
Cisco Unified Computing System	
	UCS-6100

1. Cisco DCNM cannot be installed on a Cisco Nexus 1110-S or 1110-X Virtual Services Appliance. These devices can be discovered by Cisco DCNM.

Licensing

The free product features that come with Cisco Prime DCNM are referred to as Essentials Edition. No license is required to use these features because they are unlocked with the image. They are included at no cost and are a part of the image that can be downloaded from <http://www.cisco.com/cisco/software/navigator.html?a=a&i=rpm>.

For the list of these features, see the *Cisco DCNM Installation and Licensing Guide*.


Note

The standalone DCNM thick client has been discontinued as of release 6.1(1a)

Cisco DCNM Advanced Edition can be licensed for both LAN and SAN switches using the product IDs listed in [Table 9](#).

Cisco

Table 9 Cisco DCNM Advanced Edition License Product IDs

Product	PID, Paper Delivery (envelope)	PIDS, Electronic Delivery (e-mail)	Chassis PIDs
Cisco MDS 9700	DCNM-SAN-M97-K9=	L-DCNM-S-M97-K9=	DCNM-SAN-M97-K9
Cisco MDS 9500	DCNM-SAN-M95-K9=	L-DCNM-S-M95-K9=	DCNM-SAN-M95-K9
Cisco MDS 9200	DCNM-SAN-M92-K9=	L-DCNM-S-M92-K9=	DCNM-SAN-M92-K9
Cisco MDS 9100	DCNM-SAN-M91-K9=	L-DCNM-S-M91-K9=	DCNM-SAN-M91-K9
Cisco Nexus 7000 SAN	DCNM-SAN-N7K-K9=	L-DCNM-S-N7K-K9=	DCNM-SAN-N7K-K9
Cisco Nexus 7700 LAN	DCNM-N7K-K9=	L-DCNM-N7K-K9=	DCNM-N7K-K9
Cisco Nexus 7700 SAN	DCNM-SAN-N77-K9	L-DCNM-S-N77-K9	DCNM-SAN-N77-K9
Cisco Nexus 7700 LAN	DCNM-LS-N77-K9	L-DCNM-LS-N77K9	DCNM-LS-N77-K9
Cisco Nexus 7700 SAN and LAN	DCNM-LS-N77-K9=	L-DCNM-LS-N77K9=	DCNM-LS-N77-K9
Cisco Nexus 6001SAN	DCNM-SAN-N61-K9=	L-DCNM-S-N61-K9=	DCNM-SAN-M61-K9
Cisco Nexus 6001 LAN	DCNM-LAN-N61-K9=	L-DCNM-L-N61-K9=	DCNM-LAN-N61-K9
Cisco Nexus 6001 SAN and LAN	DCNM-LS-N61-K9=	L-DCNM-LS-N61K9	DCNM-LS-N61-K9
Cisco Nexus 6004 SAN	DCNM-SAN-N64-K9=	L-DCNM-S-N64-K9=	DCNM-SAN-M64-K9
Cisco Nexus 6004 LAN	DCNM-LAN-N64-K9=	L-DCNM-L-N64-K9=	DCNM-LAN-N64-K9
Cisco Nexus 6004 SAN and LAN	DCNM-LS-N64-K9=	L-DCNM-LS-N64K9	DCNM-LS-N64-K9
Cisco Nexus 5000 SAN	DCNM-SAN-N5K-K9=	L-DCNM-SAN-N5K-K9=	DCNM-SAN-N5K-K9
Cisco Nexus 5000 LAN	DCNM-LAN-N5K-K9=	L-DCNM-LAN-N5K-K9=	DCNM-LAN-N5K-K9
Cisco Nexus 5000 SAN and LAN	DCNM-LS-N5K-K9=	NA	DCNM-LS-N5K-K9
Cisco Nexus 3000	DCNM-LAN-N3K-K9=	L-DCNM-L-N3K-K9=	DCNM-LAN-N3K-K9



Note

Cisco Nexus Access licenses (DCNM-NXACC-100-K9 and DCNM-NXACC-250-K9) are no longer available in Cisco DCNM Release 6.1(1a) and later releases. Use DCNM-LAN-N3K and DCNM-LAN-N5K licenses above in place of DCNM-NXACC licenses

Product IDs for Cisco Fabric Manager licenses are listed in [Table 10](#).

