# Installing Cisco Virtual Switch Update Manager

This chapter contains the following sections:

## Information About Cisco Virtual Switch Update Manager

Cisco VSUM is a virtual appliance in the data center and is registered as a plug-in to the VMware vCenter Server. The Cisco VSUM user interface is an integral part of the VMware vSphere Web Client.

**Benefits of Cisco VSUM**

The Cisco VSUM GUI enables you to do the following:

- Upload Cisco Nexus 1000V image files.

- Install, migrate, monitor, and upgrade:

    - VSMs in high availability (HA) or standalone mode.

    - VEMs on ESX/ESXi hosts.

**Guidelines for Installing Cisco VSUM**

Cisco VSUM software is available on VSUM download page on Cisco.com.

**Note**    The download location and the software are the same for the Cisco Nexus 1000V and the Cisco AVS.

We recommend that the Cisco VSUM VMNICs be connected to the management network of the network infrastructure for the data center. This allows Cisco VSUM to access the vCenter and the hosts.

**Note** When you have multiple Cisco AVS associated to different vCenters, you need to deploy Cisco VSUM on all vCenters associated with the multi-Cisco AVS infrastructure. You should have the same number of vCenters and VSUM deployments.

# Compatibility Information for Cisco VSUM

The following table lists the compatibility information for Cisco VSUM.

*Table 1: Version Compatibility for Cisco VSUM for Cisco Nexus 1000V*

| Minimum Required Cisco Nexus 1000V Release for Various Features | VMware vCenter Server Version (Includes Patches and Updates) | VMware Software Release Version (Includes Patches and Updates) |
|---|---|---|
| Cisco Virtual Switch Update Manager supports installations of the following releases: <br><br> • Release 5.2(1)SV3(3.1) <br> • Release 5.2(1)SV3(2.8) <br> • Release 5.2(1)SV3(2.5) <br> • Release 5.2(1)SV3(2.1) <br> • Release 5.2(1)SV3(1.15) <br> • Release 5.2(1)SV3(1.10) <br> • Release 5.2(1)SV3(1.6) <br> • Release 5.2(1)SV3(1.5b) <br> • Release 5.2(1)SV3(1.5a) <br> • Release 5.2(1)SV3(1.4) <br> • Release 5.2(1)SV3(1.3) <br> • Release 5.2(1)SV3(1.2) <br> • Release 5.2(1)SV3(1.1) <br> • Release 4.2(1)SV2(2.3) <br> • Release 4.2(1)SV2(2.2) <br> • Release 4.2(1)SV2(1.1a) <br> • Release 4.2(1)SV1(5.2b) <br><br> Cisco VSUM supports migration from Release 4.2(1)SV1(5.1) and later. <br><br> Cisco VSUM supports upgrades from Release 4.2(1)SV1(4b) and later. <br><br> Cisco VSUM supports the monitoring functionality from Release 4.2(1)SV2(1.1) and later. | 6.5a <br><br> 6.0 <br><br> 5.5 <br><br> 5.1 <br><br> **Note**  If you are using Cisco VSUM 2.1 or an earlier release and want to upgrade to vCenter 6.5a, you must upgrade to Cisco VSUM 2.1.1 or later and then upgrade vCenter. <br><br> **Note**  If you are using Cisco VSUM 1.5.2 or an earlier release and want to upgrade vCenter to 6.0, you must upgrade to Cisco VSUM 1.5.3 or later and then upgrade vCenter. | ESXi 6.5a <br><br> ESXi 6.0 <br><br> ESXi 5.5 <br><br> ESXi 5.1 <br><br> ESXi 5.0 <br><br> ESXi 4.1 |

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

# System Requirements for Cisco VSUM

- VMware vSphere Web Client 5.1, 5.5, 6.0, or 6.5a.

- All the web-based GUI client requirements as required by the VMware vSphere Web Client.

- The memory requirement is 4 GB RAM.

- The CPU requirement is 2.

- The disk space requirement is 80 GB.

# Prerequisites

Cisco VSUM has the following prerequisites:

- You have installed the VMware Enterprise Plus license on the hosts.

- You have installed the vCenter Server 5.1, 5.5, 6.0, or 6.5a with the Web Client.

- You have administrative credentials for the vCenter Server.

- You have a username, IP address, subnet mask, and gateway IP address for deploying the Cisco VSUM OVA.

- Cisco VSUM has IP connectivity on port 443 to all ESXi hosts.

- Ports 80 and 443 are open in the vCenter to communicate with the host.

- The IP address used for deploying the OVA can communicate with the IP address of the vCenter Server. Port 8443 is open for communication between Cisco VSUM and vCenter.

# Verifying the Authenticity of the Cisco-Signed Image (Optional)

Before you install the Nexus1000v-vsum.2.x-pkg.zip image, you have the option to validate its authenticity. In the zip file, there is a signature.txt file that contains an SHA-512 signature and an executable script that can be used to verify the authenticity of the Nexus1000v-vsum.2.x-pkg.zip image.

**Note**    Verifying the authenticity of an image is optional. You can still install the image without validating its authenticity.

**Before you begin**

You must be running a Linux machine with the following utilities installed:

- openssl

- base64

**Step 1**    Copy the following files to a directory on the Linux machine:

  • Nexus1000v-vsum.2.x-pkg.zip image

  • signature.txt file

  • cisco_n1k_image_validation_v_2_x script

**Step 2**    Ensure that the script is executable.

**chmod 755 cisco_n1k_image_validation_v_2_x**

**Step 3**    Run the script.

**./cisco_n1k_image_validation_v_2_x -s signature.txt Nexus1000v-vsum.2.x-pkg.zip**

**Step 4**    Check the output. If the validation succeeds, the following message displays:

```
Authenticity of Cisco-signed image Nexus1000v-vsum.2.x-pkg.zip has been successfuly verified!
```

# Installing Cisco VSUM

You can install the Cisco VSUM OVA using the following steps.

### Before you begin

  • Ensure that the Cisco VSUM OVA image is available in the file system.

