

Prerequisites

This chapter provides release-specific prerequisites information for your deployment of *Cisco Data Center Network Manager*.

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Prerequisites for DCNM Open Virtual Appliance

Before you install the Cisco DCNM Open Virtual Appliance, you will need to meet following software and database requirements:

- VMware vCenter Server that is running on a Windows server (or alternatively, running as a virtual appliance).
- VMware ESXi host imported into vCenter.
- Three port groups on the ESXi host—DCNM Management Network, Enhanced Fabric Management Network, and InBand interface for EPL and Telemetry features.
- Determine the number of switches in your Cisco Programmable Fabric that will be managed by the Cisco DCNM Open Virtual Appliance.
- Ensure that no anti-virus software (such as McAfee) is running on the host where the VMware vCenter web client is launched for the DCNM OVA installation. If the anti-virus software is running, the DCNM installation might fail.
- The DCNM Open Virtual Appliance is compatible to be deployed in ESXi host as well. For deploying in the ESXi host, VMware vSphere Client application is mandatory.

Note For more information about the CPU and memory requirements, see the *Server Resource Requirements* section of the Cisco DCNM Release Notes, Release .

Prerequisites for DCNM ISO Virtual Appliance

Ensure that you do not add an additional Active or Standby node to an existing Active-Standby Native HA DCNM Appliance. The installation fails.

You have to set up the host or the hypervisor before you install the Cisco DCNM ISO Virtual Appliance. Based on the requirement, set up the setup Host machine or Hypervisor based on CPU and Memory requirement.



Note For more information about the CPU and memory requirements, see the *Server Resource Requirements* section of the *Cisco DCNM Release Notes*.

You can set up one of the following hosts to install the DCNM ISO Virtual Appliance.

VMware ESXi

The host machine is installed with ESXi and two port groups are created—one for EFM network and the other for DCNM Management network. Enhanced Fabric In-Band network is optional.

Kernel-based Virtual Machine (KVM)

The host machine is installed with Red Hat Enterprise Linux (RHEL) 5.x or 6.x or 7.x, with KVM libraries and Graphical User Interface (GUI) access. The GUI allows you to access the Virtual Machine Manager, to deploy and manage the Cisco DCNM Virtual Appliances. Two networks are created—EFM network and DCNM Management network. Typically, the DCNM management network is bridged to gain access from other subnets. Refer the KVM documentation on how to create different types of networks.



Note KVM on other platforms like CentOS or Ubuntu will not be supported as it increases the compatibility matrix.

Prerequisites for Cisco DCNM Virtual Appliance HA

This section contains the following topics that describe the prerequisites for obtaining a high-availability (HA) environment.

Deploying Cisco DCNM Virtual Appliances in HA mode

You must deploy two standalone Virtual Appliance (OVA and ISO). When you deploy both Virtual Appliances, you must meet the following criteria:

- The eth0 of the active OVA must be in the same subnet as eth0 of the standby Virtual Appliance. The eth1 of the active Virtual Appliance must be in the same subnet as eth1 of the standby OVA. The eth2 of the active virtual appliance must be in the same subnet as the eth2 of the standby appliance.
- Both Virtual Appliances must be deployed with the same administrative password. This process ensures that both Virtual Appliances are duplicates of each other.

- If you try to add an additional Active or Standby node to an existing Active-Standby Native HA DCNM Appliance, the installation fails.

Availability of Virtual IP Addresses

Two free IP addresses are needed to set up the server eth0 and eth1 interfaces. However, eth2 IP address is optional. The first IP address will be used in the management access network; it should be in the same subnet as the management access (eth0) interface of the OVAs. The second IP address should be in the same subnet as enhanced fabric management (eth1) interfaces (switch/POAP management network).

If you choose to configure inband management (eth2) for the DCNM Server, you must reserve another IP Address. For Native HA setup, the eth2 interface on Primary and Secondary servers must be in same subnet.

Installing an NTP Server

For most of the HA functionality to work, you must synchronize the time on both OVAs by using an NTP server. The installation would typically be in the management access network (eth0) interfaces.