



# Installing Cisco Nexus 1000V Using Cisco VSUM

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## Information About Installing Cisco Nexus 1000V Using Cisco VSUM

The Cisco VSUM is the GUI that you use to install the VSMs in high availability (HA) or standalone mode and the VEMs on ESX/ESXi hosts. The Cisco VSUM GUI is an integral part of the VMware vSphere Web Client and can only be accessed by logging into the VMware vSphere Web Client.

Cisco VSUM enables you to install Cisco Nexus 1000V Release 4.2(1)SV2(2.3) and the later releases.

See [Migrating Hosts to Cisco Nexus 1000V Using Cisco VSUM](#) to install VEM using Cisco VSUM.

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

See the corresponding *Cisco Nexus 1000V Installation and Upgrade Guide* to manually install the Cisco Nexus 1000V versions that are not supported by the Cisco VSUM.

## About the Virtual Switch Image File Upload Utility

The Virtual Switch Image File Upload utility is a GUI that enables you to dynamically upload the Cisco Nexus 1000V image files before you install Cisco Nexus 1000V. You must download the Cisco Nexus 1000V image files from Cisco.com on your local system before you upload them to the Cisco VSUM repository.

# Uploading the Cisco Nexus 1000V Image File

Before you install Cisco Nexus 1000V using Cisco VSUM, you must upload the corresponding Cisco Nexus 1000V image file to Cisco VSUM.

## Before you begin

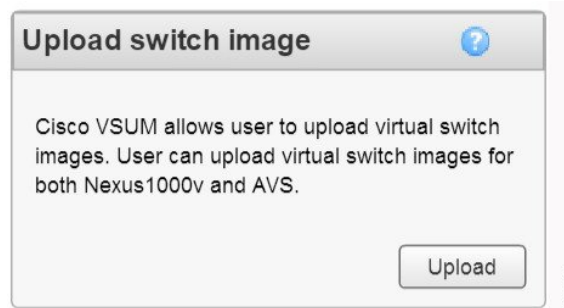
Download the Cisco Nexus 1000V .zip image folder from <https://software.cisco.com/download>.



**Attention** You must download the Cisco Nexus 1000V .zip image folder before starting the upload operation.

**Step 1** Log in to the VMware vSphere WebClient and choose **Home > Cisco Virtual Switch Update Manager > Upload**. The **Upload Switch Image** dialog box appears.

*Figure 1: Upload Switch Image Dialog Box*



**Step 2** In the **Upload Switch Image** dialog box, click **Upload**.

The **Virtual Switch Image File Uploader** dialog box appears.

**Step 3** In the **File Upload** dialog box, click **Choose File**, choose the appropriate image file available on your local machine, and then click **Upload**.

The upload might take a few minutes. The Cisco Nexus 1000V image file is uploaded to the Cisco VSUM repository.

## What to do next

Install Cisco Nexus 1000V as described in the procedure at [Installing the Cisco Nexus 1000V Using Cisco VSUM, on page 4](#).

# Prerequisites for Installing the Cisco Nexus 1000V Using Cisco VSUM

The Cisco Nexus 1000V installation using Cisco VSUM has the following prerequisites:

- You have downloaded the appropriate Cisco Nexus 1000V image file from Cisco.com and uploaded it in the Cisco VSUM repository.
- You installed Cisco VSUM.
- You installed and prepared vCenter Server for host management using the instructions from VMware.
- You installed VMware vSphere Web Client.
- You installed the VMware Enterprise Plus license on the hosts.
- You are familiar with the Cisco Nexus 1000V topology diagram.
- You created port groups for the Control and Management VLANs on the Cisco Nexus 1000V.
- You enabled the Distributed Switch—Create, Extension-Register, Update privilege permissions on the vCenter Server.
- ESXi host is running 4.1 or later releases.

