

# Cisco Nexus 1000V VEM Software Installation and Upgrade Guide, Release 4.2(1) SV1(4)

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This document describes how to install and upgrade the Cisco Nexus 1000V Virtual Ethernet Module (VEM) software on a VMware ESX/ESXi 4.0.0 server or ESX/ESXi 4.1.0 server.

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- Choosing a VEM Software Installation or Upgrade Procedure, page 6
- Upgrading the ESX/ESXi Host With VEM Software Installed Using VUM, page 7
- Patching ESX/ESXi 4.0.0 Update 1 with ESX/ESXi400-201002001 (P04), page 7
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#### Audience

## Send document comments to nexus1k-docfeedback@cisco.com.

# Audience

This document is intended for use by experienced server administrators who configure and maintain server software. Table 1 compares the roles of the network administrator and server administrator.

Table 1Administrator Roles

Network Administrator	Server Administrator
• Creates, configures, and manages vswitches.	• Assigns the following to port groups:
• Creates, configures, and manages port	- Virtual network interface cards (VNICs)
profiles, including the following:	<ul> <li>vmkernel interfaces</li> </ul>
– Security	<ul> <li>Service console interfaces</li> </ul>
<ul> <li>Port channels</li> </ul>	• Assigns physical NICs (PNICs) to vswitches
<ul> <li>QoS policies</li> </ul>	on each host.

This document includes instructions for installing new VEM software as a fresh install or after upgrading the VSM software to a new version.

To install the Virtual Supervisor Module (VSM), see the following document:

Cisco Nexus 1000V Software Installation Guide, Release 4.2(1)SV1(4)

For detailed information about upgrading the software on the VSM and VEM, see the following document:

Cisco Nexus 1000V Software Upgrade Guide, Release 4.2(1)SV1(4)

# Information About the Virtual Ethernet Module

This section provides information about the Virtual Ethernet Module and includes the following topics:

- Introduction to Cisco Nexus 1000V and the Virtual Ethernet Module, page 2
- Obtaining the VEM Software, page 4
- VMware Patch Releases, page 5

# Introduction to Cisco Nexus 1000V and the Virtual Ethernet Module

The Cisco Nexus 1000V is compatible with any upstream physical access layer switch that is Ethernet standard compliant, including the Catalyst 6500 series switch, Cisco Nexus switches, and switches from other network vendors. The Cisco Nexus 1000V is compatible with any server hardware listed in the VMware Hardware Compatibility List (HCL).

Cisco and VMware jointly designed APIs that produced the Cisco Nexus 1000V. The Cisco Nexus 1000V is a distributed virtual switch solution that is fully integrated within the VMware virtual infrastructure, including VMware vCenter for the virtualization administrator. This solution off-loads the configuration of the virtual switch and port groups to the network administrator to enforce a consistent data center network policy.

The Cisco Nexus 1000V has the following components that can virtually emulate a 66-slot modular Ethernet switch with redundant supervisor functions:

- Virtual Ethernet module (VEM) data plane—Each hypervisor is embedded with one VEM, a lightweight software component that replaces the virtual switch by performing the following functions:
  - Advanced networking and security
  - Switching between directly attached virtual machines
  - Uplinking to the rest of the network



• There can be one and only one version of VEM installed on an ESX/ESXi host at any given time.

- Virtual supervisor module (VSM) control plane—The VSM is a virtual appliance which can be installed in either a standalone or active/standby HA pair which is the recommended configuration. The VSM performs the following functions for the Cisco Nexus 1000V system (that is, the combination of the VSM and all VEMs that it controls):
  - Configuration
  - Management

A single VSM can manage up to 64 VEMs.

- Monitoring
- Diagnostics
- Integration with VMware vCenter

Active-standby VSMs increase high availability

In the Cisco Nexus 1000V, traffic is switched between virtual machines locally at each VEM instance. Each VEM also interconnects the local virtual machine with the rest of the network through the upstream access-layer network switch (blade, top-of-rack, end-of-row, and so forth). The VSM runs the control plane protocols and configures the state of each VEM accordingly, but it never forwards packets.

In the Cisco Nexus 1000V, the module slots are primary module 1 and secondary module 2. Either module could act as active or standby. The first server or host is automatically assigned to Module 3. NIC ports are 3/1 and 3/2 (vmnic0 and vmnic1 on ESX/ESXi host). The ports to which the virtual NIC interfaces connect are virtual ports on the Cisco Nexus 1000V where they are assigned a global number.

Figure 1 shows an example of the Cisco Nexus 1000V distributed architecture.

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Figure 1

Cisco Nexus 1000V Distributed Switching Architecture



# **Obtaining the VEM Software**

You can obtain the VEM software from the sources listed in Table 2.

Table 2	Obtaining VEM Software
Source	Description
VUM	If you are using the VMware vCenter Update Manager (VUM), then VUM obtains the VEM software from the VSM or from the VMware online portal. See the VMware and Cisco Nexus 1000V Software Compatibility table in the <i>Cisco Nexus</i> 1000V Compatibility Information, Release 4.2(1)SV1(4) to identify which VEM bits are available on the VSM or posted on the VMware online portal <sup>1</sup> .
VSM	After the VSM has been installed as a VM, copy the file containing the VEM software from the VSM homepage located at the following url: http://VSM_IP_Address/
VMware	Download the VEM software from the VMware website.
	Click Download Vmware vSphere 4 Enterprise Plus > Download
	Download the VMware patches if you are utilizing VMware releases with patches.
Cisco	Download the VEM software from the Cisco website.

1. VMware vCenter Update Manager 4.0 does not list Cisco Nexus 1000V patches or updates, but you can add a Cisco Nexus 1000V patch source using the VMware knowledge base procedure located at the following url:

 $http://kb.vmware.com/selfservice/microsites/search.do?language=en_US\&cmd=displayKC\&externalId=1013134$ 

VMware vCenter Server 4.0 Update 1 with VUM P02 and later versions do not have this limitation.

# **VMware Patch Releases**

The Cisco Nexus 1000V VEM software is updated to support VMware patch releases and is available on both the VMware and Cisco software download web sites. The Cisco Nexus 1000V software posted on these Web sites can be used for both installation and upgrade of the VEM for both the VMware Classic and VMware Embedded platforms.

For information about installing software on an ESX/ESXi host, see your VMware documentation.

For information about VEM software packages and compatibility, see the following document:

Cisco Nexus 1000V Compatibility Information, Release 4.2(1)SV1(4).

# Prerequisites for Installing VEM Software

Before installing the Cisco Nexus 1000V VEM software, you must know or do the following:

/!\ Caution

If the VMware vCenter Server is hosted on the same ESX/ESXi host as a Cisco Nexus 1000V VEM, then a VUM assisted upgrade on the host will fail. You should manually vMotion the VM to another host before performing the upgrade.



When performing any VUM operation on hosts which are a part of a cluster, ensure that VMWare High Availability (HA), VMware Fault Tolerance (FT), and VMware Distributed Power Management (DPM) features are disabled for the entire cluster. Otherwise, VUM will fail to install the hosts in the cluster.