  • Ensure that you have the IP address, subnet mask, gateway IP address, domain name, DNS server, and vCenter IP address and credentials for deploying the OVA.

**Note**    When you install Cisco VSUM, you must use the same credentials that you use to install the thick client.

**Step 1**    Log in to the VMware vSphere Web Client.
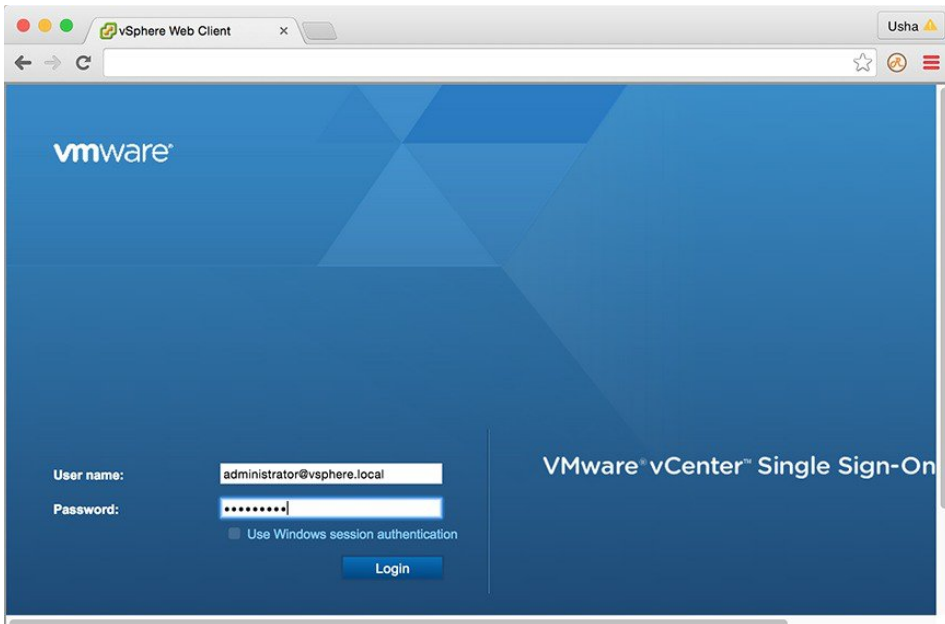
**Step 2** Choose **Hosts and Clusters**.
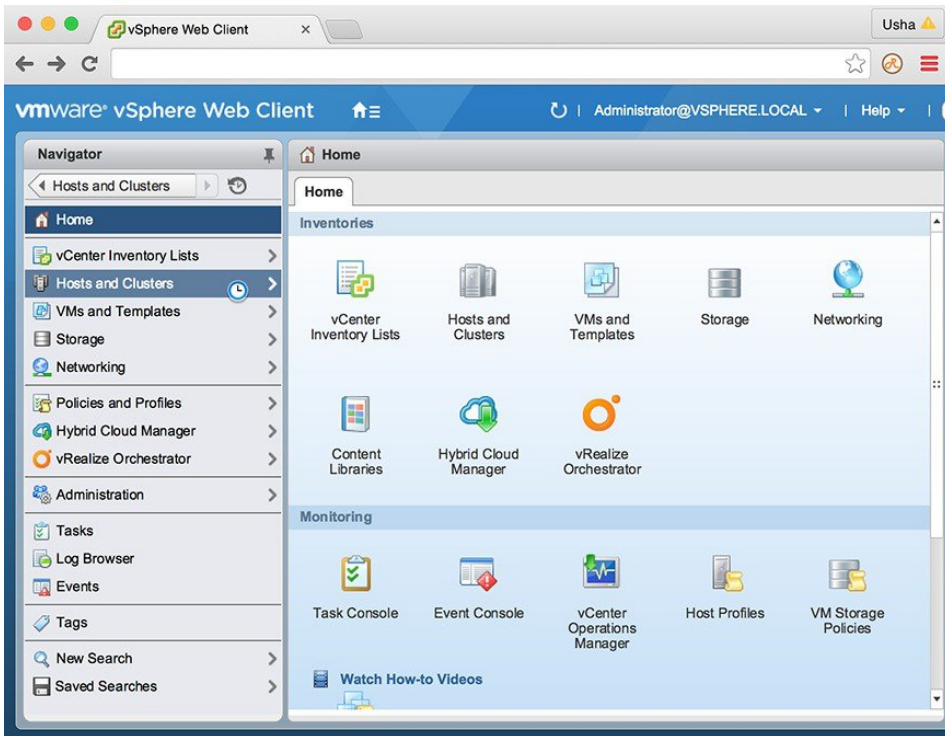


