Upgrading Cisco Nexus 1000V Using Cisco Virtual Switch Update Manager

This chapter contains the following sections:

Information About Upgrading the Cisco Nexus 1000V Using Cisco Virtual Switch Update Manager

Cisco Virtual Switch Update Manager is the graphical user interface (GUI) that you can use to upgrade the Virtual Supervisor modules (VSMs) and the VEMs on ESX/ESXi hosts.

An interactive upgrade tool has been provided to assist you in determining the correct upgrade steps based on your current environment and the one to which you want to upgrade.

See the *Cisco Nexus 1000V and VMware Compatibility Information* for more information on the compatibility information for Cisco Nexus 1000V.

You can obtain your upgrade-related software for the current release of the Cisco Nexus 1000V software from cisco.com.

With Cisco Virtual Switch Update Manager, you can upgrade Cisco Nexus 1000V version only with the vSphere version intact.

See the *Cisco Nexus 1000V Installation and Upgrade Guide* for information about how to upgrade both vSphere and Cisco Nexus 1000V versions together and how to upgrade the vSphere version only, with the Cisco Nexus 1000V version intact.

Supported Upgrade Paths: With Cisco Virtual Switch Update Manager, you can upgrade Cisco Nexus 1000V from Release 4.2(1)SV1(4b) and later releases.

Unsupported Upgrade Paths: Using Cisco Virtual Switch Update Manager, you cannot upgrade the following releases of Cisco Nexus 1000V to the current release:

- Release 4.2(1)SV1(4)

- Release 4.2(1)SV1(4a)

- Release 4.2(1)SV1(3x) series

See the *Cisco Nexus 1000V Installation and Upgrade Guide* to upgrade the Cisco Nexus 1000V to the current version using the CLI.

Note Upgrades from Release 4.0(4)SV1(1), 4.0(4)SV1(2), and 4.0(4)SV1(3x) are no longer supported. VMware 4.0 and 4.1 are also not supported with this Cisco Nexus 1000V release.

Prerequisites for Upgrading Cisco Nexus 1000V Using Cisco Virtual Switch Update Manager

Upgrading the Cisco Nexus 1000V with Cisco Virtual Switch Update Manager has the following prerequisites:

- Close any active configuration sessions before upgrading the Cisco Nexus 1000V software.

- Save all changes in the running configuration to the startup configuration.

- Save a backup copy of the running configuration in the external storage.

- Perform a VSM backup. For more information, see the "Configuring VSM Backup and Recovery" chapter in the *Cisco Nexus 1000V System Management Configuration Guide*.

- Use the VSM management IP address to log into VSM and perform management tasks.

  Important If you connect to a VSM using the VSA serial port or the connect host from the Cisco Integrated Management Control (CIMC), do not initiate commands that are CPU intensive, such as copying images from the TFTP server to bootflash or generating a lot of screen output or updates. Use the VSA serial connections, including CIMC, only for operations such as debugging or basic configuration of the VSA.

- If you need to migrate a vSphere host from ESX to ESXi, do it before the Cisco Nexus 1000V upgrade.

- You have placed the VEM software file in `/tmp` on the vSphere host. Placing it in the root (/) directory might interfere with the upgrade. Make sure that the root RAM disk has at least 12 MB of free space by entering the **vdf** command.

- On your upstream switches, you must have the following configuration.

  ◦ On Catalyst 6500 Series switches with the Cisco IOS software, enter the **portfast trunk** command or the **portfast edge trunk** command.

◦ On Cisco Nexus 5000 Series switches with the Cisco NX-OS software, enter the **spanning-tree port type edge trunk** command.

- On your upstream switches, we highly recommend that you globally enable the following:

  ◦ Global BPDU Filtering

  ◦ Global BPDU Guard

- On your upstream switches where you cannot globally enable BPDU Filtering and BPDU Guard, we highly recommend that you enter the following commands:

  ◦ **spanning-tree bpdu filter**

  ◦ **spanning-tree bpdu guard**

- You must have the Distributed Switch—Create and Modify privilege permission enabled on the vCentre.

- For more information about configuring spanning tree, BPDU, or PortFast, see the documentation for your upstream switch.