- Before performing a VEM upgrade, make sure that there are no active VMs running on the host. When VMware patch ESX/ESXi400-201002001 or the ESX/ESXi400-201006201-UG is installed on the host, it puts the host in maintenance mode when performing a VEM upgrade. If you do not have and also use VMware vCenter Update Manager 4.0 Update 1 Patch 2, vCLI build 198790, and VSM Release 4.0(4)SV1(2) or later, in order to have a non-disruptive upgrade.
- You must install VMware patch ESX/ESXi400-201002001 or the ESX/ESXi400-201006201-UG on the host, and also use VMware vCenter Update Manager 4.0 Update 1 Patch 2, vCLI build 198790, and VSM Release 4.0(4)SV1(2) or later, in order to have a non-disruptive upgrade.
- You have a copy of your VMware documentation available for installing software on a host.
- You have already obtained a copy of the VEM software file from one of the sources listed in Table 2.
- If you are installing the VEM software for the first time, you can install it before the Virtual Supervisor Module (VSM) is installed; however, verification and configuration of the VEM can only be done after installing the VSM.
- You have already downloaded the correct VEM software based on the current ESX/ESXi host patch level. For more information, see the *Cisco Nexus 1000V Compatibility Information, Release* 4.2(1)SV1(4).
- If you install the VEM software on an ESXi host before adding the host to a vSphere Server, you need to reboot the host. The alternative is to add the host to vSphere Server first, and then install the VEM software.
- If using VUM for a first-time installation, no action is required by the server administrator. VUM automatically installs the VEM software.

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- If you use a proxy server to connect VUM to the Internet, you may need to disable the proxy before starting a VUM upgrade. In VMware versions before VUM Update 1, the proxy prevents VUM from communicating locally with the VSM. For this reason, automatic VEM upgrades may fail if the proxy is not disabled first.
- On upstream switches the following configuration is mandatory:
  - cat6k IOS: (config-if) portfast trunk or

(config-if) portfast edge trunk

- n5k: (config-if) spanning-tree port type edge trunk
- On upstream switches it is highly recommended that you globally enable the following:
  - Global BPDU Filtering
  - Global BPDU Guard
- On upstream switches where you cannot globally enable BPDU Filtering and BPDU Guard, it is highly recommended that you configure the following:
  - (config-if) spanning-tree bpdu filter
  - (config-if) spanning-tree bpdu guard
- For more information about configuring spanning-tree, BPDU, or portfast, see the documentation for your upstream switch.

# **Choosing a VEM Software Installation or Upgrade Procedure**

There are two possible use cases:

- Upgrading the ESX/ESXi Host with VEM Software Installed
  - If you are using VUM to upgrade the host, you will have to create a host patch baseline and include the appropriate VMware patch or update bulletins and the corresponding Cisco Nexus 1000V VEM bulletin in the baseline. You can then upgrade the host by applying the baseline to the host and remediating. To determine which VUM upgrade procedure you should follow, see "Upgrading the ESX/ESXi Host With VEM Software Installed Using VUM" section on page 7.
  - If you are using the CLI, use the vihostupdate command or the essupdate command. See the "Upgrading the ESX/ESXi Host with VEM Software Installed Using the CLI" section on page 40.
- Installing or Upgrading the VEM Software
  - If you are using VUM, then the Cisco Nexus 1000V VEM software will be installed automatically when the host is added to the Cisco Nexus 1000V DVS. When VEM upgrades are triggered from the VSM, the VEM software will be automatically upgraded on the host. To determine which VUM upgrade procedure you should follow, see Installing or Upgrading the VEM Software Using VUM, page 43.
  - If you are using the CLI, use the **vihostupdate** command or the **esxupdate** command. See the "Installing or Upgrading the VEM Software Using the CLI" section on page 44.

# Upgrading the ESX/ESXi Host With VEM Software Installed Using VUM

<u>A</u> Caution

If removable media is still connected, for example, if you have installed the VSM using ISO and forgot to remove the media, then host movement to maintenance mode fails and the VUM upgrade fails.

This section describes the procedures for installing and upgrading from ESX/ESXi 4.0.0 Update 1 to ESX/ESXi 4.0.0 Update 1 Patch 04 and ESX/ESXi 4.0.0 to ESX/ESXi 4.1.0. Choose the procedure that is appropriate to your environment.

- Patching ESX/ESXi 4.0.0 Update 1 with ESX/ESXi400-201002001 (P04), page 7
- Upgrading from VMware Release 4.0 to VMware Release 4.1, page 17

# Patching ESX/ESXi 4.0.0 Update 1 with ESX/ESXi400-201002001 (P04)

#### **BEFORE YOU BEGIN**

Before you begin this procedure, you must know or do the following:

Caution

Disabling the HTTP server prevents VEM from upgrading the VEMs. For more information, see *Cisco Nexus 1000V Security Configuration Guide, Release* 4.2(1)SV1(4).

- Make sure that you have the VMware Update Manager installed on your VMware vCenter Server. For more information, see the VMware vCenter Update Manager Administration Guide.
- All VMware patches require that the host be placed in maintenance mode.



VUM U1-ESX400-P02 (282702) is mandatory for all upgrades.

- Determine which version of VMware you are upgrading from by running the **vem version** command on the ESX/ESXi hosts.
- Check Cisco Nexus 1000V Compatibility Information, Release 4.2(1)SV1(4).
- See Table 2 for software download locations.
- The entire Cisco zip bundle needs to be downloaded and extracted to get the appropriate VEM vib file. The file name is similar to Nexus1000v-4.2.1.SV1.4.zip.
- You are logged in to the VMware vSphere Client.

#### PROCEDURE

You can use the following procedure to upgrade the VEM software from ESX/ESXi 4.0.0 Update 1 to ESX/ESXi 4.0.0 Update 1 Patch 04.

Step 1 From the VMware vSphere Client window, click the Update Manager icon.



The Update Manager Administration window opens.

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Network Connectivity	- Dateb Description of Sa			
<ul> <li>Patch Download Settings</li> </ul>	C Chart was	urces	and a state of intervals securified in Patiek Demolecul Cohestate 1999	
Patch Download Schedule	·· Deec corried	or click the	Download Now button below	Patch Source
Notification Check Schedule	Enabled	Patch Type Component	Putch Source	De A
15 August Manhine Collinson	R	VMware ESX	https://hostupdate.vn/ware.com/software/VUMPRODUCTION/index.com/	Do
virtual macrime petongs	Г	VMware ESX ·	https://www.vitiware.com/PatchManagementSystem/patchmanagement	Do
ESX Host/Cluster Settings	9	Custom ESX	https://hostupdate.vmware.com/software/VUM/PRODUCTION/csco-main-index.on	N Do
vApp Settings	- C	Linux VMs	https://xinil.shevlik.com/unix/	Do
		Windows VMs	https:///onii.shavlik.com/data	Do
	E	Oustom ESX	http://10.78.99.175/ProdDepo/csco-main-index.xml	10
	10	malage erv is	Her IKO 70 00 170/brodhervänder vel	- N
	C Use a shared	frepository What's this	9	
			Validate LRL Download Now	Apply
	Note: you can a	iso Import Patches manually f	from a local .zip file	
	Proxy Settings			
	Proxy Settings		Proxy requires authentication	
	Proxy Settings		Proxy requires authentication	
	Proxy Settings		Proxy requires authentication     Usemane:	

**Step 2** To configure the VMware Update Manager, click the **Configuration** tab and check the **Enabled** check boxes for the VMware patch source and the Cisco patch source.