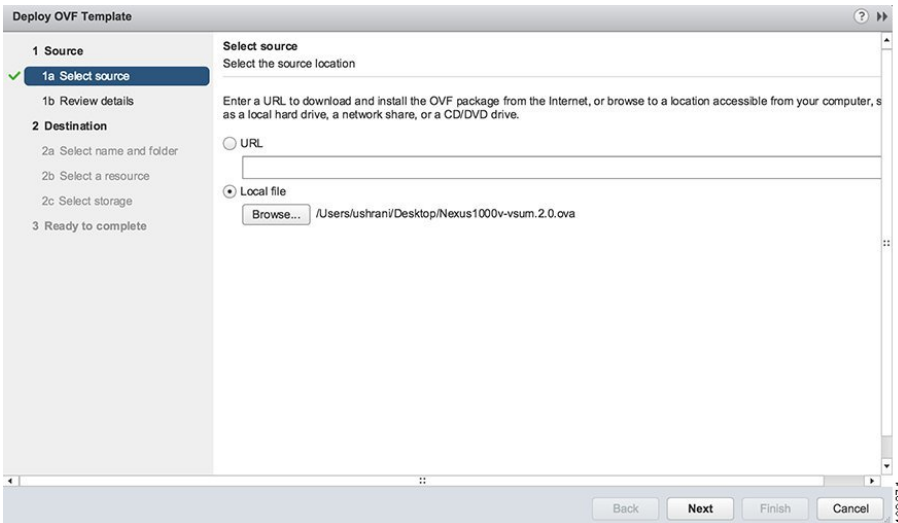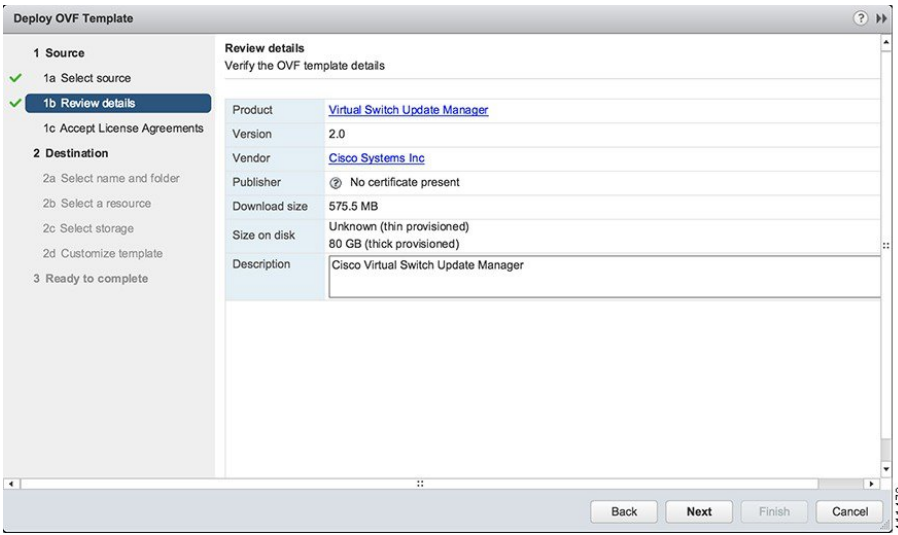**Step 3** Choose the host on which to deploy the Cisco VSUM OVA.
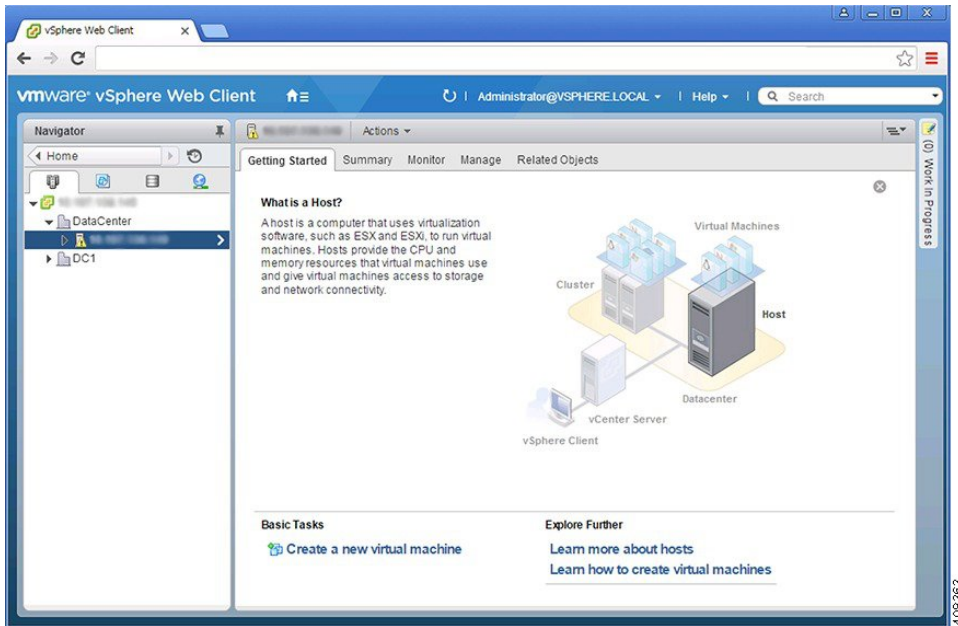
**Step 4**    From the **Actions** menu, choose **Deploy OVF Template**.
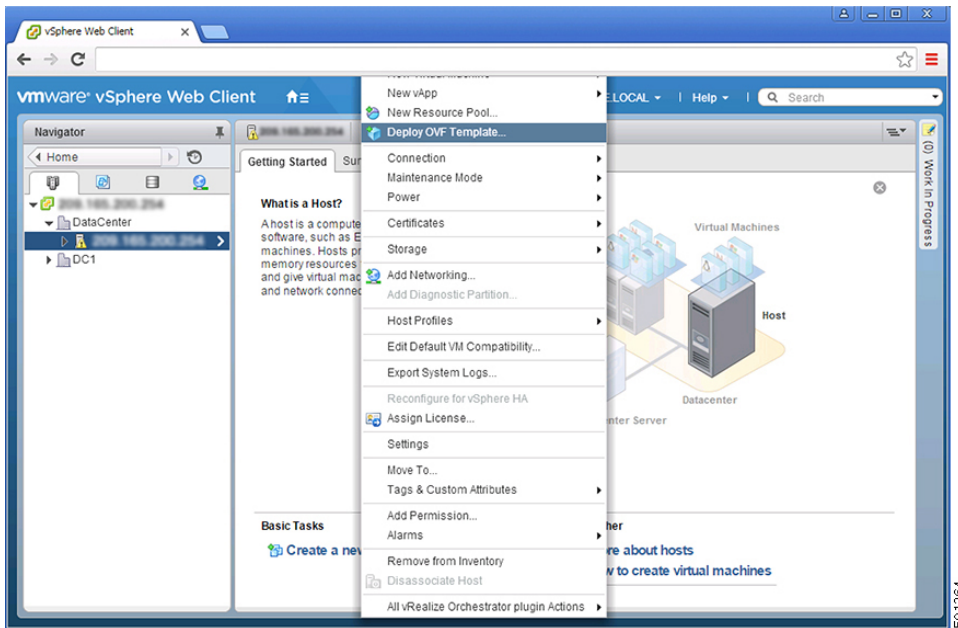