## Guidelines and Limitations for Installing Cisco Nexus 1000V Using Cisco VSUM

The Cisco Nexus 1000V installation using Cisco VSUM has the following guidelines and limitations:

- We recommend that you install the VSMs in a high availability mode on the Cisco Nexus 1000V. For information about high availability and redundancy, see the *Cisco Nexus 1000V High Availability and Redundancy Configuration Guide*. Cisco VSUM supports standalone mode, but we do not recommend that you use this mode in a production environment.
- Cisco VSUM always deploys with VSM HA pairs by default. We recommend that you install primary and secondary VSM VMs on separate hosts.
- Only Layer 3 mode of deployment is supported by the Cisco VSUM with ESXi host.
- The Cisco Nexus 1000V VSM always uses the following two network interfaces in the same order:
  1. Control Interface
  2. Management Interface
- The VM hardware version has no dependencies, so the VM hardware version can be upgraded if required.
- Do not deploy vCenter server and VSM in different data centers. It is not supported.
- We recommend that you monitor and install all the relevant patch applications from the VMware ESXi host server.

# Installing the Cisco Nexus 1000V Using Cisco VSUM

You can install Cisco Nexus 1000V using Cisco VSUM. You install the Cisco Nexus 1000V switch by creating a new VSM or by using an existing VSM that is on a Cisco Nexus Cloud Services Platform (CSP). The VSM must not have been used to create a switch before you use it to install the Cisco Nexus 1000V switch.



**Note** If you want to install a Cisco Nexus 1000V switch by using a VSM, you must first create the VSM on a CSP.

## Before you begin

Know the following about the switch:

- VM port group for the control traffic of the switch
- VM port group for the management traffic of the switch
- IP address for management
- Subnet mask
- Gateway IP address
- Data center in which the switch will be installed
- Domain ID (a unique ID for the switch)
- Password (the default username is admin)



**Attention** From Cisco VSUM, Release 2.0, you cannot proceed with the installation of Cisco Nexus 1000V without uploading the Cisco Nexus 1000V image file to the Cisco VSUM repository. You can navigate to the Manage Uploaded Switch Image pane to check if the image file is already available in the Cisco VSUM repository.

## Step 1

### Step 2

Log in to VMware vSphere Web Client.

