



System Requirements

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

- [System Requirements, on page 1](#)

System Requirements



Note We recommend that you do not upgrade any underlying third-party software separately. All the necessary software components will be updated during the inline upgrade procedure. Upgrading the components outside of DCNM upgrade will cause performance issues.

This section describes the various system requirements for proper functioning of your Cisco DCNM, Release 11.3(1).

Java Requirements

The Cisco DCNM Server is distributed with JRE 11.0.2 into the following directory:

```
DCNM_root_directory/java/jdk11
```

Server Requirements

Cisco DCNM, Release 11.3(1), supports the Cisco DCNM Server on these 64-bit operating systems:

- **SAN Deployments:**
 - Microsoft Windows 2016
 - Microsoft Windows 2012 R2
 - Red Hat Enterprise Linux Release 7.3, 7.4, 7.6, and 7.7
 - Open Virtual Appliance (OVA) with an integrated CentOS Linux release 7.6
 - ISO Virtual Appliance (ISO) with an integrated CentOS Linux release 7.6
- **IP for Media, LAN Fabric, and Classic LAN Deployments:**

- Open Virtual Appliance (OVA) with an integrated CentOS Linux release 7.6
- ISO Virtual Appliance (ISO) with an integrated CentOS Linux release 7.6

Cisco DCNM Release 11.3(1) supports the following databases:

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



Note Cisco DCNM Release 11.3(1) doesn't support the Oracle 12c pluggable database version installation.

- Oracle 12c RAC (nonpluggable installation)
- PostgreSQL 9.4.5



Note The database size 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 an Oracle database, we recommend that you use Oracle SE or Enterprise edition, instead of Oracle XE due to table space limitations.



Note You are responsible for all the support that is associated with the Oracle databases, including maintenance, troubleshooting, and recovery. We recommend that you take regular backup of the database; either daily or weekly, to ensure that all the data is preserved.



Note The ISO/OVA installation only supports the embedded PostgreSQL database.

From Release 11.2(1), Cisco DCNM supports the ISO installation on a bare-metal server (no hypervisor) on the following server platforms:

Server	Product ID (PID)	Recommended minimum memory, drive capacity, and CPU count ¹
Cisco UCS C240M4	UCSC-C240-M4S	32G / 500G 16 vCPUs
Cisco UCS C240M4	UCSC-C240-M4L	32G / 500G 16 vCPUs
Cisco UCS C240 M5S	UCSC-C240-M5SX	32G / 500G 16 vCPUs
Cisco UCS C220 M5L	UCSC-C220-M5L	32G / 500G 16 vCPUs

- ¹ Install the Cisco DCNM Compute node with 16vCPUs, 64G RAM, and 500GB hard disk. Ensure that you do not install the Compute node on 32G RAM server.

If you are deploying Network Insights applications on the Cisco DCNM Compute cluster, refer to the app-specific Release Notes for additional CPU/memory requirements for the Computes.



Note Cisco DCNM can work on an alternative computing hardware as well, despite Cisco is only testing on Cisco UCS.

Supported Hypervisors

From Release 11.3(1), Cisco DCNM supports the running of the Cisco DCNM Server on the following hypervisors., for DCNM LAN Fabric and DCNM LAN Classic Deployments:

Hypervisor supported	Data Center Manager server application	Supported deployments
ESXi 6.7 P01	vCenter 6.7 P01	All
ESXi 6.5	vCenter 6.5	All
ESXi 6.0	vCenter 6.0	All
RedHat 7.6 KVM	Virtual Machine Manager (comes with RHEL 7.6)	<ul style="list-style-type: none"> • LAN Fabric • Classic LAN
Hyper-V on Windows Server 2019	Hyper-V Manager (comes with Windows Server 2019)	<ul style="list-style-type: none"> • LAN Fabric² • Classic LAN

- ² This is supported with Native HA mode, and not in Cluster mode.

VMware Snapshot Support for Cisco DCNM

Snapshots capture the entire state of the virtual machine at the time you take the snapshot. You can take a snapshot when a virtual machine is powered on, powered off.



Note vCenter server is mandatory to deploy the Cisco DCNM OVA Installer.

To take a snapshot on the VM, perform the following steps:

1. Right-click the virtual machine the inventory and select **Snapshots > Take Snapshot**.
2. In the Take Snapshot dialog box, enter a **Name** and description for the snapshot.
3. Click **OK** to save the snapshot.

The following snapshots are available for VMs.

- When VM is powered off.
- When VM is powered on, and active.



Note Cisco DCNM supports snapshots when VM is either powered on or powered off. DCNM doesn't support snapshots when the Virtual Machine memory option is selected.

Note that the Snapshot the Virtual Machine's memory check box must not be selected, as shown in the following figure. However, it is grayed out when the VM is powered off.

Take Snapshot | dcnm-va.11.X.1 ×

Name VM Snapshot taken powered on 12/8/2019,

Description

Snapshot the virtual machine's memory

Quiesce guest file system (Needs VMware Tools installed)

CANCEL
OK

You can restore VM to the state in a Snapshot.

