



Overview

Cisco Data Center Network Manager (DCNM) is a management system for Cisco NXOS-based storage fabrics. In addition to provisioning, monitoring, and troubleshooting the data center network infrastructure, the Cisco DCNM provides a comprehensive feature-set that meets the routing, switching, and storage administration needs of data centers. It streamlines the provisioning for the Programmable Fabric and monitors the SAN components.

Cisco DCNM provides a high level of visibility and control through a single web-based management console for Cisco Nexus Series Switches, Cisco MDS, and Cisco Unified Computing System (UCS) products. Cisco DCNM also includes Cisco DCNM-SAN client and Device Manager functionality.

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Introduction

Cisco DCNM provides an alternative to the command-line interface (CLI) for switch configuration commands.

Cisco DCNM Release 11.5(3) contains critical bug fixes. Refer to the [Caveats](#) in Cisco DCNM Release Notes, Release 11.5(3) before you install DCNM Release 11.5(3). For all other supported features, we recommend that you deploy Cisco DCNM Release 11.5(1) only.

Cisco DCNM includes these management applications:

Cisco DCNM Web UI

Cisco DCNM Web UI allows operators to monitor and obtain reports for Cisco MDS and Nexus events, performance, and inventory from a remote location using a web browser. Licensing and discovery are part of the Cisco DCNM Web UI.

Performance Manager

Performance Manager presents detailed traffic analysis by capturing data with SNMP. This data is compiled into various graphs and charts that can be viewed on the Cisco DCNM Web UI.

Installation Options

Cisco DCNM software images are packaged with the Cisco DCNM installer, signature certificate, and signature verification script. Unzip the desired Cisco DCNM installer image ZIP file to a directory. Verify the image signature by following the steps in the README file. The installer from this package installs the Cisco DCNM software.

DCNM Open Virtual Appliance (OVA) Installer

This installer is available as an Open Virtual Appliance file (.ova). The installer contains a pre-installed OS, DCNM, and other applications needed for programmable fabric.

DCNM ISO Virtual Appliance (ISO) Installer

This installer is available as an ISO image file (.iso). The installer is a bundle of OS, DCNM, and other applications needed for dynamic fabric automation.



Note If you are installing Cisco DCNM on SE, install the DCNM ISO Virtual Appliance (.iso) installer.

Deployment Options

You can deploy the Cisco DCNM installer in one of the following modes:

Supported Latency

The supported latency for Cisco DCNM LAN Fabric deployment is defined below:

- Between Native HA Primary and Secondary appliances, latency is 50ms.
- Between DCNM Native HA Primary appliance to Switches, latency is 50ms.
- Between DCNM Computes latency is 50ms.

Standalone Server

All types of installers are packaged along with PostgreSQL database. The default installation steps for the respective installers result in this mode of deployment.



Note We recommend that you deploy Cisco DCNM in Native HA Mode.

High Availability for Virtual Appliances

You can deploy the DCNM Virtual appliances, both OVA and ISO, in High Availability mode to have resilience in case of application or OS failures.

DCNM Computes

Compute nodes are scale out application hosting nodes that run resource-intensive services to provide services to the larger Fabric. When compute nodes are added, all services that are containers, run only on these nodes. This includes Config Compliance, Endpoint Locator, and Virtual Machine Manager.

DCNM in Clustered Mode

In a clustered mode, the Cisco DCNM Server with more compute nodes provides an architecture to expand resources, as you deploy more applications. The DCNM Servers do not run containerized applications. All applications that work in unclustered mode works in the clustered mode, also.

DCNM in Unclustered Mode

In unclustered mode, the Cisco DCNM runs some of its internal services as containers. Cisco DCNM leverages resources from the Standby node for running some containers applications. The Cisco DCNM Active and Standby nodes work together to extend resources to the overall functionality and deployment of DCNM and its applications. However, it has limited resources to run some of the advanced applications and to extend the system to deploy more applications delivered through the Cisco AppCenter.

root and sysadmin User Privileges

The following table summarizes the user privileges differences between DCNM 11.5 and previous releases.



Note This is applicable to Cisco DCNM OVA/ISO deployments only.

Description	Functionality in DCNM 11.5 Release	Functionality in DCNM 11.4(1) and 11.3(1) Releases	Remarks
su command	Requires local root password. sysadmin user can't run sudo su command	Requires sysadmin password su is an alias for sudo su	The su command requires the local password even when the remote authentication is configured.
appmgr change_pwd ssh root command	Only root user can run this command.	sysadmin can also run this command.	-
appmgr root-access {permit deny ...} command	Only root user can run this command	sysadmin user can also run this command	-
appmgr remote-auth command	Only root user can run this command	Not available	-
Other appmgr commands	root or sysadmin user can run these commands	root or sysadmin user can run these commands	-

Upgrading Cisco DCNM

The following table summarizes the type of upgrade that you must follow to upgrade to Release 11.5(3).



Note Cisco DCNM Release 11.5(3) does not support IP Fabric for Media (IPFM) and SAN Deployments.

Deployment Type	Current Release Number	Upgrade type to upgrade to Release 11.5(3)
LAN Fabric	11.5(2)	Inline Upgrade
	11.5(1)	Inline Upgrade