Cisco DCNM Release Notes, Release 10.4(2)

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Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
http://www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 527-0883

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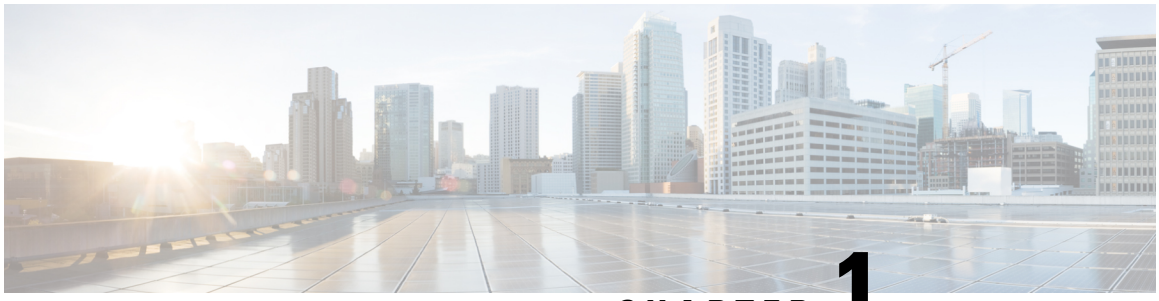


CHAPTER 1

Overview of Cisco DCNM

Cisco Data Center Network Manager unifies and automates Cisco Nexus® and MDS Multi-tenant infrastructure for data center management across Cisco Nexus 3000, 5000, 6000, 7000, and 9000 in NX-OS mode as well as MDS 9100, 9200, 9300, 9500 and 9700 Series Switches. Cisco DCNM lets you manage large scale LAN & SAN fabrics providing read-to-use management and automation capabilities. In addition, Cisco DCNM provides advanced SAN Management and troubleshooting functionality for Cisco MDS and Nexus Series Switches.

For more information, see https://www.cisco.com/c/en/us/products/cloud-systems-management/prime-data-center-network-manager/index.html.

Cisco DCNM, Release 10.4(2) is a unified release for managing SAN, LAN and Programmable Datacenter Fabrics in the Cisco NX-OS driven datacenter environment. To download the Cisco DCNM software, go to https://www.cisco.com/c/en/us/support/cloud-systems-management/prime-data-center-network-manager/tsd-products-support-series-home.html and click **Download Software**.

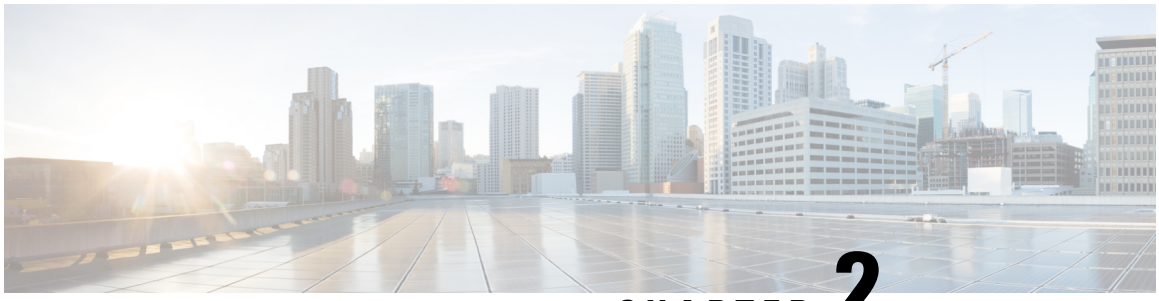
This document provides the Release Notes for Cisco DCNM, Release 10.4(2). Use this document in combination with the documents listed in the Related Documentation.

Note Release Notes are sometimes updated with new information about restrictions and caveats. To view the most recent version of the Cisco DCNM Release Notes document, see: http://www.cisco.com/c/en/us/support/cloud-systems-management/prime-data-center-network-manager/products-release-notes-list.html.

The following table shows the change history for this document.

Table 1: Change History

Date	Description
November 2017	Published Release Notes for Cisco DCNM Release 10.4(2)



CHAPTER 2

System Requirements

This chapter lists the tested and supported hardware and software specifications for Cisco Prime Data Center Network Management (DCNM) server and client architecture. The application has been tested in English locales only. This chapter contains the following section:

System Requirements for Cisco DCNM, Release 10.4(2)

Java Requirements

The Cisco DCNM Server is distributed with JRE 1.8.0_121 into the following directory:

```
DCNM_root_directory/java/jre1.8
```

Server Requirements

Cisco DCNM, Release 10.4(2), supports the Cisco DCNM Server on these 64-bit operating systems:

- Microsoft Windows 2008 R2 SP1
- Microsoft Windows 2008 Standalone SP2
- Microsoft Windows 2012 R2
- Red Hat Enterprise Linux Release 6.6 and 7.0
- OVA and ISO with integrated operating system

Cisco DCNM Release 10.4(2) supports the following databases:

- Oracle11g Express (XE), Standard, and Enterprise Editions, and Oracle 11g Real Application Clusters (RAC)
- PostgreSQL 9.4.5
- Oracle 12c Enterprise Edition (Conventional)—(Nonpluggable installation)

Note Cisco DCNM Release 10.4(2) does not support Oracle 12c pluggable database version installation.

- Oracle 12c RAC (nonpluggable installation)

Note The Cisco DCNM database size is not limited, and increases according to the number of nodes and ports that the DCNM manages with Performance Manager Collections enabled. You cannot restrict the database size. If you choose Oracle database, we recommend that you use Oracle SE or Enterprise edition, instead of Oracle XE due to table space limitations.

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

Cisco DCNM Release 10.4(2) supports ISO installation on bare-metal server (no hypervisor) on the following server platform:

- Cisco UCS C240M4 12G / 100G 4-CPU Cores with Cisco hardware RAID Controller [UCSC-MRAID12G-1GB/2GB] for RAID operation.

Cisco DCNM Release 10.4(2) supports the running of the Cisco DCNM Server on the following hypervisors:

- VMware ESXi 6.0
- VMware ESXi 6.5
- VMware ESXi 6.7
- VMware ESXi 6.7 U1
- VMware vCenter 6.0
- VMware vCenter 6.5
- VMware vCenter 6.7
- VMware vCenter 6.7 U1

Note

- vCenter server is mandatory to deploy the Cisco DCNM OVA Installer.
- When you log into the VMware vSphere Web Client, the Adobe Shockwave Flash crashes with the latest Google Chrome 62.0.3202.62 (64-bit), Mozilla Firefox 56.0.1 (64-bit) and Internet Explorer 8.0.7601.17514. Hence you cannot install Cisco DCNM on VMware ESX using VMware vSphere Web Client. This is a known issue with Adobe Shockwave Flash version 27.0.0.159.