Table 10 Cisco Fabric Manager License Product IDs

Platform	PID, Paper Delivery (envelope)	PID, Electronic Delivery (e-mail)
Cisco MDS 9500	M9500FMS1K9=	L-M9500FMS1K9=
Cisco MDS 9200	M9200FMS1K9=	L-M9200FMS1K9=
Cisco MDS 9100	M9100FMS1K9=	L-M9100FMS1K9=
Cisco Nexus 5000 SAN	N5000FMS1K9=	L-N5000FMS1K9=

In addition, Cisco DCNM supports the existing switch based SAN license, FMS_SERVER_PKG. For additional information about Cisco Fabric Manager licenses, see the [Cisco Fabric Manager Release Notes](#) on Cisco.com.

Service contract PIDs are required for opening a case with TAC for breakage or repair and for upgrade from older versions of Cisco DCNM and Fabric Manager. You can also select Cisco DCNM as part of the purchase of a switch chassis, under software options. For more information on licensing, see the FAQs at this URL: http://www.cisco.com/en/US/products/ps9369/prod_literature.html.

Registering a Product Authorization Key

To receive a Cisco DCNM license, you must register the Product Authorization Key (PAK) that you receive when you purchase Cisco DCNM. To register the PAK, follow these steps:

1. Go to <http://www.cisco.com/go/license>.
2. Enter the PAK, contact information, and MAC address or host ID of the Cisco DCNM server.

The license is sent as an e-mail attachment that is uploaded to Cisco DCNM Server and then assigned from the licensing pool to individual switches.

Limitations in Cisco DCNM Release 6.2(x)

This section includes the following topics:

- [General Limitations for Cisco DCNM Release 6.2, page 19](#)
- [Specific Limitations for Cisco DCNM SAN Release 6.2, page 19](#)

General Limitations for Cisco DCNM Release 6.2

License Installer

The license installer in Cisco DCNM Release 6.2 supports only US English. Attempting to install a license for any locale other than US English results in an error.

SMI-S API Support

A Storage Management Initiative Specification (SMI-S) API is not supported in a federated Cisco DCNM configuration. The use of an SMI-S provider for northbound integration requires at least one switch to be licensed in a fabric.

Specific Limitations for Cisco DCNM SAN Release 6.2

The Data Mobility Manager (DMM) feature has been enhanced to support larger LUN sizes and an increased number of DMM jobs. This enhancement is supported in Cisco DCNM Release 6.2(3) and later releases. The software changes require compatible code versions on the managed switches, and are supported in Cisco NX-OS Release 6.2(1) and later releases.

A DMM infrastructure that does not need these enhancements can continue to be managed with Cisco DCNM Release 6.2(1), or an earlier release. The managed switches must also run a Cisco NX-OS release earlier than Release 6.2(1).

If DMM is not used, the releases of Cisco DCNM and Cisco NX-OS do not need to match.

Caveats

This section includes the following topics:

- [Open Caveats—Cisco DCNM Release 6.2, page 19](#)
- [Resolved Caveats—Cisco DCNM Release 6.2\(1\), page 21](#)
- [Resolved Caveats—Cisco DCNM Release 6.2\(3\), page 22](#)

Open Caveats—Cisco DCNM Release 6.2

This section lists caveats that apply to both Cisco DCNM-LAN and Cisco DCNM-SAN.

- CSCud11964

Symptom: The virtual mac address does not change after using the “use-bia” option in HSRP.

This symptom might be seen when the “use-bia” option is used and the virtual mac address not changing in summary pane.

Workaround: Rediscover the device.

- CSCuf20756

Symptom: Rediscovery of devices takes longer than a fresh discovery of devices.

Conditions: This symptom might be seen when the simultaneous rediscovery of more than one task has a device that is a Cisco Discovery Protocol (CDP) neighbor in the task. The rediscovery of devices takes more time than it does in a fresh discovery.

Workaround: Trigger the rediscovery of one task at a time.

- CSCuf73759

Symptom: The two-layer vPC ID is not shown in the topology pane and links are not shown correctly in Topology-> port channel and in the vPC view.

Conditions: This symptom might be seen when you discover the two Cisco Nexus 5000 Series switches and the Cisco Nexus 1000v switch one-by-one with hop 0.

Workaround: Discover all the devices in one task, or rediscover the two uplink Cisco Nexus 5000 Series switches one-by-one.

- CSCuh50439

Symptom: A power supply that is shut down does not get updated on the Cisco DCNM Inventory screen.