The appropriate links are:

- https://hostupdate.vmware.com/software/VUM/PRODUCTION/index.xml
- https://hostupdate.vmware.com/software/VUM/PRODUCTION/csco-main-index.xml



- e If you are behind a proxy, you might need to specify the required proxy server settings to access the Internet.
- **Step 3** To apply the settings, click **Apply** and **Download Now**.
- **Step 4** To display the list of all available patches on the Cisco Nexus 1000V VSM and patches which are on the portals, click the **Patch Repository** tab.

The Patch Repository window opens where you can confirm that the patches are being downloaded.

		n	tle, Product, Release	Date, Type, Severity	y, Impact, Vendor or Vendor ID (	contains: •	Advanced.	Clear Compl
Tibe	Product	Release Date	Type	Severty	Impact	Vendor	Vendor ID	Deseines
A Cisco switch module for VMWare ESX Server 4	enbeddedEsx 4.0.0,	4/26/2009 6:50:36 PM	Host Extension	Critical		Osco Systems, Inc.	VEM400-200904001	Add to baseline.
Sisco Nexus 1000V VEM	enbeddedEsx 4.0.0	7/9/2009 5:30:00 AM	Host Extension	General		Osco Systems, Inc.	VEM400-200906002	Add to baseline.
isco Nexus 1000V VEM	enbeddedEsx 4.0.0,	8/6/2009 5:30:00 AM	Host Extension	General		Osco Systems, Inc.	VEM400-200907001	Add to baseline.
isco Nexus 1000V VEM	enbeddedEsx 4.0.0,	9/24/2009 5:30:00 AM	Host Extension	General		Cisco Systems, Inc.	VENH00-200909001	Add to baseline.
isco Nexus 1000V	enbeddedEsx 4.0.0,	11/19/2009 4:36:51 PM	Host Extension	General	Maintenance Mode	Osco Systems, Inc.	VEM400-200911014	Add to beseine.
Isco Nexus 1000Y VEM	enbeddedEsx 4.0.0,	1/5/2010 5:30:00 AM	Host Extension	General	Maintenance Mode	Cisco Systems, Inc.	VEM400-200912001	Add to baseline.
Jisco Nexus 1000V VEM	enbeddedEsx 4.0.0,	1/5/2010 5:30:00 AM	Host Extension	General		Osco Systems, Inc.	VEM400-200912016	Add to baseline.
isco Nexus 1000V VEM	enbeddedEsx 4.0.0,	2/10/2010 \$:30:00 AM	Host Extension	General	Maintenance Mode	Osco Systems, Inc.	VEM400-201002001	Add to baseline.
lisco Nexus 1000V VEM	enbeddedEst 4.0.0,	2/10/2010 5:30:00 AM	Host Extension	General	Maintenance Mode	Osco Systems, Inc.	VEM400-201002011	Add to baseline.
pdates VMX	esx 4.0.0	7/9/2009 1:30:00 PM	Patch	Critical	Maintenance Mode	Whene, Inc.	ESX400-200906401	Add to baseline.
ipdates ESX Scripts	esx 4.0.0	7/9/2009 1:30:00 PM	Patch	Critical	Hostd Restart	Where, Inc.	ESX400-200906402+	Add to baseline.
Ipdates Whivare Tools	esx 4.0.0	7/9/2009 1:30:00 PM	Patch	General	Hostd Restart	Where, Inc.	ESX400-200906403	Add to baseline.
pdates CIM	esx 4.0.0	7/9/2009 1:30:00 PM	Patch	Critical	Hostd Restart	Where, Inc.	ESX400-200906404	Add to baseline.
pdates krb5 and pam_krb5	esx 4.0.0	7/9/2009 1:30:00 PM	Patch	Security	Reboot, Maintenan	Whene, Inc.	ESX400-200906405	Add to baseline.
pdates sudo	esx 4.0.0	7/9/2009 1:30:00 PM	Patch	Security		Where, Inc.	ESX400-200906406	Add to baseline.
pdates curi	esx 4.0.0	7/9/2009 1:30:00 PM	Patch	Security		Whene, Inc.	ESX400-200906407	Add to baseline.
pdates SCSE Driver for QLogic FC	esx 4.0.0	7/9/2009 1:30:00 PM	Patch	Ortical	Reboot, Maintenan	Where, Inc.	E5X400-200906408	Add to baseline.
pdates LSI storelib Library	esx 4.0.0	7/9/2009 1:30.00 PM	Patch	Critical	Hostd Restart	Where, Inc.	E5X400-200906409	Add to beseine.
pdates hostd	esx 4.0.0	7/9/2009 1:30:00 PM	Patch	Critical	Hostd Restart	Where, Inc.	ESX400-200906410	Add to baseline.
pdates udev	esx 4.0.0	7/9/2009 1:30:00 PM	Patch	Security		Whene, Inc.	ESX400-200906411	Add to baseline.
pdates esimpdate	esx 4.0.0	7/9/2009 1:30:00 PM	Patch	Oritical	Hostd Restart	Where, Inc.	ESX400-200906412	Add to baseline.
pdates veikernel (SCSI Driver	esx 4.0.0	7/9/2009 1:30:00 PM	Patch	Critical	Reboot, Maintenan	Whether, Inc.	ESX400-200906413	Add to baseline.
adates visidinus and visitemeitid	esx 4.0.0	8/6/2009 1:30:00 PM	Patch	Critical	Reboot, Maintenan	Whene, Inc.	E5X400-200907401	Add to baseline.
pdates vex and veikernel64	esx 4.0.0	9/24/2009 1:30:00 PM	Patch	Oritical	Reboot, Maintenan	Where, Inc.	ESX400-200909401	Add to baseline
Indates Wilware Tools	esx 4.0.0	9/24/2009 1:30:00 PM	Patch	Ortical	Hostd Restart	Whene, Inc.	ESX400-200909402	Add to baseline

#### Step 5 To patch the ESX/ESXi host by using a baseline, click the Baselines and Group tab.



You need to select the bulletin numbers based on the patch that you are installing. Consult *Cisco Nexus 1000V Compatibility Information, Release* 4.2(1)SV1(4) and refer to the VEM Bundle for the VMware Software Version you are patching.

w Baseline for: Hots WK/VAs				Compliance Vev
tch Baselines   Extension Baselines   Upgrade Baselines				Orada Edt Deleti
Dateline Name	Content	Type	Component	Last Modified
Children Most Patches	30	Dynamic	Host Palches	10/26/2009 6:41:44 PM
Non-Critical Host Patches	62	Dynamic	Host Petches	10(26/2009 6:41:45 PM
20 p03-verw-ceco-veor-ev	3	Fixed	Host Petches	10(26/2009 £ 48:44 PM
MV-P04-verware-claco-cos	7	Fixed	Host Patches	10/26/2009 9:22:58 PM
AV-P04-verware-cieco-cos	,	Fored	Host Patches	10(26/2009 9:30:02 PM

**Step 6** To create a new baseline, click the **Create** link at the upper right-hand corner of the window. The New Baseline Wizard screen opens.

aseline Name and Type	Baseline Name and Desc	ription		
atch Options ritoria	Name:	P04-baceline		
Ready to Complete				
	Description:	Baseline to Patch hosts to V	mware Patch04	
			-	
	Baseline Type			1
	Host Baselines	VM Baselines	VA Baselines	
	Host Patch	C VM Patch		
	o nosc Paten	V Wir Pateri	A UN UPgrade	
	Host Extension			
	C Host Upgrade			
	. <u>.</u>			
	Host Patch baselines	contain patches to apply to a ho	st or set of hosts based on applicability.	
	If the baseline contains will be impored for that	patches for software that is not bost	installed on a particular host, the patch	

- Step 7 Enter a name in the Name field, click the Host Patch radio button, and click Next.The Patch Options screen opens.
- Step 8In the Patch Options screen, click the Fixed radio button and click Next.The Filter Patches screen opens.