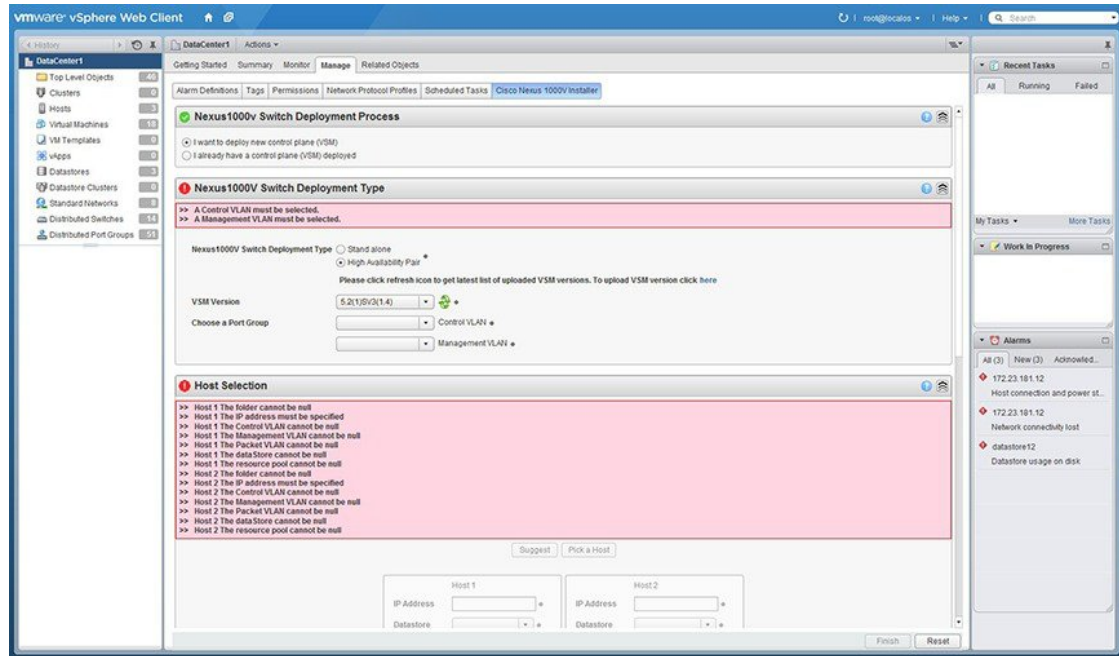
### Step 3

Complete one of the following actions, depending on the version of vCenter that you are using.

If you are using ...	Then...
vCenter 6.0 or earlier	Choose <b>Home &gt; Cisco Virtual Switch Update Manager &gt; Nexus 1000V &gt; Install</b> , and then choose the data center.
vCenter 6.5a	Choose <b>Home &gt; Cisco Virtual Switch Update Manager &gt; Nexus 1000V &gt; Install &gt; Configure &gt; Cisco Nexus1000V Installer</b> .

The installation screen appears.

Figure 2: Cisco Nexus 1000V Installer Pane



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**Step 4** Required: Complete one of the following sets of steps:

If you want to create a switch with...	Then...
An existing VSM	<ol style="list-style-type: none"> <li>1. In the <b>Nexus 1000v Switch Deployment</b> area, choose <b>I already have a control plane deployed</b>.</li> <li>2. In the <b>Virtual Supervisor Module (VSM) configuration</b> area, enter an IP address of an already existing VSM in the <b>IP address</b> field, and enter a password in the <b>Password</b> field. <ul style="list-style-type: none"> <li><b>Note</b> If you check the <b>Default Port Profile</b> check box, the default port profile is enabled. Also, sample port profiles are created for the different features in the VSM, and the port profiles are pushed to the VSM. The sample port profiles are created as user references and include default and mandatory commands that are required to configure this feature. You can modify the port profiles based on the network configuration.</li> </ul> </li> <li>3. Click <b>Finish</b>.</li> <li>4. Skip to the next section; you do not need to complete the remaining steps in this section because the switch is created when you complete the previous step.</li> </ol>

If you want to create a switch with...	Then...
A new VSM	<ol style="list-style-type: none"> <li>1. In the <b>Nexus 1000v Switch Deployment</b> area, choose <b>I want to deploy new control plane (VSM)</b>.</li> <li>2. Complete the remaining steps in this section to create the switch.</li> </ol>

**Step 5**

In the **Cisco Nexus 1000V Switch Deployment Type** area, complete the following fields:

Name	Description
<b>Standalone</b>	<p>Installs the switch in standalone mode.</p> <p><b>Note</b> We recommend that you install the Cisco Nexus 1000V in an HA pair.</p>
<b>High Availability Pair</b>	<p>Installs the switch as an HA pair. By default, the <b>High Availability Pair</b> is selected.</p>
<b>VSM Version</b>	<p>Choose the Cisco Nexus 1000V version to be installed. By default, the latest version is selected.</p> <p><b>Note</b> We recommend that you click the refresh icon to display the latest list of the uploaded VSM versions.</p>
<b>Control VLAN</b>	<p>Choose the control port group for the switch.</p> <p>The control port group is used for the control traffic.</p>
<b>Management VLAN</b>	<p>Choose the management port group for the switch.</p> <p><b>Note</b> The Cisco Nexus 1000V VSM uses the management network to communicate with vCenter Server and ESXi.</p>

**Step 6**

Click **Suggest** to choose two hosts based on the details provided in the **Cisco Nexus 1000V Switch Deployment Type** area.