Manage Snapshots | dcnm1111 ×

- ▼ dcnm1111
- ▼ VM Snapshot 12%252f12%252f2019, 11:56:07 AM
- ▼ 1131 Snapshot 12%252f12%252f2019, 3:04:31 PM
- ▼ VM Snapshot 12%252f16%252f2019, 6:55:02 AM
- 📍 You are here

Name	VM Snapshot 12%252f16%252f2019, 6:55:02 AM
Created	12/15/2019, 11:55:31 PM
Disk usage	510.03 MB
Snapshot the virtual machine's memory	No
Quiesce guest file system	No

EDIT

DELETE ALL
DELETE
REVERT TO

DONE

Right-click on the Virtual Machine and select **Manage Snapshot**. Select the snapshot to restore, and click **Done**.

Table 1: Snapshot Support for Classic LAN, LAN Fabric, Media Controller, and SAN OVA Deployments

VMware vSphere Hypervisor (ESXi)	6.0	6.5	6.7	6.7 P01
VMware vCenter Server	6.0	6.5	6.7	6.7 P01

Server Resource Requirements

Deployment	Deployment Type	Small (Lab or POC)	Large (Production)	Huge (Production)	Compute
SAN	Windows	CPU: 8 vCPUs RAM: 24 GB DISK: 500 GB	CPU: 16 vCPUs RAM: 32 GB DISK: 500 GB	Not Applicable	Not Applicable
	Linux (standalone or VM)	CPU: 8 vCPUs RAM: 24 GB DISK: 500 GB	CPU: 16 vCPUs RAM: 32 GB Disk: 500 GB	With SAN Insights: <ul style="list-style-type: none"> • CPU: 32 vCPUs • RAM: 128 GB • DISK: 2 TB 	Not Applicable
	<ul style="list-style-type: none"> • OVA standalone • ISO standalone 	CPU: 8 vCPUs RAM: 24 GB DISK: 500 GB	CPU: 16 vCPUs RAM: 32 GB DISK: 500 GB	CPU: 32vCPUs RAM: 128 GB DISK: 2 TB (with SAN Insights)	Not Applicable
IP for Media (IPFM)	<ul style="list-style-type: none"> • OVA • ISO 	CPU: 8 vCPUs RAM: 24 GB DISK: 500 GB	CPU: 16 vCPUs RAM: 32 GB DISK: 500 GB	CPU: 32vCPUs RAM: 128 GB DISK: 500 GB	Not Applicable
LAN Fabric Classic LAN	<ul style="list-style-type: none"> • OVA • ISO 	CPU: 8 vCPUs RAM: 24 GB DISK: 500 GB	CPU: 16 vCPUs RAM: 32 GB DISK: 500 GB	CPU: 32vCPUs RAM: 128 GB DISK: 500 GB	CPU: 16 vCPUs RAM: 64 GB DISK: 500 GB



Note For Huge and Compute deployments, you can add extra disk. The size of the disk can range from a minimum of 32GB to a maximum of 1.5TB.

Ensure that there is enough disk space to the root partition or mount another disk where the `/tmp` directory can be mounted during the installation or upgrade.

You can add additional disk space to your DCNM set up. Logon to DCNM server using SSH. Extend the disk file system using **appmgr system scan-disks-and-extend-fs** command.



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- Note**
- From Release 11.3(1), Cisco DCNM Windows deployments does not support the SAN Insights feature.
 - Cisco SAN Insights feature is only supported with the Huge deployment.
 - You can use the SAN Insights feature on a medium-sized deployment with 2 TB disk space.
 - Every federation deployment consists of three large configuration nodes.
 - From Cisco DCNM Release 11.2(1), synchronize the Federation nodes from the Primary node only.
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Client Requirements

Cisco DCNM SAN desktop client and Cisco Device Manager support Microsoft Windows 10, Microsoft Windows 2012, Microsoft Windows 2016, and Red Hat Linux. The following table lists the minimum hardware requirements for these client systems.

Table 2: Client Hardware Requirements

Hardware	Minimum Requirements
RAM (free)	6 GB or more
CPU speed	3 GHz or faster
Disk space (free)	20 GB

If you install Cisco DCNM on 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. For information about Licensing in DCNM, see https://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/11_x/licensing/cisco_dcnm_licensing_guide_11_x.html.

Supported Web Browsers

Cisco DCNM supports the following web browsers:

- Google Chrome Version 79.0.3945.79
- Mozilla Firefox Version 71.0 (32/64 bit)
- Microsoft Internet Explorer Version 11.706 update version 11.0.120

Other Supported Software

The following table lists the other software that is supported by Cisco DCNM, Release 11.3(1).

Table 3: Other Supported Software

Component	Features
Security	<ul style="list-style-type: none"> • ACS versions 4.0, 5.1, 5.5, and 5.8 • ISE version 2.6 • 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 • TLS 1.3
OVA/ISO Installers	CentOS 7.6/Linux Kernel 3.10.x

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

Qualified Security Certifications

Security Certifications	Date run on DCNM 11.4(1)
Nessus	6/29/2020
Appscan	6/29/2020
Qualsys	6/29/2020