New Baseline Wize Patches Select patches	ard s to be included in the fixed baseline.	_ <b>_</b> X
Baseline Name and Patch Options Patches Ready to Complete	Filter Patches Enter specific criteria to filter the list of patches.	Filter Clear
	Text contains: (searches all text fields)	Cisco System
	Product: Severity: Any embeddedEsx 4.0.0 embeddedEsx 4.1.0 esx 4.0.0 Released Date: Patch Vendor:	Cisco System Cisco System Cisco System Cisco System Cisco System Cisco System
	On or After Friday , October 22, 2010      On or Before Friday , October 22, 2010      Whware, Inc.	Vendor ID Pa
	Help Cancel	
Help	< Back	Next > Cancel

**Step 9** Select from the **Product** field for the product that matches your environment, choose the appropriate Patch Vendor, and click **Find**.

The Patches window opens.

Baseline Name and Type Patch Options Patches Ready to Complete	There are 15 (List is filtere	2 patches i ed:152 from	n the patch r 152 patche	epository. Se s) Title, Prod	lect the patcl uct, Type	•	ine. Double-click a pab	ch for details. ed Clear
	Release 6/10/201 6/10/201 6/4/2010 6/4/2010 6/4/2010 6/4/2010 6/4/2010	Date \$\$300.05300.05300.1130000.113000.113000.1130000.1130000.1130000.1130000.1130000.1130000.1130000.1130000.11300000.1130000.11300000000	Type Host Ext Update Update Update Update Update Update	Severity General Critical Critical Critical Critical General Critical Critical	Impact Mainten Reboot, Reboot, Reboot,	Vendor Cisco System Cisco System Vhtware, Inc. Vhtware, Inc. Vhtware, Inc. Vhtware, Inc. Vhtware, Inc.	Vendor ID VEM400-201006021 VEM400-201006021 ESX400-201006201 ESX400-201006202 ESX400-201006201 ESX400-201006221 ESX400-201006219 ESX400-201006219	-80 -80 -00 -00 -00 -00 -00 -00 -00 -00
	Fixed Patche	s to Add	Severity	Impact	Vendor	Vendor		Patch Av.
	10 1:30:00	Update	Critical	Reboot, .	. VMware,	Inc. ESX400-	201006203-UG	true
	101:30:00	Update	Critical	Reboot, .	. VMware,	Inc. ESXi400	-201006201-UG	true
	10 1:30:00	Update	Critical		VMware	Inc. ESXI400	-201006202-UG	true
	10 1:30:00.	Update	Critical	Reboot,	. VMware,	Inc. ESXI400	-Update02	true
	2010 5:30:0	Host Ext.	General	Mainten	Cisco Sys	tem VEM400	-201006021-BG	true

**Step 10** To add patches to the baseline, select the appropriate patches from the upper half of the screen and click the down arrow.

The patch is added to the Fixed Patches to Add section.

Step 11 When you have added all patches, click Next.

The Update Manager window opens.

File Edit Wew Inventory Administration Plug-ins Help         Image: Search Inventory         Image: Search	🚰 U1-¥C-203 - vSphere Client				_ @ ×
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		Hide Hosts			Stage Afternediate
	l				
RECEIN Lasks	Recent Tasks	Target	Chabur	Details	Initiated by UCentra

**Step 12** Select either a host or cluster to be patched and click the **Attach** link.

The Attach Baseline or Group window opens.

Home & S Inven	kory ⊅ (	Hosts and Clusters		Search Inventory
et est & Di &		Attach Baseline or Group	_ D ×	]
Ø UI-VC-203 B ■ AV B ● AV	patel iumna	Select the Baseline or Baseline Group that you would Individual Baselines by Type	d like to attach to patch-197.cisco.com. Create Baseline	Maper, Otorage verve , Opdate Manager, 👔
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ent Tasks	_			
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Step 13 Select the check box of the baseline that you previously created and click Attach.The Update Manager window opens.

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Step 14In the Update Manager window, click the Scan link.The Confirm Scan window opens.

🖉 Canfirm Scan	8
Scan the selected hours for:	11
Patches and Extensions	
□ Upgrades	
Help	Cancel

- Step 15 Click the Scan button.
- Step 16In the Update Manager window, click Stage.The Stage Wizard screen opens.

Edd Man	Inventory Administration Di	white Help				
	aneskary Administration PK	Ayris nep				-
	stage mizard				Elt	
61 0 U1-WC	Baseline Selection Select the baselines and	target hosts you wish to stage				
A     Baseline Selection     Patch and Extension Exclusio     Reads to Complete		Select the attached baselines Baselines	you wish to stage.			Update Mandid D Help Admin View
		Varie Name			Туре	-
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	<u>د ا</u>					Remetate
t Task	Help				< Back. Next > Cancel	
	Targ	NR.	52.80.05			Details _
		cluster1	32%			
Stage Entit	· Y DE					
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Step 17 Click Next and click Finish.

Note

The Staging process will take some time to complete depending on the patches. Once staging is complete, look for the patches displaying a staged status.

Step 18 Click Remediate in the Update Manager window.

The Remediate window opens.

of out O the se	GI Hosts and Ousters		Search Inventory	(C
Remediate			-05	<li>I</li>
AV AV Columnation Select Columnation Select the targets	on of your remediation.			C. Advertised in
Remediation Selection Patches and Extension Post Remediation Optic	Select the baselines or baseline groups to Baseline Groups and Types	o remediate. Baselines		#Hosts
AV2 Ready to Complete bi-betz U1-PT: 51, 10	Name Individual Baselines by Type Patch Baselines	I⊽ Name I⊽ patch04 cos	Type Host Patches	0
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	IF         Host         Version           IF         patch-198 cisco.com         VMware E           IF         patch-197 cisco.com         VMware E	Patches           ESX4.0.0         © 8(8 staged)           ESX4.0.0         © 8(8 staged)	Extensions Usgrades	st Scan Time (2010 5:23 54 (2010 5:23:15) (Remediate)
aske Heb	INot         Version           patch-198 cisco.com         VMware E           patch-197 cisco.com         VMware E	Patches ESK400	Extensions Upgrades	t Scan Time 2010 S 23 54. 2010 S 23 15. Remediate

**Step 19** Click **Next** in the Remediation Selection window.

The Host Remediation Options window opens.

atchas and Extensions	Task Name:	10.104.62.197
lost Remediation Options eady to Complete	Task Description:	Leader and the second sec
	Remediation Time	·
	Remediate the se	lected hosts:
	Immedia	tely
	C At time:	10/22/2010 5:55 PM
	Failure Options:	
	The ESX and ESX migrated before r below. Distributer	hosts must be put in maintenance mode, and all virtual machines and appliances shut down and/or emediation can proceed. If the host cannot enter maintenance mode, the task will respond as specified J Power Management (DPM) and Fault Tolerance (FT) will be disabled temporarily for remediation.
	Failure response:	Retry
	Retry delay:	

Step 20 Click Next.

Step 21 To remediate the baseline, click Next.



This process will take time to complete based on the clusters, the number of hosts in the clusters, and on the patch that is being applied. This process involves automatically putting the host in maintenance mode, applying the patch, rebooting the host, and removing the host from maintenance mode.