**Step 7**

In the **Host Selection** area, complete the following fields:

Name	Description
<b>IP Address</b>	<p>The IP address of the hosts on which the switch will be deployed.</p> <p>The primary switch is deployed on Host 1 and the secondary switch is deployed on Host 2.</p> <p>You can override system choices by dragging and dropping hosts. Click <b>Pick a host</b> to drag and drop hosts.</p>
<b>Datastore</b>	<p>Choose the system-selected datastore that you want to override. Choose a datastore for each host.</p>

Name	Description
<b>Resource Pool</b>	<p>Choose the resource pool for each host.</p> <p><b>Note</b> If you do not choose a resource pool and the host is a cluster, the resource pool for the switch is the root resource pool of the cluster.</p> <p>If you do not choose a resource pool and the host is in standalone mode, the resource pool for the switch will be the root resource pool of the host.</p>
<b>Folder Name</b>	<p>Choose the folder name for each host.</p> <p><b>Note</b> If the folder name is not displayed in the drop-down list, the switch VM is created in the root VM folder of the data center.</p>

**Step 8**

In the **Switch Configuration** area, complete the following fields:

Name	Description
<b>Domain ID</b>	<p>The domain ID for the switch.</p> <p>The domain ID is common for both the primary and secondary switches and it should be unique for every new switch. The range for the domain is from 1 to 1023.</p>
<b>Deployment Type</b>	<p>Configures the deployment type.</p> <p>By default, <b>Management IP Address</b> is selected.</p> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• If you choose the Management IP address, this IP address is used for the VSM management operations and the VSM-to-VEM communications.</li> <li>• If you choose the Control IP address, this IP address is used only for the VSM-to-VEM communications.</li> </ul>
<b>Control:IP/Name</b>	The IP address for switch connectivity.
<b>Control: Mask</b>	The subnet mask.
<b>Control: Gateway IP/Name</b>	The gateway IP address.

**Step 9**

In the **Virtual Supervisor Module (VSM) configuration** area, complete the following fields:

Name	Description
<b>Switch Name</b>	<p>The name of the switch. The name must have the following:</p> <ul style="list-style-type: none"> <li>• Start with a letter (A-Z, a-z).</li> <li>• Contain up to 32 case-sensitive letters (A-Z, a-z), numbers (0-9), or hyphens (-).</li> <li>• Not contain any other special characters or spaces.</li> </ul> <p>When a switch VM is created in vCenter, the same name is used for the primary and the secondary switch.</p> <p>For a standalone deployment, the VSM VM is the <i>switch name</i>.</p> <p>For an HA deployment, the primary VSM VM is the <i>switch name_primary</i> and the secondary switch is the <i>switch name_secondary</i>.</p>
<b>IP Address</b>	The IP address of the switch. The IP address is used for the management of the Cisco Nexus 1000V switch.
<b>Subnet Mask</b>	The subnet mask for the above entered IP address.
<b>Gateway Address</b>	The gateway IP address for the above entered IP address.
<b>Username</b>	By default, the user name is admin. This field is not editable.
<b>Default Port Profiles</b>	<p>If checked, the default port profile is enabled and this creates sample port profiles for the different features in the VSM, and pushes it to the VSM.</p> <p>The sample port profiles are created as user references and include default and mandatory commands that are required to configure this feature. You can modify the port profiles based on the network configuration.</p>
<b>Password</b>	<p>The admin user password.</p> <p>This password is used to log in to the switch for administration.</p>
<b>Confirm Password</b>	The admin user password that you reenter for confirmation.

**Step 10** Click **Finish** to install the Cisco Nexus 1000V switch. A window appears to show the status of the installation.

**Step 11** (Optional) For detailed information about the status of the installation by completing the following steps:

- Open a new tab in your browser and enter the same vCenter IP address to open the web client again.
- Log in to the web client and in the navigation pane, click **Tasks**.

The **Task Console** opens in the work pane, displaying a list of tasks with the most recent task at the top.



- c) 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 in progress. You can click the refresh icon to display new tasks and learn how much of the task is complete.