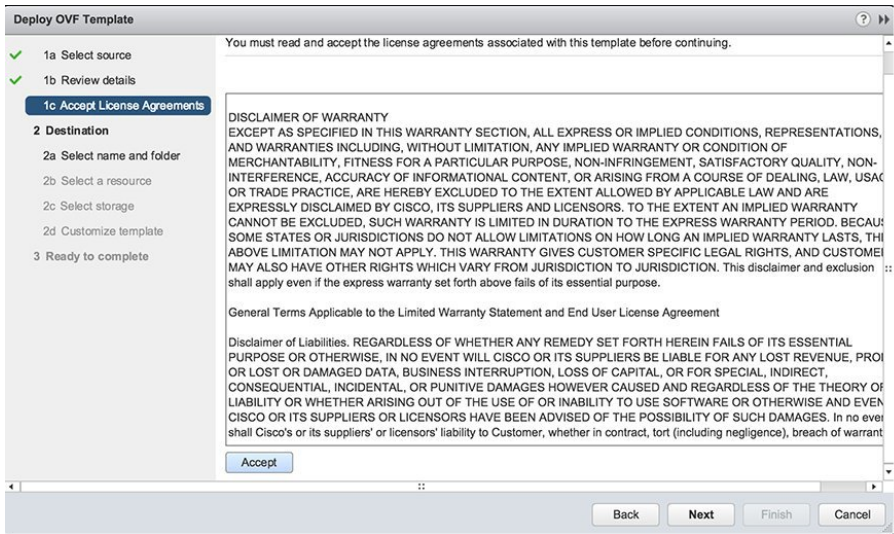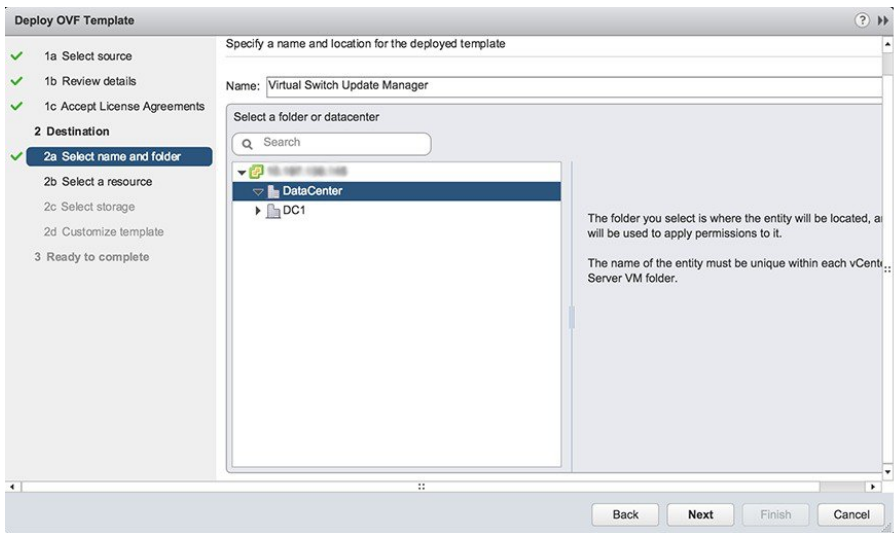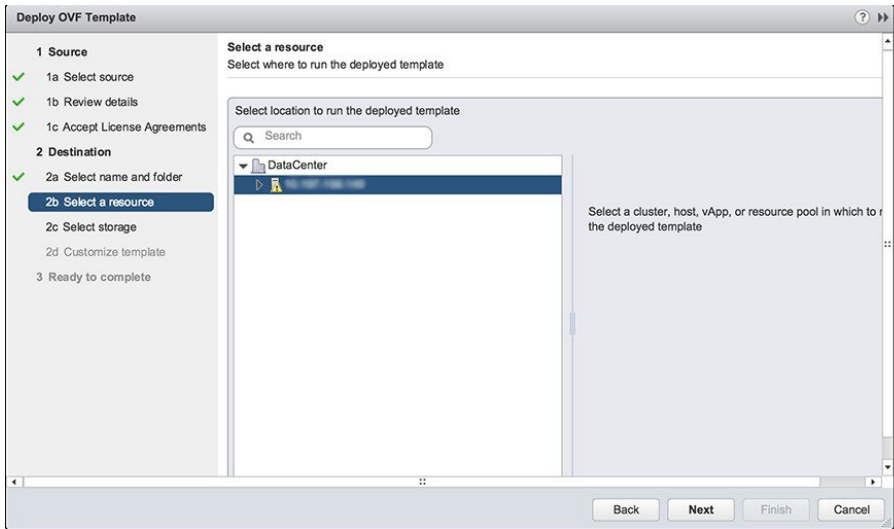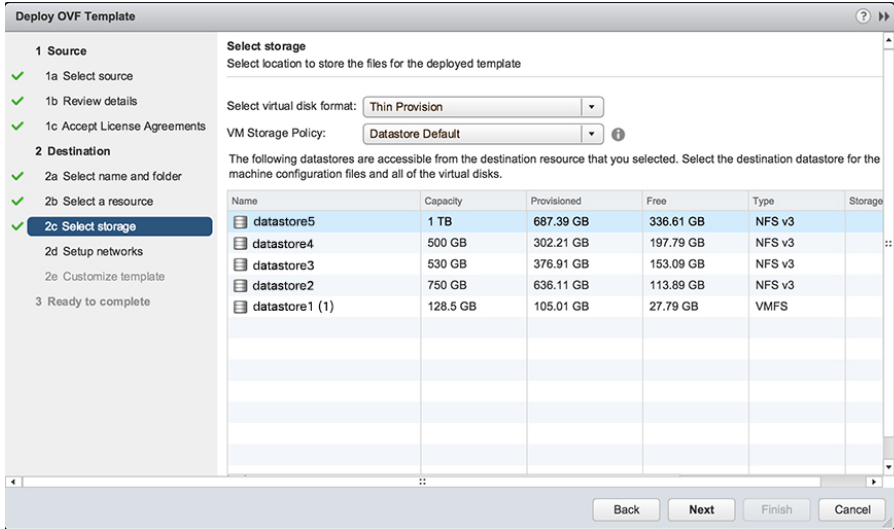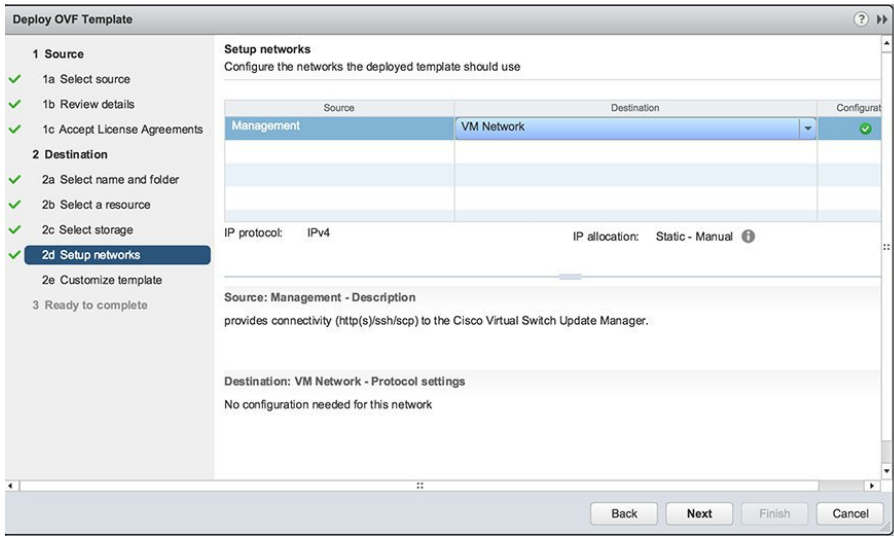**Step 5**    In the **Deploy OVF Template** wizard, complete the information as described in the following table.