Image: Construction       Image: Construction<		tory > M Hosts and Clusters			49	<ul> <li>Search Inventory</li> </ul>	e
U-N-C-C03						1.11.41	
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Step 22 Once remediation is complete, the Update Manager window displays 100% complete.You have completed the patching procedure.

# Verifying the Patch Upgrade on VUM

Step 1 Click the Update Manager tab.

Name contains:       Clear       Scan       Attach       Help       Admin Vie <ul> <li>All</li> <li>byru-po3-cos-av</li> <li>byru-po4-cos-av1</li> <li>Patch</li> <li>byru-po4-cos-av1</li> <li>Patch</li> <li>Compliant</li> <li>Compliant</li></ul>		х х	Name contains: Clear Type Patch Patch	Scan Attach Help Ac Host Compliance All Applicable Hosts Non-Compliant	tmin View # Hosts
Attached Baselines <ul> <li>Type</li> <li>All</li> <li>byru-po3-cos-av</li> <li>byru-po4-cos-av1</li> <li>Patch</li> <li>Patch</li> <li>Compliant</li> <li>Compliant</li></ul>		л	Type Patch Patch	Host Compliance All Applicable Hosts Non-Compliant	# Host
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✓ byru-po3-cos-ev       Patch         ✓ byru-po4-cos-ev1       Patch         Ø Uninrown       0         Ø Uninrown       0         ✓ Compliant       0         Ø Uninrown       0         Ø Unin	✓ byru-po3-cos-av ✓ byru-po4-cos-av1	и	Patch Patch	Non-Compliant	
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Patches       Upgrades       Extensions       Last Scan Time         ✓ 12       7/72010 6:53:06 PM				A Incompatible	0
Patches       Upgrades       Extensions       Last Scan Time         ✓ 12       2772010 6:53:06 PM				② Unknown	0
Patches       Upgrades       Extensions       Last Scan Time         ✓ 12       7/7/2010 6.53:06 PM				✓ Compliant	1
Patches         Upgrades         Extensions         Last Scan Time           ✓ 12         7/7/2010 6:53:06 PM				Compliant	
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✓ 12 // / 2010 6:53:06 PR	Patche	nes   Upgrades	Extensions	Last Scan Time	

The status of the applied patch and the compliance view are displayed.

#### Step 2 To verify the build number on the ESX/ESXi host, run the following commands:

# **Upgrading from VMware Release 4.0 to VMware Release 4.1**

You can use this procedure to upgrade from VMware Release 4.0 to VMware Release 4.1.

#### **BEFORE YOU BEGIN**

Before beginning this procedure, you must know or do the following:

- ESX/ESXi 4.1.0 vCenter Server and ESX/ESXi 4.1.0 Update Manager
- Download the upgrade ZIP bundle to a local desktop or vCenter Server.
  - For ESX, download upgrade-from-ESX4.0-to-4.1.0-0.0.260247-release.zip
  - For ESXi, download upgrade-from-ESXi4.0-to-4.1.0-0.0.260247-release.zip
  - For Cisco Nexus 1000V, download the bundle from www.cisco.com (VEM-4.1.0-GA-v120.zip)

- Consult the *Cisco Nexus 1000V Compatibility Information, Release 4.2(1)SV1(4)* document to determine the correct VIB Version, VEM Bundle, Host Build, vCenter Server, and Update Manager versions.
- Upgrading the ESX/ESXi hosts consists of the following procedures:
  - Upgrading the vCenter Server, page 18
  - Upgrading the vCenter Update Manager, page 23
  - Upgrading the ESX/ESXi Hosts, page 27

# **Upgrading the vCenter Server**

**Step 1** Navigate to the VMware-vpx-all-4.1.0-258902 folder.



Step 2 Double-click autorun.

The VMware vCenter Installer window opens.



- Step 3 Click vCenter Server.
- Step 4Select a language and click OK.The Installation Wizard opens.
- Step 5 Click Next.
- **Step 6** In the Patent Agreement window, click **Next**.

The License Agreement window opens.

License Agreement				
VMWARE MASTER E	ND USER LICENSE AGREEMENT	-		
NOTICE: BY DOWNLOAD DTHERWISE USING THE SO BY THE TERMS OF THIS VI AGREEMENT ("EULA"). IF DF THIS EULA, YOU MAY I USE THE SOFTWARE, AND SOFTWARE TO THE VENDO WITHIN THIRTY (30) DAYS	ING AND INSTALLING, COPYING OR DFTWARE, YOU AGREE TO BE BOUND MWARE MASTER END USER LICENSE YOU DO NOT AGREE TO THE TERMS NOT DOWNLOAD, INSTALL, COPY OR YOU MAY RETURN THE UNUSED OR FROM WHICH YOU ACQUIRED IT AND REQUEST A REFUND OF THE	•		
I agree to the terms in the license ag	greement			
I do not agree to the terms in the lice	onse agreemente			

- Step 7 Click the I agree to the terms in the license agreement radio button and click Next.
- **Step 8** In the Database Options window, click **Next**.

The Database Upgrade Warning window opens.

)atabase Upgrade Warnir	ng 🔂
The DSN, 'VMware VirtualCo requires upgrading. The up older vCenter Server versio	ienter', points to an older version of vCenter Server database whic ograde is required and it will make the database incompatible with ons.
Backup the existing databa	ase and SSL certificates before proceeding with the upgrade.
• Upgrade existing	vCenter Server database
I have taken a certificates in th VirtualCenter\S	backup of the existing vCenter Server database and SSL he folder: C:\ProgramData\VMware\VMware SL\.
C Do not upgrade es	xisting vCenter Server database

- Step 9Click the Upgrade existing vCenter Server database radio button and check the I have taken a<br/>backup of the existing vCenter Server database and SSL certificates in the folder:<br/>C:\ProgramData\VMware\VMware VirtualCenter\SSL\. check box.
- **Step 10** From the Windows Start Menu, click **Run**.
- Step 11 Enter the name of the folder that contains the vCenter Server database and click OK.
- **Step 12** Drag a copy of the parent folder (SSL) to the Desktop as a backup.
- Step 13 Return to the installer program and click Next.
- Step 14 In the vCenter Agent Upgrade window, click the Automatic radio button and click Next. The vCenter Server Service window opens.

nter the vCenter Server service a	account information.
onfigure the vCenter Server serv count in the domain.	ice to run in the SYSTEM account or in a user-specified
Use SYSTEM Account	
ccount name:	Administrator
Account <u>p</u> assword:	
Ion <u>fi</u> rm the password:	
SECURITY ADVISORY: The vCente to user-specified accounts.	r Server installer grants the "Log on as a service" right

Step 15 Check the Use SYSTEM Account check box and click Next.

The Configure Ports window opens.

Configure Ports	- C - C - C - C - C - C - C - C - C - C
Enter the connection information for vCenter Server.	E.
UTTDC parts	
HTTP port:	443
Heartbeat port (UDP):	1002
Web Services HTTP port:	8080
Web Services HTTPS port:	8443
Web Services Change Service Notification port:	60099
LDAP Port:	389
SSL Port:	636
allShield	

#### **Step 16** Review the port settings and click **Next**.

The vCenter Server JVM Memory window opens.

optimally configure your deployment, ple- st describes your setup.	ase select which vCenter Server configuration
inventory Size	Maximum Memory
• Small (less than 100 hosts)	1024 MB
C Medium (100-400 hosts)	2048 MB
C Large (more than 400 hosts)	4096 MB

Step 17 Based on the number of hosts, click the appropriate memory radio button and click Next.The Ready to Install the Program window opens.