Cisco DCNM Server resources for various installers are summarized in the following table:

Table 2: Server Resources for LAN or Programmable Fabric and SAN

LAN: 25 Switches and up to 1000 Ports **SAN: 50 Switches and up to 2000 Ports**	**LAN: 100 Switches and up to 3000 Ports** **SAN: 200 Switches and up to 5000 Ports**	**LAN and SAN: 400+ Nodes and 20000 Ports**
2 CPU Cores 2 GHZ (or faster) 2 vCPUs for ESXi or KVM, 2 GHz (or faster)	4 CPU Cores 2 GHZ (or faster) 4 vCPUs for ESXi or KVM, 2 GHz (or faster)	4 CPU Cores 2 GHZ (or faster) 4 vCPUs for ESXi or KVM, 2GHz (or faster)
8-GB memory, 80-GB free hard disk 2 servers or 2 VMs (ESXi or KVM), LAN/Programmable Fabric Native-HA or SAN federation	12-GB memory, 100-GB free hard disk 2 servers or 2 VMs (ESXi or KVM), LAN/Programmable Fabric Native-HA or SAN federation	12 GB memory, 100-GB free hard disk 2 servers or 2 VMs (ESXi or KVM), LAN/Programmable Fabric Native-HA or SAN federation
PostgreSQL 9.4.5 (included) Oracle11g or Oracle 12c Standard or Enterprise	PostgreSQL 9.4.5 (included) Oracle11g or Oracle 12c Standard or Enterprise	Native-HA: PostGreSQL (Included with OVA/ISO), Oracle11g or Oracle 12c Standard or Enterprise with RAC with dedicated resources

Note

- If there are multiple devices in the SNMP unreachable state, or if the Elasticsearch is running, Cisco DCNM (with 12GB memory) may run out of memory. This might happen when you use the Temperature monitoring or the Endpoint Locator features since both applications use Elasticsearch. In this case, you need to add an additional 12 GB memory.
- Although it is not mandatory, we recommend that you register the server system with Domain Name Service (DNS) servers.

Client Requirements

Cisco DCNM SAN desktop client and Cisco Device Manager support Windows 7, Windows 2008, Windows 2012, Windows 10, and Red Hat Linux. The following table lists the minimum hardware requirements for these client systems.

Table 3: Client Hardware Requirements

Hardware	**Minimum Requirements**
RAM (free)	4 GB
CPU speed	3 GHz or faster
Disk space (free)	20 GB

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

Some Cisco DCNM features require a license. Before using the licensed features, you must install a Cisco DCNM license for each Nexus-managed or MDS-managed platform.

Host Requirements

The following table lists the server resource requirements for deploying Cisco DCNM Release 10.4(2) Virtual Appliance (OVA).

Note Resource reservations for the OVA virtual machine are required to ensure consistent performance of the Cisco DCNM server.

Table 4: Host Requirements

Small Deployment: Up To 50 Switches	Large Deployment: More than 50 Switches
4 vCPUs, 2 GHz (or faster)	8 vCPUs, 2 GHz (or faster)
12 GB memory, 200 GB	24 GB memory, 200 GB

Supported Web Browsers

Cisco DCNM supports the following web browsers:

- Mozilla Firefox Version 53.0 (32-bit or 64-bit)
- Microsoft Internet Explorer Version 11.0.9600.18617CO

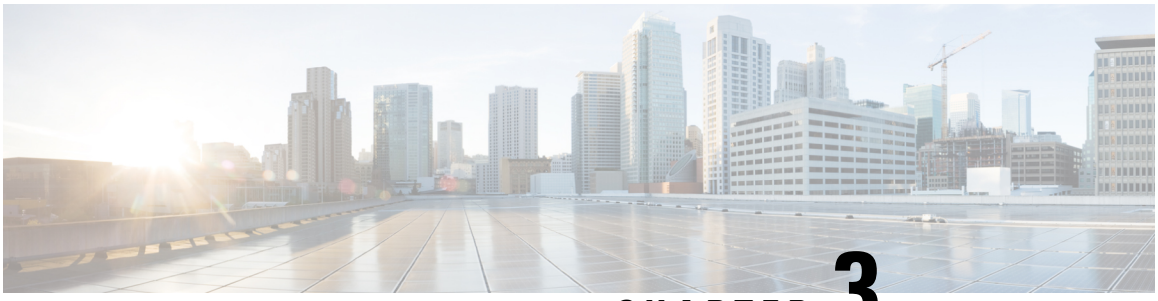
Other Supported Software

The following table lists the other software supported by Cisco DCNM, Release 10.4(2).

Table 5: Other Supported Software

Component	Minimum Requirements
Security	• ACS versions 4.0, 5.1, and 5.5 • Telnet Disabled: SSH Version 1, SSH Version 2, Global Enforce SNMP Privacy Encryption • Web Client and Cisco DCNM-SAN Server Encryption: HTTPS with TLS 1, 1.1 and 1.2
DHCP Server	• Cisco Network Registrar 8.2
OVA/ISO Installers	CentOS 6.7

Additionally, Cisco DCNM supports EMC call-home events, fabric change events, and events that are forwarded by traps and email.



CHAPTER 3

Guidelines and Limitations

This section lists guidelines and limitations that are related to Cisco DCNM 10.4(2)11.0(1).

- When configuring LDAP for remote AAA, the role assignments are case-sensitive.
- For deployments that require PIM border leaf and multi-site, use Cisco DCNM 10.4(2) or later. vPC and PIM Border leaf cannot coexist in the same fabric. If IP for Media (IPFM) vPC is required, use Cisco DCNM 10.3(2).
- Though deletion of the IP for Media (IPFM) hosts is possible in the DCNM for Media Controller solution, it is recommended that you should use this option with extreme caution, understanding that manual effort is needed to bring the solution back in sync.
- The Cisco non-blocking multicast (NBM) crashes on Cisco Nexus 9000 Series switch that runs NX-OS Release 7.0(3)F3(1). This is a known issue with Cisco Nexus 9000 Series switch that runs NX-OS Release 7.0(3)F3(1). The cleanFlow API might be used for cleaning the stale flows in Cisco DCNM, and that may trigger the issue with Nexus 9000 Series switch that runs NX-OS Release 7.0(3)F3(1).
- The icons or fonts on Cisco DCNM GUI may not appear correctly on Microsoft Windows 10 browsers. This problem can occur if your Windows 10 is set to block untrusted fonts or some security or mitigation options. Microsoft's Internet Explorer Browser Support team has provided with the following steps to address this issue.
    - You need to configure the *Allow Font Downloads* Internet Explorer Setting on the Internet Zone and Restricted Sites Zone (enabled by default). Perform the following steps:
        1. Search for **Group Policy Editor** in Control Panel.
        2. Choose **Computer Configuration > Administrative Templates > Windows Components > Internet Explorer > Internet Control Panel > Security Page > Internet Zone > Allow Font Downloads**.
        3. Double click and choose the **Enabled** radio button.
        4. Click **OK**.
        5. Choose **Computer Configuration > Administrative Templates > Windows Components > Internet Explorer > Internet Control Panel > Security Page > Restricted Sites Zone > Allow Font Downloads**.
        6. Double click and choose the **Enabled** radio button.
        7. Click **OK**.