Guidelines and Limitations for Upgrading the Cisco Nexus 1000V Using Cisco Virtual Switch Update Manager

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Caution   During the upgrade process, the Cisco Nexus 1000V does not support any new additions such as modules, virtual NICs (vNICs), or VM NICs and does not support any configuration changes. VM NIC and vNIC port-profile changes might render VM NICs and vNICs in an unusable state.

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Note   We recommend that you use vSphere 5.0 Update 1 or later instead of vSphere 5.0.

Upgrading the Cisco Nexus 1000V with Cisco Virtual Switch Update Manager has the following guidelines and limitations:

- You are upgrading the Cisco Nexus 1000V software to the current release.

- Schedule the upgrade when your network is stable and steady. Ensure that everyone who has access to the switch or the network is not configuring the switch or the network during this time. You cannot configure a switch during an upgrade.

- Avoid power interruptions to the hosts that run the VSM VMs during any installation procedure.

Before you upgrade the VEMs, note these guidelines and limitations:

- During the VEM upgrade process, VEMs reattach to the VSM.

- Connectivity to the VSM can be lost during a VEM upgrade when the interfaces of a VSM VM connect to its own distributed virtual switch (DVS).

Upgrading the Cisco Nexus 1000V Using Cisco Virtual Switch Update Manager

You can upgrade the Cisco Nexus 1000V using Cisco Virtual Switch Update Manager.

Step 1 Log in to the VMware vSphere Web Client.

Step 2 In the vSphere Client, choose **Cisco Virtual Switch Update Manager** > **Nexus 1000V** > **Configure and Manage Nexus 1000V and Application Virtual Switch** > **Datacenter** > **Distributed Virtual Switch** > **Manage**.

    Note If the switch is not managed by Cisco Virtual Switch Update Manager, you are prompted to enter the switch credentials in the **Make Managed** window. For more information, see the chapter Managing an Existing Cisco Nexus 1000V Switch.

Step 3 In the switch pane, click **Upgrade**.

Step 4 (Optional) In case of multiple vCenter Servers, choose **Home** > **Cisco Virtual Switch Update Manager** > **vCenter Server** > **Configure**.

Step 5 (Optional) You can also access the Cisco Virtual Switch Update Manager in the vSphere Client by navigating to **vCenter** > **Distributed Switches**.

Step 6 (Optional) In the switch pane, click **Manage** > **Cisco Nexus 1000V** > **Upgrade**.

    Note If the policy agent has been installed on the VSM, then do the following:

        1 Enter the PNSC version number in the PNSC field.

        2 Enter the VSG version number in the VSG field.

        3 Click **OK**. The upgrade path displays the selected PNSC version and PA Compatible option as **Yes**.

        4 From the Eligible Hosts drop-down list, choose the host and click **Finish**. This upgrades the VSMs along with the Policy Agent and the VEM.

Step 7   In the **Switch Upgrade Path** area, the **Switch Upgrade Path** for the selected switch displays the switch to be upgraded.