Ready to Install the Program			- 27
The wizard is ready to begin insta	llation.		<b>.</b>
Click Install to begin the installatio	n.		
If you want to review or change a exit the wizard.	any of your installati	ion settings, click Back.	Click Cancel to

#### Step 18 Click Install.

The Installation Completed window appears.



Step 19 Click Finish.

- **Step 20** Open the VMware vSphere Client.
- Step 21 From the Help menu, choose About VMware vSphere.



**Step 22** Confirm that the vSphere Client and the VMware vCenter Server are both version 4.1.0, Build 258902, click **OK**, and exit the VMware vSphere Client.

# Upgrading the vCenter Update Manager

Step 1	Copy the VUM bundle to the local drive.
Step 2	On the local drive, double-click VMware-UpdateManager.
Step 3	Select a language and click <b>OK</b> .
	The Update Manager Installer opens.



**Step 4** Click **OK** to upgrade to 4.1.

🙀 VMware vCenter Update	Manager 🛛
	Welcome to the InstallShield Wizard for VMware vCenter Update Manager
<b>B</b>	The InstallShield(R) Wizard will install VMware vCenter Update Manager on your computer. To continue, click Next.
VMware vCenter" Update Manager	WARNING: This program is protected by copyright law and international treaties.
	Nrxt > Cancel

- Step 5 Click Next to begin.
- Step 6 Click Next at the Patent Agreement.
- Step 7Click the I agree to the terms in the license agreement radio button and click Next.The vCenter Server Information window opens.

Enter vCenter Server location and cre	edentials
ase provide the necessary information	n about vCenter Server below. VMware vCenter
late Manager will need this informatio	n to connect to the vCenter Server at startup.
Mware vCenter Server Information —	
IP Address / Name:	HTTP Port:
172.23.231.145	80
<u>U</u> sername:	Password:
administrator	•••••
a annuada acor	

Step 8Verify the IP Address and Username, enter the Password and click Next.The Database Information window opens.

Enter additional databa	n ase configuration information.
DSN:	¥Mware Update Manager
ODBC Driver:	C:\Windows\SysWOW64\sqlncli.dll
DSN is setup to use int on user credentials to	egrated Windows authentication. SQL Server will use the logged verify authenticity. Please click Next to proceed.

#### Step 9 Click Next.

The Database Upgrade window opens.

itabase Upgrade				6
atabase upgrade required.				
he DSN, 'VMware Update Ma which requires upgrading. The with older Update Manager vi	anager' points l e upgrade is re ersions.	to an older ve equired and it	rsion of Update Ma will make the datal	anager database base incompatible
Ve strongly recommend that vith the upgrade.	you take a ba	ckup of the ex	kisting database be	fore proceeding
• Yes, I want to upgra	ade my Upda	ite Manager	database	
🔽 I have taken a ba	ckup of the ex	isting Update	Manager database	э.
🔿 No, I do not want to	upgrade my	Update Ma	nager database	•
Shield				
			<u> </u>	1

- Step 10 Click the Yes, I want to upgrade my Update Manager database radio button and click Next.
- **Step 11** Verify the Update Manager port settings and click **Next**.
- **Step 12** Verify the Proxy Settings and click **Next**.
- **Step 13** Click **Install** to begin the upgrade.
- Step 14 Click OK to acknowledge that a reboot will be required to complete the setup.
- Step 15 During the upgrade, the vSphere Client is disconnected. Click Cancel for the attempt to reconnect.
- Step 16 Click OK in the Server Connection Invalid dialog box.
- Step 17 Click Finish.
- **Step 18** Reboot the local PC.

The Shut Down Windows window opens.

Select the option that be down the computer	est describes why you wa	ant to shut	
Option:		🔽 Planned	
Other (Planned)		-	
Comment:			
Comment:   VUM upgrade			

Step 19 From the Option drop-down list, choose Other (Planned), enter a value in the comment field, and click OK.

- Step 20 After the system has rebooted, browse to the C:\ProgramData\VMware\VMware Update Manager\Logs\ folder.
- **Step 21** Open the vmware-vum-server-log4cpp file.



**Step 22** Verify the Update Manager version in the log files by searching for the Update Manager build number of 256596.

# **Upgrading the ESX/ESXi Hosts**

- Step 1 In the vSphere Client, click Home and click Update Manager.
- Step 2 Click the Host Upgrade Releases tab.

The Part of the Part	Complianc grade Release	Q ce View Delete
Update Manager Administration for DOCS-VID4-VC Gentro Startink, Biscelines and Groups / Configuration / Event / Notifications / Paich Recentory / Host Upgrade Releases → Fryou donct include the upgrade files for a host type, will be all inported for upgrade. Imported Upgrade Releases Upgrade Release Name / Version ESX 4.0.x ESX 4.0.x ESX 3.x ESX 3.x Status / Television / Type / Last Modified Host Upgrade Baseline / Content / Type / Last Modified	Complianc grade Release	ce View Delete
	Complianc <u>grade Release</u>	Delete
aported Upgrade Releases Name Version ESX 4.0.x ESX 4.0.x ESX 3.x ESX 3.x Statue Not Upgrade Baseline / Content 1ype Last Modified	grade Release	Delete
Jograde Release Name Version ESX 4.0.x ESX 3.x ESX 3.x Status fost Upgrade Baseline / Content 1ype Last Modified	<u>'</u>	
tost Upgrade Baseline / Content Type Last Modified		
tost Upgrede Baseline / Content Type Last Modified	Create Baseline	Delete
ecent Tasks Name, Target or Status contains: •	C	ear ×
tame Target Status Details Initiated by vCenter Server Requested Start Ti	🗢 Start Time	

Step 3 Click Import Upgrade Release.

Select an upgrade file	from your local disk or an accessible network locatic	n and upload it to Update Manager.
Select Upgrade Files	You can upgrade multiple hosts of different ve complete upgrade release bundle contains files 4.0.x to version 4.1. Do not upload upgrade files that you will not u want to use. Note: You can select multiple files at once. Son ESX upgrade bundles:	rsions simultaneously by using a complete upgrade release bundle. A , which let you upgrade both ESX and ESX hosts from versions 3.x and se. Use the Browse button below to select the upgrade files which you the files are large and might take several minutes to upload. Brogge Delete
Help		< Back Next > Cancel

**Step 4** Click **Browse** and navigate to the location of the upgrade-from-ESX4.0-to-4.1.0-0.0.260247-release.zip Zip bundle.

Ipen				×
🗸 🗢 🗖 Desktop 🔹		*	Search Desktop	<b>P</b>
ganize 🔻 New folder				= • 🔟 📀
Favorites	Size	Name	Item type	Date modified *
🧮 Desktop		Libraries		
🔰 Downloads	8	admin		
🔡 Recent Places	1	Computer		
- 14	-	Network		
Documents		SSL	File folder	11/9/2010 2:32 PI
Music	1 206,	upgrade-from-ESXi4.0-to-4	Compressed (zippe	7/2/2010 9:29 PM
E Pictures	📄 1 K	B Vmware4.1Bits - Shortcut	Shortcut	11/9/2010 3:28 A
Videos	33.°C			
Computer				
Local Disk (C:)				
Vetwork				
	•			
File	name: upgra	de-from-ESXi4.0-to-4.1.0-0.0.2	✓ All VMware Upgra	ide Release Bu 💌
			Open	Cancel
				Cancer

**Step 5** Select the Zip file and click **Open**.

The Select Upgrade Files window opens.