8. Restart the computer so that the new setting takes effect.

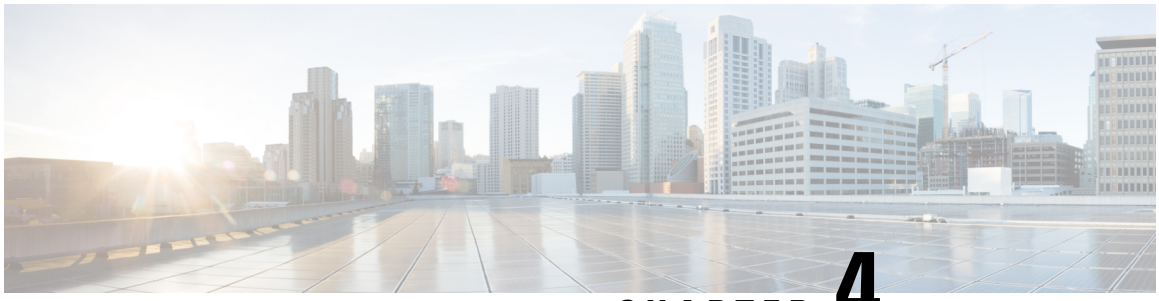
- The Cisco DCNM Virtual Machine Manager integration does not display in topology when the PKCS12 certificate is used. The REST API call to the Elasticsearch fails, and hence the Compute visualization feature does not work. This is because Elasticsearch uses the same SSL, and when you create a new self-signed SSL, you have to maintain the same version with Elasticsearch as well. Therefore the issue is with creating a self-signed SSL and then having the old one at /usr/elasticsearch/fmserver.jks. To address this issue, use JKS keystore format and do not use pkcs12 certificate. Make sure that the same JKS file is copied to both JBoss and Elasticsearch locations.
- **POAP Dynamic Breakout**—Beginning with Cisco NX-OS Release 7.0(3)I4(1), POAP dynamically breaks out ports in an effort to detect a DHCP server behind one of the broken-out ports. Previously, the DHCP server used for POAP had to be directly connected to a normal cable because breakout cables were not supported. POAP determines which breakout map (for example, 10gx4, 50gx2, 25gx4, or 10gx2) brings up the link that is connected to the DHCP server. If breakout is not supported on any of the ports, POAP skips the dynamic breakout process. After the breakout loop completes, POAP proceeds with the DHCP discovery phase as normal.

  Cisco DCNM leverages dynamic breakout to simplify fabric setup by retaining successful breakout configuration. Since dynamic breakout requires the other side of the link to be active, there are circumstances where you need to manually breakout interfaces, or may notice breakout in places which are not desired. In those situations, the user should adjust the ports on the Interfaces page before performing Save and Deploy in the Fabric Builder.
- If you want to perform an In-Service Software Upgrade (ISSU), you need to configure both IPv4 and IPv6 addresses on the switch.
- To support IPv6 addressing in Nexus 9000 Leaf template, the custom template needs to be configured with the IPv6 address field and the IPv6 gateway without IPv4 fields. The BUM Multicast Replication fields need to be added to specify correct RP Group and anycast IP address.
- Depending on how a switch handles the **cdp enable** CLI command (enabled or disabled by default), sometimes Cisco DCNM shows this as config difference, although the Save and Deploy operation is performed to correct it. This depends on the default behavior of the switch image (that is, whether the "show running-config" shows the CLI or not). To address this issue, the respective policy_template applied on the interfaces can be updated so that this CLI is ignored during the compliance check.
- When you edit a template in Cisco DCNM 10.4(2) while it is in use, the template changes are saved on the DCNM Web UI but not on the disk. If this setup is upgraded to Cisco DCNM 11.0(1), the template changes made in 10.4(2) are not retained since backup reads content from disk. To address this issue, ensure that the content on DCNM Web UI matches with the content on disk. If it does not match, you must manually edit these templates in 10.4(2) on disk before taking the backup of the content.
- During the installation if EPL eth2 adapter is used when eth0 and eth1 adapters are configured, the virtual machine needs to come up first. If the virtual machine does not come up before eth2 adapter is configured, the eth1 adapter will not come up, because of the incorrect mac-address assignment by installer.
- You should create a free-form configuration on all the white box switches that are managed by Cisco DCNM as shown below, and deploy them on all the switches before the final Save and Deploy operation.

  ```
  line console
  speed 115200
  stopbits 2
  ```

  This is only applicable to the Cisco DCNM LAN Fabric mode.

- On Microsoft Windows 2016 Standard server, you need to run the Cisco DCNM installation EXE file as as administrator. Cisco DCNM installation will not start on Microsoft Windows 2016 Standard server unless you set the EXE file as an administrator. To start the installation EXE file, you can right-click on the EXE file, and choose "**Run as administrator**."
- When the NX-OS Virtual Switches are cloned, they might use the same serial number. Since Cisco DCNM will discover them using the same serial number, the device discovery operation will fail.
- You must undeploy everything before border provisioning. However, Cisco DCNM allows you to change the roles from Leaf to BorderLeaf and Leaf to BorderGateway, or vice versa. Cisco DCNM also allows you to enable VRF-Lite and Multisite Domains with active deployments. You must ensure that the Border provisioning is enabled on the switch before deployment.
- Cisco DCNM allows you to view and purge the various events between the Host and Flow. The Events are recorded on **Media Controller > Events**. When you click **Purge** to remove the old or unwanted events, the DCNM server restarts, by default a maximum of 5000 event entries are retained for 6 hours..
- Though deletion of PMN hosts is possible in the Cisco DCNM for Media Controller solution, it is recommended that you should use this option with extreme caution, understanding that manual effort is needed to bring the solution back in sync.
- On the border leaf switch, ethernet interfaces are configured as sender and receiver WAN interfaces to transport multicast traffic between the switch and remote hosts. PIM policies are enabled on the sender and receiver WAN interfaces.