Figure 1: Cisco Virtual Switch Update Manager—Upgrading Cisco Nexus 1000V
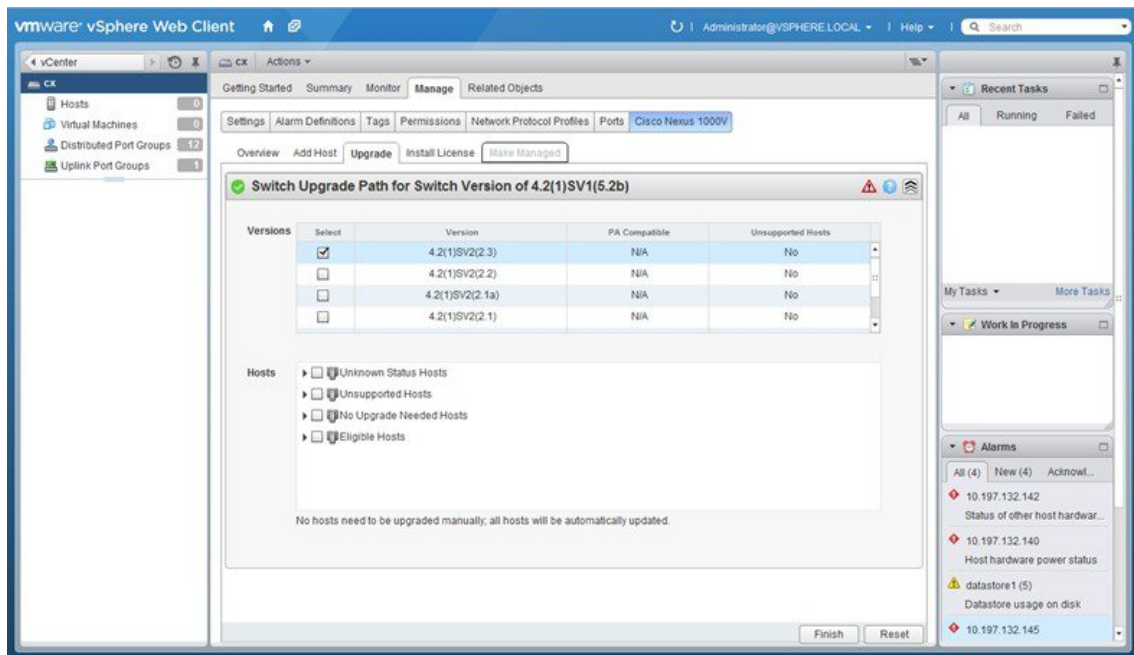
Step 8   In the **Versions** area, the following information is pre configured.

Name	Description
Suggested Upgrade field	Displays if the upgrade is supported .
Version field	Displays the version number of the Cisco Nexus 1000V switch suggested for upgrade.
PA Compatble field	Displays if the Cisco PNSC version is compatible with the Cisco Nexus 1000V switch version suggested for upgrade.
Unsupported Hosts field	Displays if the ESXi host has to be upgraded manually.

Step 9   In the **Hosts** area, the hosts that are associated with the Cisco Nexus 1000V version suggested for upgrade are displayed. The hosts are represented in the following four categories

   • Unknown Status Hosts—The status of the host is in nonresponding state.

   • Unsupported Hosts—The ESX/ESXi version of the host is not compatible with the ESX/ESXi version of the host that is associated with the Cisco Nexus 1000V version suggested for upgrade. The unsupported hosts should be upgraded manually to the ESX/ESXi versions supported by the Cisco Nexus 1000V. See the *Cisco Nexus 1000V and VMware Compatibility Information* for more information about supported ESX/ESXi versions.

- No Upgrade Needed Hosts—The hosts already have the correct VEM version installed.

- Eligible Hosts—The ESX/ESXi version of the host is compatible with the ESX version of the host that is associated with the Cisco Nexus 1000V version suggested for upgrade. During the upgrade process, Cisco Virtual Switch Update Manager upgrades the VEM version installed on the hosts to the specified version.

Step 10   Click **Finish** to upgrade the Cisco Nexus 1000V.

Step 11   Check the upgrade status by completing the following steps:

a) In the **Recent Tasks** pane to the right of the work pane, click **More Tasks**.
The **Task Console** appears in the work pane, displaying a list of tasks with the most recent task at the top.

b) Find the task in the **Task Name** column and then view the status in the **Status** column.
The **Status** column shows whether the task is complete or is in progress. You can click the refresh icon to display new tasks and learn how much of the task is complete in terms of percentage.

> **Note**   Several tasks might appear above the primary task you just performed. They might be associated with your primary task.

The upgrade is confirmed when the primary task `Upgrade Cisco DVS` has the status `Completed`.

If you close the browser and later want to view the task's history, log in to the web client, click **Tasks** in the navigation pane to display the lists of tasks in the work pane.

Feature History for Upgrading the Cisco Nexus 1000V Using Cisco Virtual Switch Update Manager

This table includes only the updates for those releases that have resulted in additions or changes to the feature.

Feature Name	Releases	Feature Information
Upgrading Cisco Nexus 1000V using Cisco Virtual Switch Update Manager	Release 1.0	This feature was introduced.
Upgrading Cisco Nexus 1000V using Cisco Virtual Switch Update Manager	Release 1.1	Users can check the status of an upgrade with VSUM in the vCenter Task Console.