Conditions: This symptom might be seen when a power supply that is already in a shut down state is inserted and the expected syslog messages are not generated on the device.

Because Cisco DCNM does not get the expected PS FOUND or PS DETECT message, it is unable to update the correct status of the power supply.

Workaround: Rediscover of all the VDCs in the devices to resolve this issue

- CSCuh96230

Symptom: The VDC rows do not expand in the Ethernet VDC screen.

Conditions: This symptom might be seen when multiple devices are discovered in the same task ID. At some point, the VDC rows are not expanded.

Workaround: Relaunch the Cisco DCNM LAN GUI for see the correct behavior.

- CSCuh97606

Symptom: The report generated email goes to the junk mail folder in Microsoft Outlook.

Conditions: This symptom might be seen when you click the **link-only** option to generate email.

Workaround: To add a specific address or domain to the Safe Recipients List, click a message from the sender. On the Home tab, in the Delete group, click **Junk**, and click **Never Block the Group or Mailing List**.

To manually add names or domains to these lists, do the following:

1. On the Home tab, in the Delete group, click **Junk**, and click **Junk E-mail Options**.
2. To add safe senders, click **Add** on the Safe Senders tab.

- CSCui06706

Symptom: A FEX rediscovery fails due to an error saving to the database.

Conditions: This symptom might be seen when rediscovery is triggered and old data needs to be removed and new data retrieved from the device. However, old data is not removed from the database, which causes the issue.

Workaround: Rediscover the device.

- CSCui35961

Symptom: After an upgrade from Cisco DCNM Release 6.2(1) to Release 6.2(3) in a primary or a secondary node in a federation, the web UI login page shows the Release 6.2(1). Login attempts to the SAN client trigger the following message:

```
This DCNM SAN client version 6.2(3) is not compatible with server version 6.2(1)Please use client version 6.2(1)
```

Conditions: This symptom might be seen in a 64-bit Windows 2008 R2 environment in a federated deployment when an automatic update of some archives in the SAN application (dcm.ear) does not occur during the Cisco DCNM upgrade process on any one of the node(s) in the federation.

Workaround: To restore the Cisco DCNM installation to the preupgrade version and start the upgrade process again, follow these steps:

1. Log in to the Windows server with the same administrator user that was used to install Cisco DCNM.
2. Stop all the Cisco DCNM services using the shortcut “Stop DCNM Servers” that is in the Start menu > All Programs > Cisco DCNM Server > Stop DCNM Servers.
3. Open the Windows services console and verify that all Cisco DCNM services are stopped. If necessary, refresh the services console wizard from Action > refresh to get the latest status.
4. Navigate to C:\Users\\.cisco_mds9000\. Open the install.conf file in an editor and replace all occurrences of 6.2(3) with 6.2(1). Save the file and exit.
5. Navigate to C:\Program Files\Zero G Registry\ and open the file .com.zerog.registry.xml. Replace all occurrences of 6.2.3.0 with 6.2.1.0. Save the file and exit.
6. Launch the Cisco DCNM 6.2(3) installer.exe to start the upgrade process.
7. After the upgrade process completes, verify that all Cisco DCNM services are up and running from the Windows services wizard.
8. Launch the Cisco DCNM web UI and verify if the version displayed in the login page is 6.2(3). Launch the Cisco DCNM SAN client and verify that a message like the one described in the symptom does not appear.

Resolved Caveats—Cisco DCNM Release 6.2(1)

- CSCuf30762

Symptom: Cisco DCNM LAN creates another discovery task when the number of devices in the discovery task is approximately 50 devices.

Conditions: This symptom might be seen when you trigger a fresh deep discovery of devices (approximately 50 devices in a task), and Cisco DCNM LAN creates a second task for the same devices again.

Workaround: This issue is resolved.

- CSCuf43829
Symptom: A Cisco DCNM LAN topology does not show the links between a Cisco Nexus 1000v switch and the uplink devices because the host name was changed on the Cisco Nexus 1000v from the Command-line interface.
Conditions: This symptom might be seen when the host name was changed on the Cisco Nexus 1000v from the Command-line interface.
Workaround: This issue is resolved.
- CSCug04392
Symptom: Device Manager does not launch automatically even when the Launch Device Manager check box is checked in the last step in the Device Manager install wizard. This symptom might be seen on the 64-bit Java JRE.
Workaround: This issue is resolved.