CHAPTER 4

New Features and Enhancements

Cisco Data Center Network Manager (DCNM), Release 10.4(2) includes the new features, enhancements, and hardware support that are described in the following section:

New Features and Enhancements in Cisco DCNM, Release 10.4(2)

This section includes information about the new features, enhancements, and hardware support for Cisco DCNM, Release 10.4(2).

PIM Router

The PIM Router feature introduced in the 10.4(2) release enables multicast traffic flow between DCNM managed and external fabrics. This is for IP Fabric for Media and therefore this feature supports the exchange of media flows between an DCNM managed IP fabric for media and external systems. A border leaf switch facilitates multicast traffic between the fabric's hosts and remote hosts.

For more information about this feature, see the DCNM Web Client Online Help.

Inline Upgrade

The Standalone Inline Upgrade and DCNM Native HA Inline Upgrade methods have been introduced as alternatives to the existing upgrade methods for OVA and ISO. Users can now upgrade with a fewer number of steps for these upgrade methods. For more information about the inline upgrade methods, see the Standalone Inline Upgrade for OVA/ISO section of the Cisco DCNM Installation Guide, Release 10.4(2).

LAN Fabric Provisioning Enhancements

This release supports multi-select, separation of VRF and Network deployment, and L2 and L3 extension via Border devices. For more information about this feature, see the Cisco DCNM Web Client Online Help.

NFM to DCNM Overlay Migration

Cisco Nexus Fabric Manager (NFM) provides a simple point-and-click approach to build and manage both the underlay spine-leaf topology and the VXLAN overlay. Since it is fully fabric aware, it understands how the fabric should operate and can autonomously configure and maintain fabric health throughout its lifecycle. You can migrate your existing Cisco NFM deployments to Cisco DCNM to gain additional capabilities.

Cisco DCNM 10.4(2) provides a migration assistant to read and migrate the NFM-generated configurations of a switch into the LAN Fabric Provisioning functions of Cisco DCNM. For more information about this feature, see the Cisco DCNM Web Client Online Help.

Network Operator View for Config Archive

The Switch dashboard has a new tab that shows archives for the selected device.

Preview Features

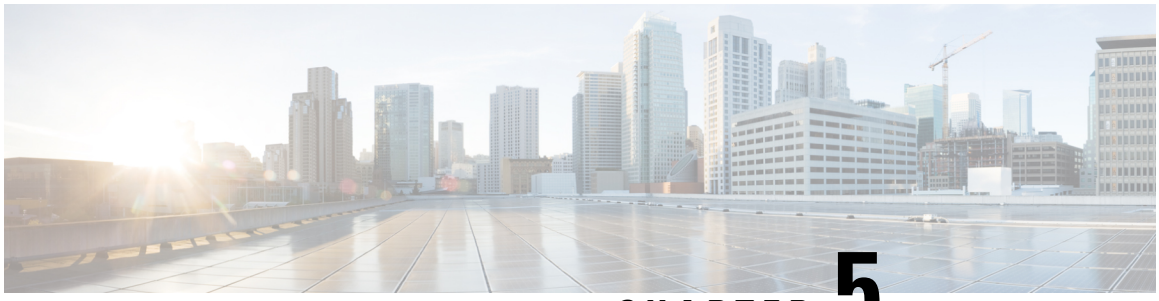
In Cisco DCNM Release 10.4(2), the following two features have been introduced for preview for LAN deployments. The idea behind the preview features is to allow customers to provide some early feedback that can then be incorporated into the General Availability (GA) release of these features. The preview features have not been qualified for any scaled environments.

- Compute Visibility with VMware Virtual Center (vCenter)
- Environmental Metrics visibility via streaming telemetry

These features are only available in the OVA form factor for DCNM 10.4.2. The installer options in which these features are supported are:

- VXLAN Fabric
- LAN, SAN, Auto-Config

For more information about this feature, see the Cisco DCNM Web Client Online Help.



CHAPTER 5

Upgrading Cisco DCNM

This chapter provides information about upgrading Cisco DCNM, and contains the following section:

Upgrading Cisco DCNM

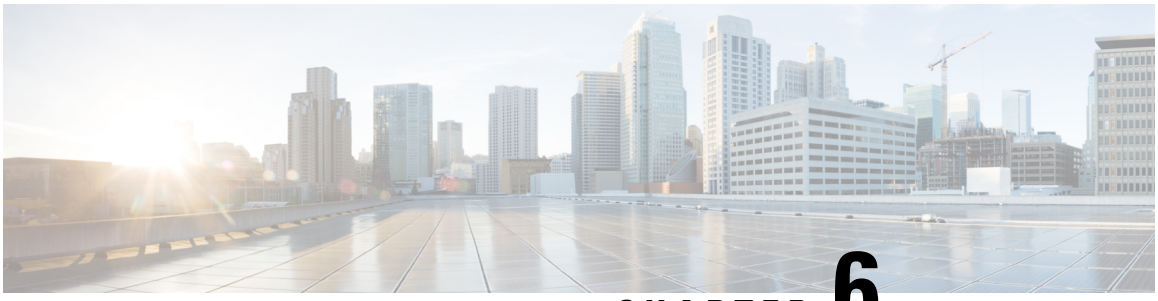
You can upgrade the following versions of Cisco DCNM directly to Cisco DCNM 10.4(2):

- Cisco DCNM, Release 10.4(1)
- Cisco DCNM, Release 10.3(2) - Professional Media Controller (PMN)
- Cisco DCNM, Release 10.3(1)

For more information about upgrading, see the "Upgrading Cisco DCNM" section of the *Cisco DCNM Installation Guide, Release 10.4(2)* at:

http://www.cisco.com/c/en/us/support/cloud-systems-management/prime-data-center-network-manager/products-installation-guides-list.html

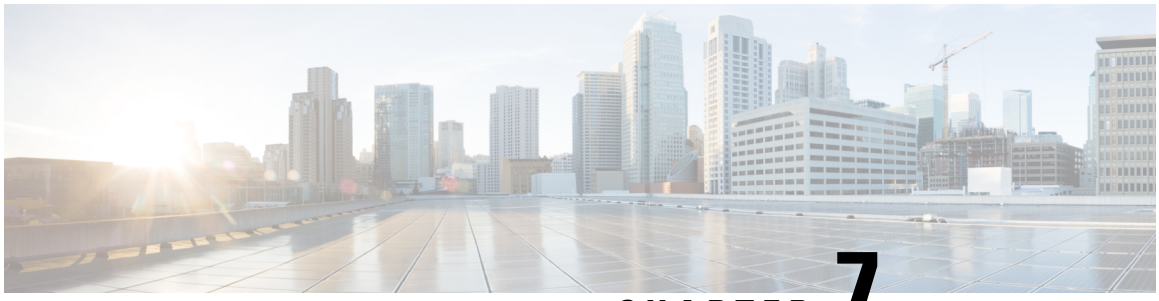
Upgrading Cisco DCNM



CHAPTER 6

Supported Cisco Platforms and Software Versions

For information about the software platforms and versions that the Cisco Data Center Network Manager (DCNM) Release 10.4(2) supports, see the Cisco DCNM Compatibility Matrix, Release 10.4(2).