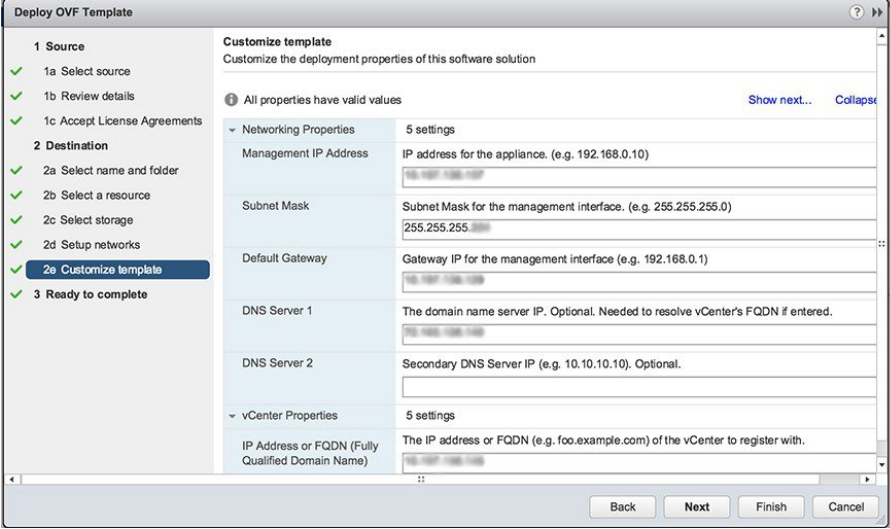| Pane | Action |
|------|--------|
| 1a Select source | Choose the Cisco VSUM OVA. |
| 1b Review details | Review the details. |

| Pane | Action |
|---|---|
| 1c Accept License Agreements | Review the agreement and click **Accept**. |
| 2a Select name and folder | Enter a name and choose a location for the appliance. |

| Pane | Action |
|------|--------|
| 2b Select a resource | Choose the host or cluster to run the OVA template. |
| 2c Select storage | Choose the data store for the VM. Choose either **Thin provisioned format** or **Thick provisioned format** to store the VM virtual disks. We recommend that you store the VM virtual disks in the **Thick provisioned format**. |

| Pane | Action |
|------|--------|
| 2d Setup networks | Choose the destination network for the VM that is reachable from the vCenter Server. |

| Pane | Action |
|---|---|
| 2e Customize template | Provide the following information:<br><br>• Management IP address<br><br>• Subnet mask<br><br>• Gateway IP address<br><br>• DNS server IP address<br><br>• DNS entry to resolve the fully qualified domain name (FQDN)<br><br>• vCenter IP or FQDN<br><br>• vCenter username<br><br>• vCenter password<br><br>• HTTP cleartext port and HTTPS port<br><br> |

| Pane | Action |
|---|---|
| 3 Ready to complete | Review the deployment settings. |
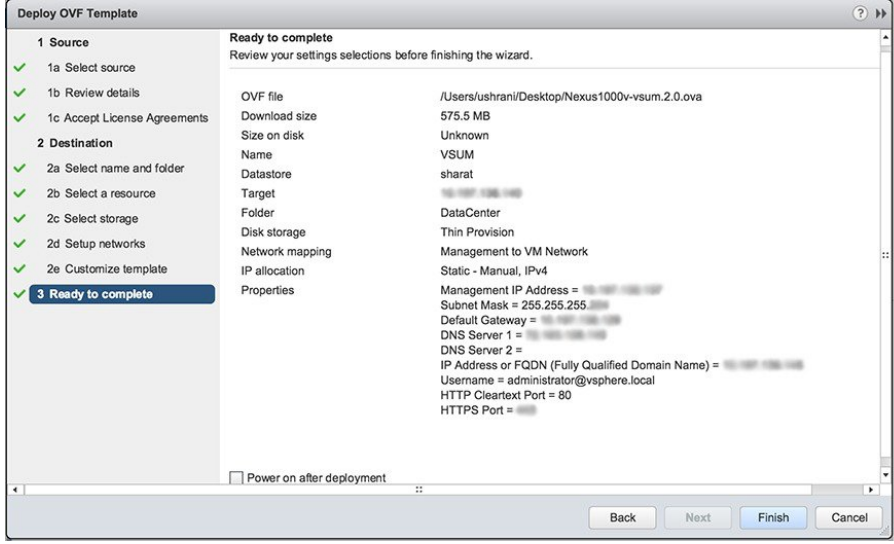
Caution    Any discrepancies can cause VM booting issues. Carefully review the IP address, subnet mask, gateway information, and vCenter credentials.