Resolved Caveats—Cisco DCNM Release 6.2(3)

- CSCud95687
Symptom: Deletion of devices takes time in Cisco DCNM. The devices are removed from web UI but they still appear in Cisco DCNM.
This symptom might be seen when the deletion of devices is triggered simultaneously. Those that belong to more than one task take additional time to delete.
Workaround: This issue is resolved.
- CSCue80485
Symptom: The port security feature of the Cisco DCNM LAN client does not remove the MAC address entry when it is deleted from the switch.
Conditions: This symptom might be seen when the MAC address entry is deleted from the switch Command-line interface. In this situation, the port security feature of the Cisco DCNM LAN client does not correctly update the MAC address.
Workaround: This issue is resolved.
- CSCuf53008
Symptom: Several JBoss software vulnerabilities exist when running Cisco DCNM Release 6.1(2) on the Red Hat Linux server.
Workaround: This issue is resolved.
- CSCuf56072
Symptom: Physical links are shown incorrectly in Cisco DCNM LAN for a two-layer vPC setup.

Conditions: This symptom might be seen when the FEX devices are not shown for the uplink switches which is the default view for Cisco DCNM LAN client topology. The physical link from a Cisco Nexus 1000v appears to just one uplink device because the FEX devices are shared for a two-layer vPC setup.

Workaround: This issue is resolved.

- CSCuf59815

Symptom: Physical links appear incorrectly in Cisco DCNM LAN for a two-layer vPC setup.

Conditions: This symptom might be seen when the FEX devices do not appear for the uplink switches, that is the default view of DCNM LAN client topology, the physical link from Nexus 1k will be shown to only 1 uplink device as the FEX devices are shared for 2 Layer vPC setup.

Workaround: This issue is resolved.

- CSCuf64359

Symptom: After device discovery, a vPC is not shown in the logical vPC view, even if the devices are licensed.

This symptom occurs only when devices are first discovered in Cisco DCNM. Within five minutes, the vPC appears in the logical vPC view.

Workaround: This issue is resolved.

- CSCuf82617

Symptom: When a dual-homed FEX goes offline and comes back online, the uplink switch state might change to unmanaged.

This symptom might be seen when the automatic rediscovery of uplink switches occurs because a FEX goes offline or comes online.

Workaround: This issue is resolved.

- CSCuf74186

Symptom: Discovering a new device can take a long time when a few devices are being deleted.

Conditions: This symptom might be seen when device deletion is in progress and the fresh discovery waits until the device deletion finishes. This issue occurs if the same device is deleted and freshly discovered when the discovery is in progress.

Workaround: This issue is resolved.

- CSCug17272

Symptom: You cannot use Cisco DCNM Release 6.2(1) to configure a DMM job.

Workaround: This issue is resolved.

- CSCug17758

Symptom: The VM name appears incorrectly in the VM-FEX screen.

The VM name appears incorrectly in the VM-FEX screen after the associated vntag mode port is shut and no shut. This issue occurs on both the Cisco Nexus 5500 switch and the Cisco Nexus 6000 Series switch.

Workaround: This issue is resolved.

- CSCug30503

Symptom: The EMC call home setting can be saved and applied, but the **Apply and Test** button works only if there is a licensed switch in the fabric. If there is not, the “SMTP server access failed” error appears.

Workaround: This issue is resolved.

- CSCui31922

Symptom: Module changes are not updated in Cisco DCNM after an online insertion and removal (OIR) on a Cisco Nexus 7000 Series chassis.

Conditions: This symptom might be seen when the default VDC is not discovered. Other custom VDCs are created and discovered in Cisco DCNM. If an OIR occurs on the Cisco Nexus 7000 Series chassis, changes are not reflected in Cisco DCNM.

Workaround: This issue is resolved.

- CCui42064

Symptom: If a report is emailed as an Excel report, the email attachment fails to open and a corrupted file error appears.

Conditions: This symptom might be seen when the the CVS Excel check box is checked. The email report as attachment and create report are checked.

Workaround: This issue is resolved.

Related Documentation

This section contains information about the documentation available for Cisco DCNM and for the platforms that Cisco DCNM manages.