Select Upgrade Files Jpload Upgrade Files	You can upgrade multiple hosts of different versions simultaneously by using a complete upgrade release bundle. A complete upgrade release bundle contains files, which let you upgrade both ESX and ESXi hosts from versions 3.x and 4.0.x to version 4.1.
	Do not upload upgrade files that you will not use. Use the Browse button below to select the upgrade files which you want to use.
	Note: You can select multiple files at once. Some files are large and might take several minutes to upload.
	ESX upgrade bundles: upgrade-from-ESXi4.0-to-4.1.0-0.0.260247-release.zip Browse
	When you dick next, these files will begin unloading and may take several minutes

- Step 6 Click Next.
- **Step 7** If you receive a Security Warning about the certificate, you can install the certificate or ignore the warning.
- **Step 8** When the upload is successful, click **Finish**.
- Step 9 To create a baseline, in the Host Upgrade Releases tab, click Create Baseline.

When you create a baseline and attach it to a host or cluster, the Update Manager can remediate the device applying all updates needed to bring it into compliance with the baseline.

Baseline Name and Type Jpgrade Version	Baseline Name and Descrip	btion		
OS VMDK Location	Name:	4.0 to 4.1		
leady to Complete	Description:		*	
	bosciption			
			*	
				-
	Baseline Type			
	Host Baselines	VM Baselines	VA Baselines	
	C Host Patch	C VM Patch	C VA Upgrade	
	C Host Extension			
	C			
	<ul> <li>Host Upgrade</li> </ul>			
	Host Upgrade baselines of to the selected release ve	ontain upgrade release package ersion, This applies to basic soft	es that will upgrade ESX and/or ESXi hos ware only, extensions must be added	ts
	Host Upgrade baselines of to the selected release ve	ontain upgrade release package ersion. This applies to basic soft	es that will upgrade ESX and/or ESXI hos ware only, extensions must be added	ts

Step 10 Enter a Name, click the Host Upgrade radio button and click Next.

Step 11 Click the Host Upgrade Release and click Next.

The COS VMDK Location window opens.

Baseline Name and Type Jograde Version COS VMDK Location Yost-Upgrade Options Ready to Complete	If you upgrade from the ESX 4.x host is m (C) (Recommen there is no l Select a dat operation fa space.	ESX 3.x to ESX 4.x you should specify oved from its own partition to a VMDK ded) Automatically select a datastore o coal datastore with sufficient free spac astore that is accessible to this host or ils if the datastore is not connected to	the location for the COS VMDK, becaus in the datastore. In the local host. The operation fails if e. Ily and is not shared with other hosts. T the host or does not have sufficient fre	e the COS o The Se
	Datastore: Path:	Upon remediation, a subfolder for eac folder you specify. This ensures that e COS VMDK.	Browse,,, host is created in the ach host has its own	

- Step 12 Click Next.
- Step 13 Click the Try to reboot the host and roll back the upgrade in case of failure check box and click Next.
- Step 14Review the upgrade information and click Finish.The baseline has been created.
- Step 15 Click Home and click Host and Cluster Inventory tab.
- **Step 16** Click the **Cluster** icon to upgrade all hosts in the cluster.
- **Step 17** Click the **Update Manager** tab.



#### Step 18 Click Attach.

The Attach Baseline or Group window opens.

ndividual baselines by Type	Lreate Baseline
Name	Туре
Patch Baselines	
Critical Host Patches	Host Patch
🔲 🎦 Non-Critical Host Patches	Host Patch
Extension Baselines	
Upgrade Baselines	11
aseline Groups	Create Baseline Group
Name	Туре
raino	
numo.	

**Step 19** Check the **4.0 to 4.1** check box and click **Attach**.

	wencory p I Hosts and Clusters			<u>8</u>	Search Inventory	-
🗗 💣 🔡 🦂 🔝	<b>A</b>					
DOCS-VUM-VC vDataCenter () () () () () () () () () () () () () (	Cluster ry Virtual Machines Hosts DRS Resource Allocation F	Performance Tasks & Events A	larms Permissions	Maps Profile Compl	ance Storage Views Update	Manager 4
172.23.231.110			Name contains:	Clea	r Span Attach Help	Admin View
1/2.23.231.98	Attached Baseline Groups	Attached Baselines	1.	Туре	Host Compliance	# Hosts
CHEL-WILL	② All Groups and Independent Baselines	■ ② All			All Applicable Hosts	3
VSM-P VSM-S VSM-S VUM-VC		② 4.0 to 4.1		Upgrade	Son-Compliant Incompatible Unknown Compliant	0 0 3 0
	All Groups and Independent Baselines -> All -> 🗍	All Applicable Hosts			0% Compliant	$\bigcirc$
	Host Name	/ Patches	Upgrades	Extensions	Attached Baselines Last	Patch Scan Ti
	172.23.231.110		② Unknown		(1) 4.0 to 4.1	
	172.23.231.88		② Unknown		(1) 4.0 to 4.1	
	172.23.231.98		② Unknown		(1) 4.0 to 4.1	

Step 20Click Scan to test the cluster's compliance to the baseline.The Confirm Scan window opens.

	×
No.	r.

Step 21 Check the Upgrades check box, uncheck the Patches and Extensions check box, and click Scan.

ile Edit View Inventory Administr	ation Plug-ins Help						
🖸 💽 🛕 Home 🕨 🛃 Inv	ventory 🕨 🎁 Hosts and Clusters			6	- Search	Inventory	Q
1 5 6 8 A M	<b>%</b>						
DOCS-VUM-VC	Cluster sry Virtual Machines Hosts DRS Resource Allocation Performance	Tasks & Events Alar	ms Permissions	Maps Profile Comp	lance S	torage Views Up	date Manager
172.23.231.110			Name contains:	Clea	ar Scan.	Attach	Help Admin View
172.23.231.98	Attached Baseline Groups	Attached Baselines	1	Type		Host Compliance	# Hosts
RHEL-VM1	😵 All Groups and Independent Baselines 🕨 🕨	😵 All				All Applicable I	Hosts 3
VSM-P VSM-S VUM-VC		😵 4.0 to 4.1		Upgrade		<ul> <li>Non-Compliant</li> <li>Incompatible</li> <li>Unknown</li> <li>Compliant</li> </ul>	3 0 0
						0% Compliant	
	All Groups and Independent Baselines -> All -> 🗍 All Applica	ble Hosts					
	Host Name	<ul> <li>Patches</li> </ul>	Upgrades	Extensions	Atta	ached Baselines	Last Patch Scan Ti
	172.23.231.110		😵 Non-Complian	t	(1)	4.0 to 4.1	
	1/2 23 231 88		Von-Complian		(1)	4.U to 4.1	
	Hide Hods		won-complian		(1)	Sane	Remediate

**Step 22** Verify that all hosts are Non-Compliant and click **Remediate**.

	Select the baselines or baseline groups to remediate.				
ULA SV 4 v Unorade	Baseline Groups and Types	Baselines			
Host Remediation Options	Name	Name		Туре	
sady to Complete	Baseline Groups	€ 4.0 to 4.1		Host Upgrade	
	Host / Version	Patches	Extensions	Upgrades	
	VMware ES	Xi 4.0.0	- former and a second second	4.1.0 260247	
		Xi 4.0.0 Xi 4.0.0		4.1.0 260247 4.1.0 260247	

**Step 23** Click **Next** in the Remediation Selection window.

Step 24 Click the I agree to the term in the license agreement radio button and click Next.