**Step 6**   Click **Finish**.

**Step 7**   After Cisco VSUM deploys successfully, click **Close**.

**Step 8**   Power on the Cisco VSUM VM.

It might take 5 minutes for Cisco VSUM to be installed and registered as a vSphere Web Client plug-in.
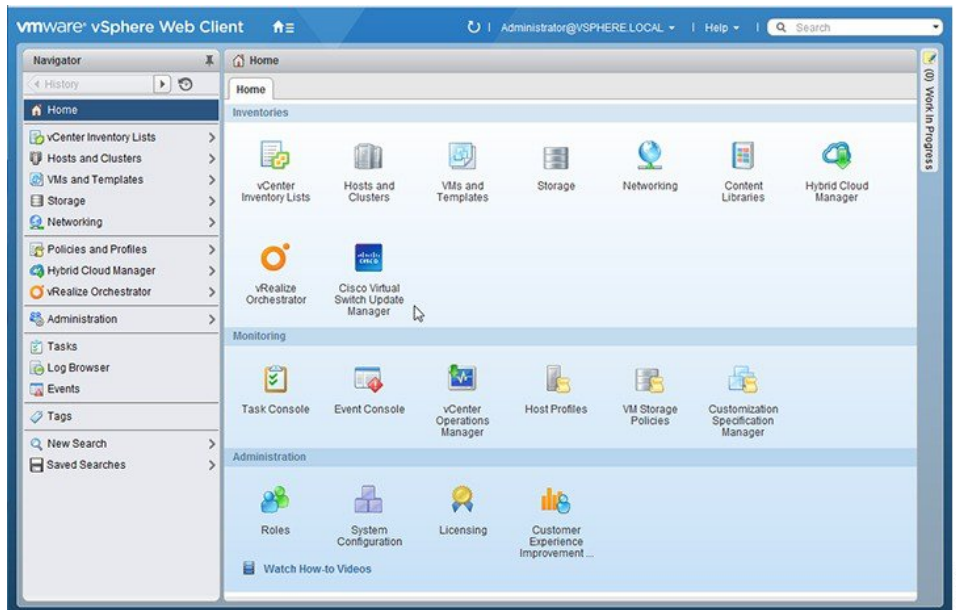
If the Web Client session was open during the installation, you must log out and log in again to view the Cisco VSUM plug-in.

# About the Cisco VSUM GUI

Cisco VSUM is a virtual appliance that is registered as a plug-in to the VMware vCenter Server.

The Cisco VSUM is a GUI that you use to upload the Cisco Nexus 1000V image files and then install, migrate, monitor, and upgrade the VSMs in high availability (HA) or standalone mode and the VEMs on ESX/ESXi hosts.

*Figure 1: VMware vSphere Web Client—Home Page*
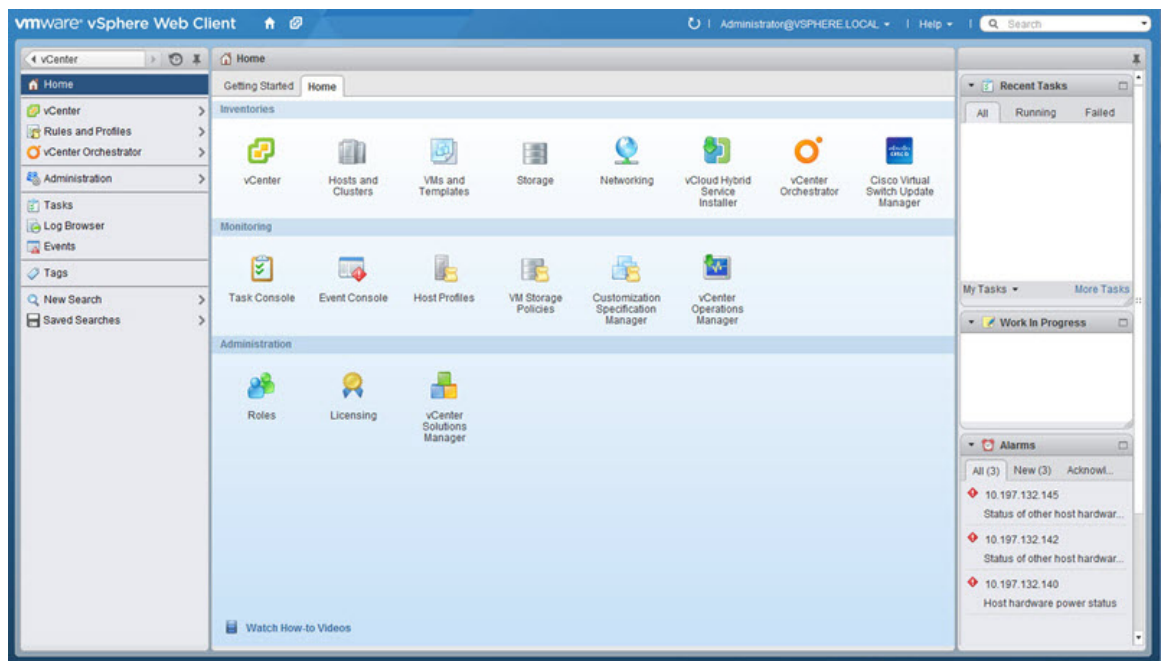
Figure 2: Cisco VSUM—Home Page
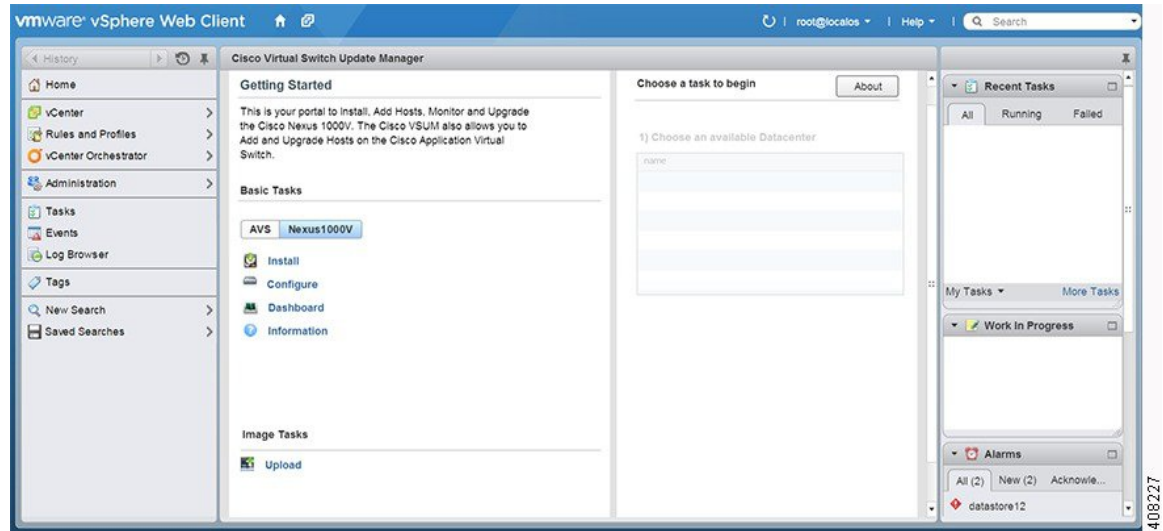