This section includes the following topics:

- [Cisco DCNM Documentation](#)
- [Cisco Nexus 1000V Series Switch Documentation](#)
- [Cisco Nexus 2000 Series Fabric Extender Documentation](#)
- [Cisco Nexus 3000 Series Switch Documentation](#)
- [Cisco Nexus 4000 Series Switch Documentation](#)
- [Cisco Nexus 5000 Series Switch Documentation](#)
- [Cisco Nexus 6000 Series Switch Documentation](#)
- [Cisco Nexus 7000 Series Switch Documentation](#)
- [Catalyst 6500 Series Switch Documentation](#)

Cisco DCNM Documentation

The Cisco DCNM documentation is available at the following URL:

http://www.cisco.com/en/US/products/ps9369/tsd_products_support_series_home.html

The documentation set for Cisco DCNM includes the following documents:

Release Notes

[Cisco DCNM Release Notes, Release 6.x](#)

Installation and Licensing

[Cisco DCNM Installation and Licensing Guide, Release 6.x](#)

Cisco DCNM Fundamentals Guide

[Cisco DCNM Fundamentals Guide, Release 6.x](#)

Cisco DCNM Troubleshooting Guide

[Cisco DCNM Troubleshooting Guide](#)

Cisco DCNM for LAN Configuration Guides

[FabricPath Configuration Guide, Cisco DCNM for LAN, Release 6.x](#)

[Cisco DCNM Interfaces Configuration Guide, Release 6.x](#)

[Cisco DCNM Layer 2 Switching Configuration Guide, Release 6.x](#)

[Cisco DCNM Security Configuration Guide, Release 6.x](#)

[Cisco DCNM System Management Configuration Guide, Release 6.x](#)

[Cisco DCNM Unicast Routing Configuration Guide, Release 6.x](#)

[Cisco DCNM Virtual Device Context Configuration Guide, Release 6.x](#)

[Cisco DCNM Getting Started with Virtual Device Contexts, Release 6.x](#)

[Cisco DCNM Web Services API Guide, Release 6.x](#)

Cisco DCNM for SAN Configuration Guides

[System Management Configuration Guide, Cisco DCNM for SAN, Release 6.x](#)

[Interfaces Configuration Guide, Cisco DCNM for SAN, Release 6.x](#)

[Fabric Configuration Guide, Cisco DCNM for SAN, Release 6.x](#)

[Quality of Service Configuration Guide, Cisco DCNM for SAN, Release 6.x](#)

[Security Configuration Guide, Cisco DCNM for SAN, Release 6.x](#)

[IP Services Configuration Guide, Cisco DCNM for SAN, Release 6.x](#)

[Intelligent Storage Services Configuration Guide, Cisco DCNM for SAN, Release 6.x](#)

[High Availability and Redundancy Configuration Guide, Cisco DCNM for SAN, Release 6.x](#)

[Inter-VSAN Routing Configuration Guide, Cisco DCNM for SAN, Release 6.x](#)

SMI-S and Web Services Programming Guide, Cisco DCNM for SAN, Release 6.x

Cisco Nexus 1000V Series Switch Documentation

The Cisco Nexus 1000V Series switch documentation is available at the following URL:

http://www.cisco.com/en/US/products/ps9902/tsd_products_support_series_home.html

Cisco Nexus 2000 Series Fabric Extender Documentation

The Cisco Nexus 2000 Series Fabric Extender documentation is available at the following URL:

http://www.cisco.com/en/US/products/ps10110/tsd_products_support_series_home.html

Cisco Nexus 3000 Series Switch Documentation

The Cisco Nexus 3000 Series switch documentation is available at the following URL:

http://www.cisco.com/en/US/products/ps11541/tsd_products_support_series_home.html

Cisco Nexus 4000 Series Switch Documentation

The Cisco Nexus 4000 Series switch documentation is available at the following URL:

http://www.cisco.com/en/US/products/ps10596/tsd_products_support_series_home.html

Cisco Nexus 5000 Series Switch Documentation

The Cisco Nexus 5000 Series switch documentation is available at the following URL:

http://www.cisco.com/en/US/products/ps9670/tsd_products_support_series_home.html

Cisco Nexus 6000 Series Switch Documentation

The Cisco Nexus 6000 Series documentation is available at the following URL:

http://www.cisco.com/en/US/products/ps12806/tsd_products_support_general_information.html

Cisco Nexus 7000 Series Switch Documentation

The Cisco Nexus 7000 Series switch documentation is available at the following URL:

http://www.cisco.com/en/US/products/ps9902/tsd_products_support_series_home.html

Catalyst 6500 Series Switch Documentation

The Catalyst 6500 Series documentation is available at the following URL:

http://www.cisco.com/en/US/products/hw/switches/ps708/tsd_products_support_series_home.html

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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