CHAPTER 7

Supported Hardware

This chapter contains information about the products and components supported in Cisco Prime DCNM Release 10.4(2).

Hardware Supported in Cisco DCNM, Release 10.4(2)

The following tables list the products and components supported in Cisco DCNM, Release 10.4(2).

Table 6: Cisco MDS 9000 Family

Product/Component	Part Number
Cisco MDS 9700 48-Port 32-Gbps Fibre Channel Switching Module	DS-X9648-1536K9
Cisco MDS 9250i Multilayer Fabric Switch	DS-9250I-K9
Cisco MDS 9124 24-Port Multilayer Fabric Switch	DS-C9124-K9
Cisco MDS 9134 34-Port Multilayer Fabric Switch	DS-C9134-K9
Cisco MDS 9148 48-Port Multilayer Fabric Switch	DS-C9148-K9
Cisco MDS 9148 48-Port Multilayer Fabric Switch	DS-C9148S-K9
Cisco MDS 9216i Multilayer Fabric Switch	DS-C9216i-K9
Cisco MDS 9222i Multilayer Fabric Switch	DS-C9222i-K9
Cisco MDS 9506 Multilayer Director	DS-C9506
Cisco MDS 9509 Multilayer Director	DS-C9509
Cisco MDS 9513 Multilayer Director	DS-C9513
Cisco MDS 9706 Multilayer Director	DS-C9706
Cisco MDS 9710 Multilayer Director	DS-C9710
Cisco MDS 9718 Multilayer Director	DS-C9718

Product/Component	Part Number
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 12-port 4-Gbps Fibre Channel Switching Module	DS-X9112
Cisco MDS 9000 12-port 4-Gbps Fibre Channel Switching Module	DS-X9112
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 24-Port 8-Gbps Fibre Channel Switching Module	DS-X9224-96K9
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 4/44-Port Host-Optimized 8-Gbps Fibre Channel Switching Module	DS-X9248-48K9
Cisco MDS 9000 48-Port 8-Gbps Fibre Channel Switching Module	DS-X9248-96K9
Cisco MDS 9000 Family 14-Port Fibre Channel and 2-port Gigabit Ethernet Module	DS-X9302-14K9
Cisco MDS 9000 18/4-Port Multiservice Module (MSM-18/4)	DS-X9304-18K9
Cisco MDS 9000 4-port 1-Gbps IP Storage Module	DS-X9304-SMIP
Cisco MDS 9000 8-port 1-Gbps IP Storage Module	DS-X9308-SMIP
Cisco MDS 9000 Family 16-Port Storage Services Node (SSN-16)	DS-X9316-SSNK9
Cisco MDS 9000 Family 24/10 SAN Extension Module	DS-X9334-K9
Cisco MDS 9000 48-port 16-Gbps Fibre Channel Switching Module with SFP LC connectors	DS-X9448-768K9
Cisco MDS 9500 Series Supervisor-1 Module	DS-X9530-SF1-K9
Cisco MDS 9500 Series Supervisor-2 Module	DS-X9530-SF2-K9
Cisco MDS 9500 Series Supervisor-2A Module	DS-X9530-SF2A-K9

Product/Component	Part Number
Cisco MDS 9000 Family 4-Port 10-Gbps Fibre Channel Switching Module	DS-X9704
Cisco MDS 9000 8-port 10-Gbps Fibre Channel over Ethernet (FCoE) Module	DS-X9708-K9
Cisco MDS 48-Port 10-Gigabit Fibre Channel over Ethernet (FCoE) Module with SFP LC connectors	DS-X9848-480K9
Cisco MDS 9132U 1RU Switch 32x32G-FC	DS-C9132U

Table 7: Cisco Nexus 9000 Series Switches

Product/Component	Part Number
Cisco Nexus 9000 Series Switches	
48P 1/10/25G + 6x100G QSFP28 1RU	N3K-C36180YC-R
36 40/100G Ethernet module for Nexus 9500 Series	N9K-X9736C-FX
64x100G QSFP28 + 2x10GSFP 1RU	N9K-C9364C
36x100G Ethernet module for Nexus 9000 Series	N9K-X9636C-RX
1RU TOR, fixed module 48 100/1000Mbps + 4 25G SFP28 + 2 100G QSFP28	N9K-C9348GC-FXP
1RU TOR, fixed module 48 10/25G SFP28 + 6 40/100G QSFP28	N9K-C93180YC-FX
1RU TOR, fixed module for Nexus 9300 Series 6 40G/100G QSFP28 + 48 10G BASE-T	N9K-C93108TC-FX
Broadwell CPU based Supervisor module for Nexus 9400 Series	N9K-SUPA-PLUS
Broadwell CPU based Supervisor module for Nexus 9400 Series	N9K-SUPB-PLUS
Nexus 9K Fixed with 48p 10G BASE-T and 6p 40G/100G QSFP28	N9K-C93108TC-EX
N9K-C92300YC-Fixed Module	N9K-C92300YC
48-port 1/10/25 Gigabit Ethernet SFP+ and 4-port 40/100 Gigabit Ethernet QSFP Line Card	N9K-X97160YC-EX
Nexus N9K-C9232C Series fixed module with 32x40G/100G	N9K-C9232C
Nexus 9K Fixed with 48p 1/10G/25G SFP+ and 6p 40G/100G QSFP28	N9K-C93180YC-EX