# Upgrading Cisco VSUM

**Step 1**    Log in to Cisco VSUM as the root user.

The default Cisco VSUM username is **root** and the default Cisco VSUM password is **cisco**.

**Example:**

```
login as: root
root@192.0.2.9's password
root@localhost ~]#
```

**Step 2**    Download from Cisco.com the zipped folder containing the upgrade file for the version of Cisco VSUM that you want to local storage.
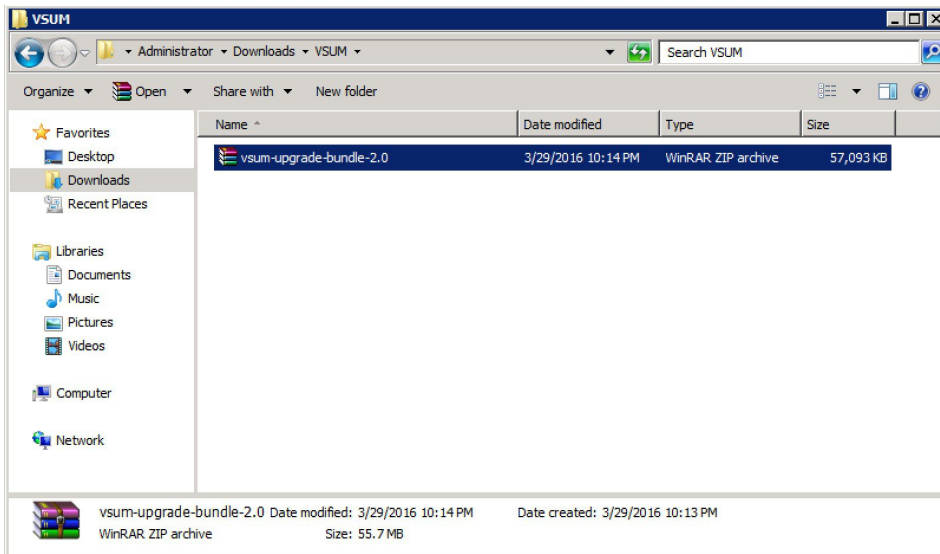
The zipped folder can be found on the Cisco VSUM Download Software page.

**Note** The upgrade folder name is `vsum-upgrade-bundle-2.x.zip`. That is, the folder name is `vsum-upgrade-bundle-2.0.zip` for VSUM 2.0 (as seen in the screen capture above), `vsum-upgrade-bundle-2.1.zip` for VSUM 2.1, or `vsum-upgrade-bundle-2.1.1.zip` for VSUM 2.1.1.

**Step 3** Copy the downloaded zipped upgrade folder to this Cisco VSUM path: `/etc/cisco/app_install`.
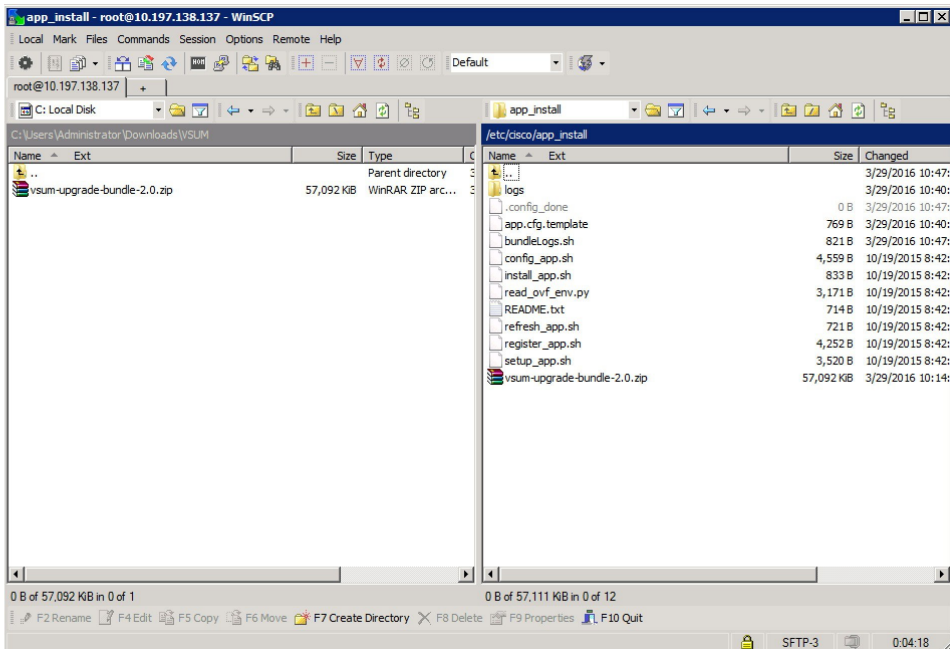