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

The Cisco Nexus 1000V installation is confirmed when the primary task `Create Nexus 1000v Switch` has the status `Completed`. A typical installation of the switch takes about 4 minutes.

### What to do next

Install VEM as described in the procedure [Migrating Hosts to the Cisco Nexus 1000V Using Cisco VSUM](#).

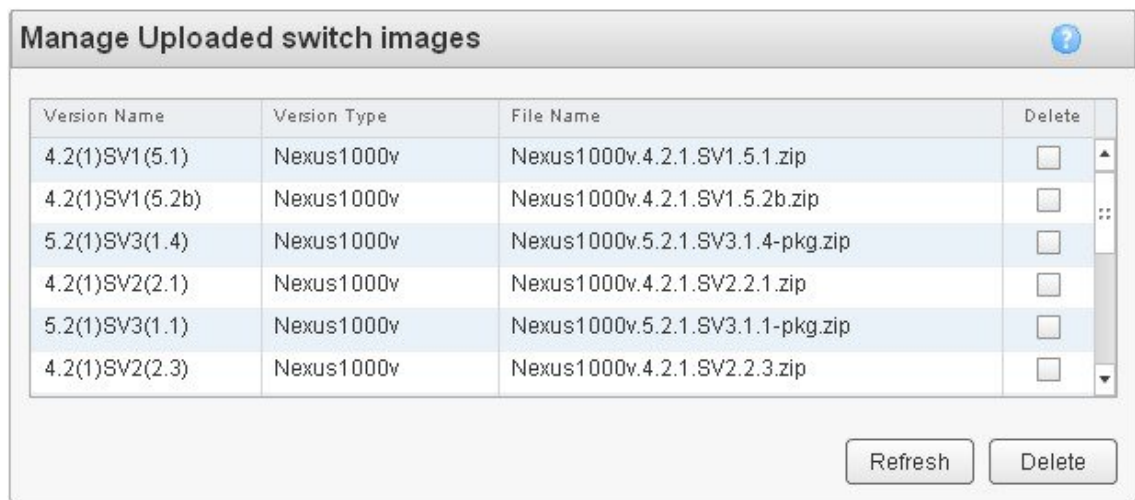
## Managing the Cisco Nexus 1000V Image Files in the Cisco VSUM Repository

You can choose to either retain multiple image files that have been uploaded in the Cisco VSUM repository, or you can delete image files that you do not require.

- Step 1** Log in to VMware vSphere Web Client and choose **Home > Cisco Virtual Switch Update Manager > Upload**.

The **Manage Uploaded Switch Images** pane appears.

*Figure 3: Manage Uploaded Switch Images Pane*



Version Name	Version Type	File Name	Delete
4.2(1)SV1(5.1)	Nexus1000v	Nexus1000v.4.2.1.SV1.5.1.zip	<input type="checkbox"/>
4.2(1)SV1(5.2b)	Nexus1000v	Nexus1000v.4.2.1.SV1.5.2b.zip	<input type="checkbox"/>
5.2(1)SV3(1.4)	Nexus1000v	Nexus1000v.5.2.1.SV3.1.4-pkg.zip	<input type="checkbox"/>
4.2(1)SV2(2.1)	Nexus1000v	Nexus1000v.4.2.1.SV2.2.1.zip	<input type="checkbox"/>
5.2(1)SV3(1.1)	Nexus1000v	Nexus1000v.5.2.1.SV3.1.1-pkg.zip	<input type="checkbox"/>
4.2(1)SV2(2.3)	Nexus1000v	Nexus1000v.4.2.1.SV2.2.3.zip	<input type="checkbox"/>

Refresh Delete

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- Step 2** Click **Refresh** to view the latest list of image files in the Cisco VSUM repository.

**Step 3** Check the check box(es) against the image file that you want to delete and click **Delete** to delete the image file(s) from the Cisco VSUM repository.

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