Product/Component	Part Number
Cisco Nexus 9000 Series 40GE Modules	
N9K 32p 40G Ethernet Module	N9K-X9432PQ
36p 40G Ethernet Module	N9K-X9636PQ
Cisco Nexus 9000 Series 10GE Fiber and Copper Modules	
8-port 100-Gigabit CFP2 I/O module	N9K-X9408PC-CFP2
100 Gigabit Ethernet uplink ports	N9K-M4PC-CFP2
Cisco Nexus 9500 Line Card support	N9K-X9564PX
N9K 48x1/10G-T 4x40G Ethernet Module	N9K-X9464PX
Cisco Nexus 9500 Line Card support	N9K-X9564TX
N9K 48x1/10G SFP+ 4x40G Ethernet Module	N9K-X9464TX
Cisco Nexus 9000 Series GEM Module	
N9K 40G Ethernet Expansion Module	N9K-M12PQ
N9K 40G Ethernet Expansion Module	N9K-M6PQ
Cisco Nexus 9200 Switches	
Nexus 92160YC-X with High performance 1RU box, 48 1/10/25-Gb host ports	N9K-C92160YC-X
Nexus 9272Q with High-performance, 72-port/40-Gb fixed switching 2RU box, 5.76 Tbps of bandwidth	N9K-C9272Q
Nexus 9200 with 56p 40G QSFP+ and 8p 100G QSFP28	N9K-C92304QC
Nexus 9200 with 36p 40G 100G QSFP28	N9K-C9236C
Nexus 9200 with 48p 1/10G/25G SFP+ and 6p 40G QSFP or 4p 100G QSFP28	N9K-C92160YC-X
Nexus 9200 with 72p 40G QSFP+	N9K-C9272Q
Cisco Nexus 9300 Fixed Switches	
Nexus 9300 with 24p 40/50G QSFP+ and 6p 40G/100G QSFP28	N9K-C93180LC-EX
9372-PXE - 48 1/10-Gbps (SFP+) ports and 6 Quad SFP+ (QSFP+) uplink port, 1 RU box	N9K-C9372PX-E
Cisco Nexus 9396PX Switch	N9K-C9396PX
Cisco Nexus 9396TX Switch	N9K-C9396TX
Cisco Nexus 9372PX Switch	N9K-C9372TX
Cisco Nexus 9372PX Switch	N9K-C9372TX

Product/Component	Part Number
Cisco Nexus 9372TX Switch	N9K-C9372TX
Cisco Nexus 9372TX Switch	N9K-C9372PX
Cisco Nexus 9332PQ Switch	N9K-C9332PQ
Cisco Nexus 93128TX Switch	N9K-C93128TX
Nexus 9300 with 48p 1/10G-T and 6p 40G QSFP+	N9K-C9372TX-E
Cisco Nexus 9500 Modular Chassis	
New fabric module for the Cisco Nexus 9516 Switch chassis	N9K-C9516-FM-E
40/100G Ethernet Module for Nexus 9500 Series chassis	N9K-X9736C-EX
Cisco Nexus 9504 Switch	N9K-C9504
Cisco Nexus 9508 Switch	N9K-C9508
Cisco Nexus 9516 Switch	N9K-C9516
Nexus 9500 linecard, 32p 100G QSFP aggregation linecard	N9K-X9732C-EX
Nexus 9500 linecard, 32p 100G QSFP28 aggregation linecard (Linerate >250 Bytes)	N9K-X9432C-S
Cisco Nexus 9500 Fabric Modules	
Fabric Module for Nexus 9504 with 100G support, NX-OS and ACI spine	N9K-C9504-FM-E
Fabric Module for Nexus 9504 with 100G support, NX-OS only	N9K-C9504-FM-S
Fabric Module for Nexus 9508 chassis 100G support, NX-OS and ACI spine	N9K-C9508-FM-E
Fabric Module for Nexus 9508 chassis 100G support, NX-OS only	N9K-C9508-FM-S

Table 8: Cisco Nexus 7000 Series Switches

Product/Component	Part Number
Supported Chassis	
Cisco Nexus 7004 chassis	N7K-C7004
Cisco Nexus 7706 chassis	N77-C7706-FAB2
Cisco Nexus 7009 chassis	N7K-C7009
Cisco Nexus 7010 chassis	N7K-C7010

Product/Component	Part Number
Cisco Nexus 7018 chassis	N7K-C7018
Cisco Nexus 7710 chassis	N7K-C7710
Cisco Nexus 7718 chassis	N7K-C7718
Fabric module, Cisco Nexus 7009 chassis	N7K-C7009-FAB-2
Fabric module, Cisco Nexus 7010 chassis	N7K-C7010-FAB-1
Fabric module, Cisco Nexus 7010 chassis	N7K-C7010-FAB-2
Fabric module, Cisco Nexus 7018 chassis	N7K-C7018-FAB-1
Fabric module, Cisco Nexus 7018 chassis	N7K-C7018-FAB-2
Fabric module, Cisco Nexus 7710 chassis	N77-C7710-FAB-1
Fabric module, Cisco Nexus 7710 chassis	N77-C7710-FAB-2
Fabric module, Cisco Nexus 7718 chassis	N77-C7718-FAB-2
Supported Supervisor	
Cisco Nexus 7000 Supervisor 1 Module	N7K-SUP1
Cisco Nexus 7000 Supervisor 2 Module	N7K-SUP2
Cisco Nexus 7000 Supervisor 2 Enhanced Module	N7K-SUP2E
Cisco Nexus 7700 Supervisor 2 Enhanced Module	N77-SUP2E
Supported F Line Cards	
32-port 1/10 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
48-port 1/10 GBase-T RJ45 Module (Enhanced F2-Series)	N7K-F248XT-25E
Cisco Nexus 7700 Enhanced 48-port 1/10 Gigabit Ethernet SFP+ I/O Module (F2 Series)	N77-F248XP-23E
Cisco Nexus 7000 1 F3 100G	N7K-F306CK-25
Cisco Nexus 7000 F3-Series 6-Port 100G Ethernet Module	N7K-F306CK-25
Cisco Nexus 7000 F3-Series 12-Port 40G Ethernet Module	N7K-F312FQ-25
Cisco Nexus 7700 F3-Series 24-Port 40G Ethernet Module	N77-F324FQ-25
Cisco Nexus 7700 F3-Series 48-Port Fiber 1 and 10G Ethernet Module	N77-F348XP-23

Product/Component	Part Number
Nexus 7000 F3-Series 48-Port Fiber 1 and 10G Ethernet Module	N7K-F348XP-25
Supported M Line Cards	
8-port 10-Gigabit Ethernet Module with XL Option (requires X2)	N7K-M108X2-12L
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
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
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
Network Analysis Module NAM-NX1	N7K-SM-NAM-K9