**Step 4** From the Cisco VSUM location `/etc/cisco/app_install`, unzip the copied upgrade folder.

**Note** The following example uses VSUM 2.0; be sure to use the upgrade file for the release you want to upgrade to.

**Example:**

```
[root@localhost app_install]# unzip vsum-upgrade-bundle-2.0.zip
Archive:  vsum-upgrade-bundle-2.0.zip
  inflating: bash-4.1.2-15.el6_5.2.x86_64.rpm
  inflating: driver.py
 extracting: patch.zip
  inflating: upgradeVsumTo2_0.sh
  inflating: README_UPGRADE
```

**Step 5** Upgrade Cisco VSUM by completing the following steps:

a) From the Cisco VSUM location `/etc/cisco/app_install`, enter the **ls** command.

**Note** The following example uses VSUM 2.0; be sure to use the upgrade file for the release you want to upgrade to.

**Example:**

```
[root@localhost app_install]# ls
app.cfg.template                  driver.py         README.txt      register_app.sh
bash-4.1.2-15.el6_5.2.x86_64.rpm  install_app.sh    README_UPGRADE  setup_app.sh
bundleLogs.sh                     logs              read_ovf_env.py upgradeVsumTo2_0.sh
config_app.sh                     patch.zip         refresh_app.sh  vsum-upgrade-bundle-2.0.zip
[root@localhost app_install]#
[root@localhost app_install]#
[root@localhost app_install]# ./upgradeVsumTo2_0.sh administrator@vsphere.local Sfish@123
```

b) Examine the output of the **ls** and make sure that an `.sh` file is present

c) If an `.sh` file is present, upgrade Cisco VSUM by entering the following command: ***./upgrade-file-name.sh <vCenter-username> <vCenter-password>***

**Note** If the `.sh` file is not present, contact Cisco Customer Support.

**Example:**

***././upgradeVsumTo2_<x>.sh <vCenter-username> <vCenter-password>***

**Note** The vCenter username and password credentials are for the vCenter with which Cisco VSUM is associated.

**What to do next**

Wait until the upgrade is complete. You can then log back into vCenter and use the upgraded Cisco VSUM.

If the VMware vSphere Web Client session was open during the upgrade, you must log out and log in again to view the Cisco VSUM plug-in.

# Replacing Cisco VSUM—Linux vCenter Appliance

Use this procedure to replace an existing Cisco VSUM in the VMware vSphere Web Client.

**Before you begin**

Power off the current Cisco VSUM before you begin this procedure.

**Step 1** Power off the current active Cisco VSUM VM.

**Step 2** Enter `https://VCIP/mob` and log in with the default credentials.

**Step 3**  In a web browser, choose **Content** > **Extension Manager** > **UnregisterExtension**.

**Step 4**  Enter **com.cisco.n1kv** and click **Invoke method**.

**Step 5**  Enter the following command:

**rm -rf /var/lib/vmware/vsphere-client/vc-packages/vsphere-client-serenity/com.cisco.n1kv-***2.x/*

**Note**    This command is applicable if you use the vCenter 5.1 or vCenter 5.5 versions.

If you use vCenter 6.0 or vCenter 6.5a, the folder is
*etc/vmware/vsphere-client/vc-packages/vsphere-client-serenity/com.cisco*. In this case, the command is **rm -rf /etc/vmware/vsphere-client/vc-packages/vsphere-client-serenity/com.cisco.n1kv-***2.x/*

**Step 6**  Enter the following command:

**/etc/init.d/vsphere-client restart**

**Step 7**  Install the new version of the Cisco VSUM VM.

**Step 8**  After Cisco VSUM is successfully deployed, log in to the VMware vSphere Web Client to view the Cisco VSUM plug-in.

# Replacing Cisco VSUM—Windows vCenter Server

Use this procedure to replace an existing Cisco VSUM in the VMware vSphere Web Client.

### Before you begin

Power off the current Cisco VSUM before you begin this procedure.

**Step 1**  Power off the current active Cisco VSUM VM.

**Step 2**  Enter `https://VCIP/mob` and log in with the default credentials.

**Step 3**  In a web browser, choose **Content** > **Extension Manager** > **UnregisterExtension**.

**Step 4**  Enter **com.cisco.n1kv** and click **Invoke method**.

**Step 5**  Choose **Start** > **Run** > **services.msc**.

**Step 6**  Right-click the VMware vSphere Web Client and click **stop**.

**Step 7**  From the `C:\ProgramData\VMware\vSphere Web Client\`
`vc-packages\vsphere-client-serenity` directory, delete the **com.cisco.n1kv** folder.

**Note**    The directory is applicable if you use vCenter 5.1 or vCenter 5.5.

If you use vCenter 6.0 or vCenter 6.5a, the directory is
`C:\ProgramData\VMware\vCenterServer\cfg\vsphere-client\vc-packages\vsphere-clien`

**Step 8**  Choose **Start** > **Run** > **type service.msc**.

**Step 9**  Right-click the VMware vSphere Web Client and click **Start**.

**Step 10**  Install the new version of the Cisco VSUM VM.

**Step 11**  After Cisco VSUM is successfully deployed, log in to the VMware vSphere Web Client to view the Cisco VSUM plug-in.