Table 9: Cisco Nexus 6000 Series Switches

Product/Component	Part Number
N6004X/5696 chassis **Note** This has been rebranded as Cisco Nexus 5000 Series Switches Chassis	N5K-C5696Q
Cisco Nexus 6001-64T Switch	N6K-C6001-64T
Cisco Nexus 6001-64P Switch	N6K-C6001-64P
Cisco Nexus 6004 EF Switch	N6K-C6004
Cisco Nexus 6004 module 12Q 40-Gigabit Ethernet Linecard Expansion Module/FCoE, spare	N6004X-M12Q
Cisco Nexus 6004 M20UP LEM	N6004X-M20UP
Cisco Nexus 6004P-96Q Switch	N6K-6004-96Q

Table 10: Cisco Nexus 5000 Series Switches

Product/Component	Part Number
Cisco Nexus 5648Q Switch is a 2RU switch, 24 fixed 40-Gbps QSFP+ ports and 24 additional 40-Gbps QSFP+ ports	N5K-C5648Q
Cisco Nexus 5624Q Switch 1 RU, -12 fixed 40-Gbps QSFP+ ports and 12 X 40-Gbps QSFP+ ports expansion module	N5K-C5624Q
20 port UP LEM	N5696-M20UP
12 port 40G LEM	N5696-M12Q
4 port 100G LEM	N5696-M4C
N5000 1000 Series Module 6-port 10GE	N5K-M1600(=)
N5000 1000 Series Module 4x10GE 4xFC 4/2/1G	N5K-M1404=
N5000 1000 Series Module 8-port 4/2/1G	N5K-M1008=
N5000 1000 Series Module 6-port 8/4/2G	N5K-M1060=
Cisco Nexus 56128P Switch	N5K-C56128P
Cisco Nexus 5010 chassis	N5K-C5010P-BF
Cisco Nexus 5020 chassis	N5K-C5020P-BF N5K-C5020P-BF-XL
Cisco Nexus 5548P Switch	N5K-C5548P-FA
Cisco Nexus 5548UP Switch	N5K-C5548UP-FA
Cisco Nexus 5672UP Switch	N5K-C5672UP
Cisco Nexus 5596T Switch	N5K-C5596T-FA
Cisco Nexus 5596UP Switch	N5K-C5596UP-FA
Cisco Nexus 0296-UPT chassis and GEM N55-M12T support	N5K-C5596T-FA-SUP
16-port Universal GEM, Cisco Nexus 5500	N5K-M16UP
Version 2, Layer 3 daughter card	N55-D160L3-V2

Table 11: Cisco Nexus 4000 Series Switches

Product/Component	Part Number
Cisco Nexus 4001I Switch Module	N4K-4001I-XPX
Cisco Nexus 4005I Switch Module	N4K-4005I-XPX

Table 12: Cisco Nexus 3000 Series Fabric Extenders

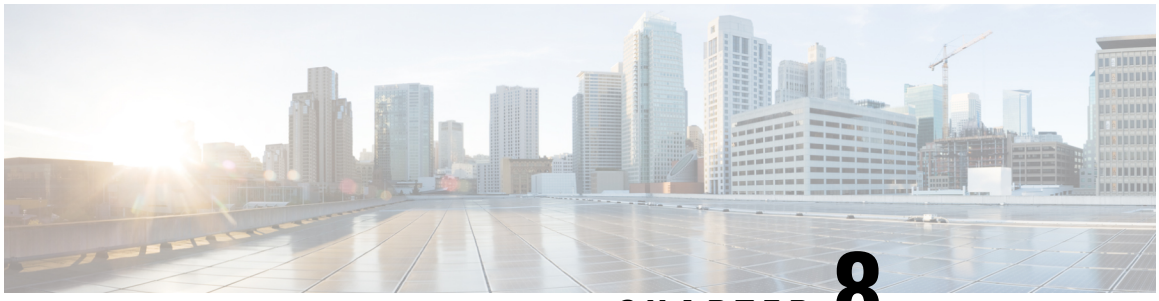
Product/Component	Part Number
Cisco Nexus 3016 Switch	N3K-C3016Q-40GE
Cisco Nexus 3048 Switch	N3K-C3048TP-1GE
Cisco Nexus 3064-E Switch	N3K-C3064PQ-10GE
Cisco Nexus 3064-X Switch	N3K-C3064PQ-10GX
Cisco Nexus 3064-T Switch	N3K-C3064TQ-10GT
Nexus 31108PC-V, 48 SFP+ and 6 QSFP28 ports	N3K-C31108PC-V
Nexus 31108TC-V, 48 10GBase-T RJ-45 and 6 QSFP28 ports	N3K-C31108TC-V
Cisco Nexus 3132Q Switch	N3K-C3132Q-40GE
Nexus 3132 Chassis	N3K-C3132Q-40GX
Cisco Nexus 3172PQ Switch	N3K-C3172PQ-10GE
Cisco Nexus 3548 Switch	N3K-C3548P-10G
Cisco Nexus 3636C-R Switch	N3K-C3636C-R

Table 13: Cisco Nexus 2000 Series Fabric Extenders

Product/Component	Part Number
Nexus 2348 Chassis	N2K-C2348TQ-10GE
Cisco Nexus 2348UPQ 10GE 48 x 1/10 Gigabit Ethernet and unified port host interfaces (SFP+) and up to 6 QSFP+ 10/40 Gigabit Ethernet fabric interfaces	N2K-C2348UPQ
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 2348TQ-E 10GE Fabric Extender	

Table 14: Cisco Nexus 1000V Series Switches

Product/Component	Part Number
Cisco Nexus 1110-S Virtual Services Appliance	N1K-1110-S
Cisco Nexus 1110-X Virtual Services Appliance	N1K-1110-X



CHAPTER 8

Caveats

Caveats describe unexpected behavior in a product. The Open Caveats section lists open caveats that apply to the current release and may apply to previous releases. A caveat that is open for a prior release and is still unresolved applies to all future releases until it is resolved.

To view the details of the software bugs pertaining to your product, perform the following task:

- Click the Caveat ID/Bug ID number in the table.

The corresponding **Bug Search Tool** window is displayed with details of the Caveat ID/Bug ID.

The Bug Search Tool (BST), which is the online successor to the Bug Toolkit, is designed to improve the effectiveness in network risk management and device troubleshooting. The BST allows partners and customers to search for software bugs based on product, release, and keyword, and aggregates key data, such as bug details, product, and version. The tool has a provision to filter bugs based on credentials to provide external and internal bug views for the search input.

To view the details of a caveat whose ID you do not have, perform the following procedure:

1. Access the BST using your Cisco user ID and password at:

   https://tools.cisco.com/bugsearch/

2. In the **Bug Search** window that is displayed, enter the necessary information in the corresponding fields.

For more information about how to use the Cisco Bug Search Tool effectively, including how to set email alerts for bugs and to save bugs and searches, see Bug Search Tool Help & FAQ.

This chapter lists the Open and Resolved Caveats in Cisco DCNM, and contains the following section:

Cisco DCNM, Release 10.4(2)

Resolved Caveats

The following table lists the Resolved bugs for Cisco DCNM, Release 10.4(2).

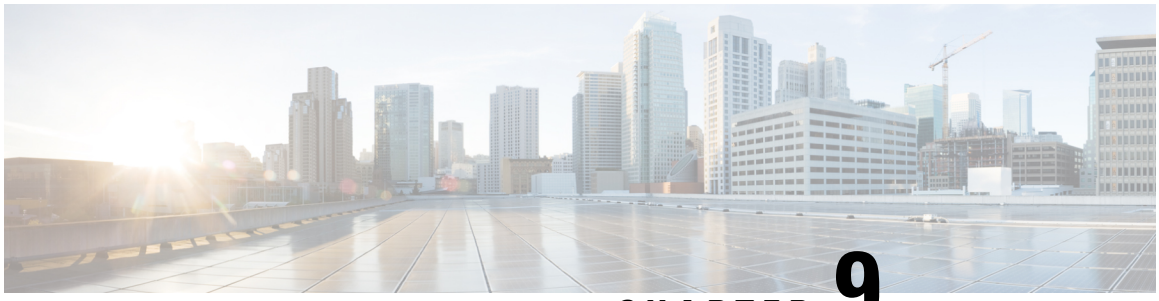
Caveat ID Number	Description
CSCvg32790	Native HA validation for Active/Standby on different subnets.

Caveat ID Number	Description
CSCvg41098	Upgrading 10.2(1) OVA federation to 10.4(1)—AMQP is not starting automatically or manually.
CSCvg51299	HTTP to HTTPS redirection is blocked in Cisco DCNM 10.4(1).

Open Caveats

The following table lists the Open bugs for Cisco DCNM, Release 10.4(2).

Caveat ID	Description
CSCvg46901	PMN-INTEROP:Issue when DCNM discovers PIM Router.
CSCvf99030	Deleting network is deleting VRF as well
CSCvg76382	Role change of leaf to BL with some vrfs deployed
CSCvg76798	Multisite: BGW loopback0 , loopback1 need to have 'tag 54321' configured
CSCvb40889	Unable to edit the default L2 L3 segment IDs in LAN fabric
CSCvg87498	NFM Migration: Handling of switch reload while Migration in progress
CSCvg39897	Nexus 9504 should show only the physical / loopback interfaces in Cisco DCNM
CSCvg87251	The **appmgr change_pwd ssh root** command thows error though it is changing the root password
CSCvg91823	Topdown: RMA of the devices after top-down deployment
CSCvg93573	Topology View doesnt show FEX uplink connections
CSCvh13788	When you upgrade to DCNM release 10.4(2), temperature data will not be backed up automatically as part of the appmgr backup script on an OVA/ISO setup where EPL is not enabled.
CSCvg76382	If there are VRFs and/or networks deployed to a Nexus 9000 switch in a VXLAN BGP EVPN network via the top-down fabric provisioning mechanism, then a role change for that switch (Border to leaf or vice-versa) may cause subsequent deployments or modifications to existing deployments, to fail.
CSCvi37845	Alarm log files keep on incremeting in the /usr/local/cisco/dcm/fm/log folder.



CHAPTER 9

Related Documentation

This chapter provides information about the documentation available for Cisco Data Center Network Manager (DCNM) and the platforms that Cisco DCNM manages, and includes the following sections:

Cisco DCNM Documentation Roadmap

This section describes and provides links to the user documentation available for Cisco Data Center Network Manager (DCNM), Release 10.4(2). To find a document online, use one of the links in this section

Table 15: Cisco DCNM 10.4(2) Documentation Roadmap

Document Title	Description
Cisco DCNM Release Notes, Release 10.4(2)	Provides information about the Cisco DCNM software release, open caveats and workaround information.
Cisco DCNM Fundamentals Guide, Release 10.4(2)	• Use Roles of Cisco DCNM • Features of Cisco DCNM Web Client • Descriptions of GUI and capabilities of Cisco DCNM-SAN. • Monitoring network and performance.
Cisco DCNM Online Help	Provides Cisco DCNM Web Client user interface and field descriptions.
Cisco DCNM Installation Guide, Release 10.4(2)	• System requirements. • Pre-installation tasks. • Installing Cisco DCNM. • Upgrading Cisco DCNM.

Document Title	Description
Cisco DCNM Licensing Guide, Release 10.x	Describes the procedure used to generate, install, and assign a Cisco Data Center Network Manager (DCNM) license.
Software Upgrade Matrix for Cisco DCNM	Lists the software upgrade paths that are supported for DCNM.
Cisco DCNM Compatibility Matrix, Release 10.4(2)	Lists the Cisco Nexus and the Cisco MDS platforms and their software releases that are compatible with Cisco DCNM.
Cisco DCNM API Reference	Provides information about the Media Controller APIs on Cisco DevNet.
Cisco Data Center Network Manager Open Source Licensing, Release 10.4(2)	Provides information about the Cisco Data Center Network Manager Open Source Licensing, Release 10.4(2).

Platform-Specific Documents

The documentation set for platform-specific documents that Cisco DCNM manages includes the following:

Cisco Nexus 1000V Series Switch Documentation

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

Cisco Nexus 2000 Series Fabric Extender Documentation

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

Cisco Nexus 3000 Series Switch Documentation

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

Cisco Nexus 4000 Series Switch Documentation

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

Cisco Nexus 5000 Series Switch Documentation

https://www.cisco.com/c/en/us/support/switches/nexus-5000-series-switches/products-installation-and-configuration-guides-list.html

Cisco Nexus 6000 Series Switch Documentation

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

Cisco Nexus 7000 Series Switch Documentation

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

Cisco Nexus 9000 Series Switch Documentation

http://www.cisco.com/c/en/us/support/switches/nexus-9000-series-switches/tsd-products-support-series-home.html

Documentation Feedback

To provide technical feedback on this document, or to report an error or omission, please send your comments to:

dcnm-docfeedback@cisco.com.

We appreciate your feedback.

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- To obtain general networking, training, and certification titles, visit Cisco Press.
- To find warranty information for a specific product or product family, access Cisco Warranty Finder.

Cisco Bug Search Tool

Cisco Bug Search Tool (BST) is a web-based tool that acts as a gateway to the Cisco bug tracking system that maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. BST provides you with detailed defect information about your products and software.