**Step 25** In the ESX 4.x Upgrade window, click **Next**.

The Host Remediation Options window opens.

Remediate	
Host Remediation Options Select the time of the task.	Specify the host remediation failure options.
Remediation Selection ELLA ESX 4.x Upgrade Host Remediation Options Cluster Remediation Options Ready to Complete Ready to Complete	Task Name: Cluster Task Description: Remediation Time:
	Remediate the selected hosts:  C Immediately C At time: 11/ 9/2010 4:10 PM
	Maintenance Mode Options: The ESX and ESX hosts must be put in maintenance mode, and all virtual machines and appliances shut down and/or migrated before remediation can proceed. If the host cannot enter maintenance mode, the task will respond as specified below.
	Failure response:     Retry       Retry delay:     30 *       minutes     *
<b>&gt;</b>	Disable any removable media devices connected to the virtual machines on the host.
Help	<back next=""> Cancel</back>

Step 26 Check the Disable any removable media devices connected to the virtual machines on the host check box and click Next.

Remediation Selection EULA ESX 4.x Upgrade	Before you start a remediation, you should temporarily disable certain features to ensure remediation success. Disabling and re-enabling can be done automatically by selecting the features below.				
Cluster Remediation Optic Ready to Complete	<sup>ℓ</sup> 🔽 Disable Distributed Power Management (DPM) if it is enabled for any of the selected clusters.				
to compare	Disable High Availability admission control if it is enabled for any of the selected clusters.				
	Note that Update Manager will not attempt to remediate hosts or clusters affected by these features if they remain enabled.				
	☑ Disable Fault Tolerance (FT) if it is enabled for the VMs on the selected hosts.				
	(i) If you let Update Manager disable FT when necessary, remediation should be applied to all the hosts in the cluster so that they remain consistent and FT can be re-enabled when remediation is complete. See documentation for more details.				
	Generate a report of the current configuration and changes during remediation:				
	Generate a report of the current configuration and changes during remediation:				

Step 27 In the Cluster Remediation Options window, check all check boxes and click Next.

Remediation Selection	Compute Resource:	Cluster		
EULA	Scheduling:	Task Name - Cluster		
Lock Remodulation Options	Maintenance Mode Ontions:	Retry		
Cluster Remediation Options	- and contained model options.	Retry every 30 Minutes		
Ready to Complete		3 Retries		
ready to complete		Disable CD/DVD drives		
	ESX 4.x Upgrade:	Use a local datastore for COS VMDK		
		Automatic rollback on failed upgrade		
	Cluster Remediation Options:	Disable Distributed Power Management		
		Disable Fligh Availability admission control Disable Fault Tolerance		
	Upgrades [1]			

**Step 28** Click **Finish** to begin the remediation.

You can monitor remediation progress in the Recent Tasks section.



- **Step 29** To check the host versions, click each host in the left-hand pane and confirm that 4.1.0, 260247 appears in the top-left corner of the right-hand pane.
- **Step 30** Determine upgrade completion:
  - **a.** If all hosts have been upgraded, the upgrade is complete.
  - **b.** If any one of the hosts was not upgraded, perform Step 31 through Step 39for each host that requires an upgrade.

DOCS-VUM-VC     Dimensional provided in the second se		172.23.231.110 Getting Started	Mware ESXi, Summary	4.0.0, 261974 Virtual Machines Per
	172.23.2	New Virtual Machine	Ctrl+N	
	172.23.2 6	New Resource Pool	Ctrl+O	
	RHEL-VM	New vApp	Ctrl+A	ses virtualizatio
	RHEL-VM VSM-P	Disconnect		al machines. H
a a a a a a a a a a a a a a a a a a a	VSM-S	Enter Maintenance Mode		s to storage ar
di b	VUM-VC	Rescan for Datastores		
		Add Permission	Ctrl+P	28184

Step 31 Right-click on the host's IP address and choose Maintenance Mode.



**Step 32** Click **Yes** in the Confirm Maintenance Mode dialog box.

The host's VMs are migrated.

Step 33 Click the Update Manager tab.



Step 34 Right-click on the 4.0 to 4.1 baseline and select Detach Baseline.

Entity Name	Туре	Version
() Cluster	Compute Resource	e .

**Step 35** Check the **Cluster** check box and click **Detach**.



**Step 36** To attach the baseline to the host that did not upgrade, click **Attach**.

idividual Baselines by Type	Lreate Baseline.
Name	Туре
Patch Baselines	
Critical Host Patches	Host Patch
Subsection Resolution	Host Patch
Extension baselines	
✓ 14.0 to 4.1	Host Upgrade
Name	Type
Name	Туре
TRAITU	

- Step 37 Check the 4.0 to 4.1 check box and click Attach.
- **Step 38** Perform Step 22 through Step 28.
- **Step 39** When the remediation is complete, confirm that the host is compliant in the Host Compliance section.



Step 40 Right-click on the host and choose Exit Maintenance Mode.



- **Step 41** Select **Cluster** to scan the entire cluster for compliance.
- **Step 42** Detach the baseline from the host and attach it to the cluster.
- **Step 43** The upgrade can also be confirmed by running the **show module** command on the VSM and observing that the VEMs are on the correct build.

8 17	72.23.231.146 - de	fault - SSH Secure Shell			
Ele	Edit View Window	Help			
	a 🔉 🔳 🗾 🗉	6 🙃 🗛 🔬 🍋 🦠	🥔 K?		
2	Quick Connect 📃 Pro	files			
Iexu	s1000V# show modu	le			~
fod	Ports Module-Ty	pe	Model	Status	
í.	0 Virtual S	upervisor Module	Nexus1000V	active *	
	0 Virtual S	upervisor Module	Nexus1000V	ha-standby	
5	248 Virtual E	thernet Module	NA	ok	
	248 Virtual E	thernet Module	NA	ok	
*	248 Virtual E	thernet Module	NA	ok	
bo	Sw	Hw			
	4 2/11/201/2 121	0.0			
	4 2(1) 571(3.12)	0.0			
	4.2(1)5V1(4)	VMware ESXi 4.1.0 Rele	asehuild-26024	17 (2.0)	
1	4.2(1) SV1(4)	VMware ESXi 4.1.0 Rele	asebuild-26024	17 (2.0)	
i.	4.2(1)5V1(4)	VMware ESXi 4.1.0 Rele	asebuild-26024	17 (2.0)	
fod	MAC-Address(es)		Serial-Num		
	00-19-07-6c-5a-a	8 to 00-19-07-6c-62-a8	NA		
	00-19-07-6c-5a-a	8 to 00-19-07-6c-62-a8	NA		
	02-00-0c-00-03-0	0 to 02-00-0c-00-03-80	NA		
÷	02-00-0c-00-04-0	0 to 02-00-0c-00-04-80	NA		
	02-00-0c-00-05-0	0 to 02-00-0c-00-05-80	NA		
boi	Server-IP	Server-UUID		Server-Name	
	170 00 001 146	W3			
	172.23.231.146	RA NA		NA	
	172 22 221 99	2cafb5b7_7a1c_11df_a407	-404064002250	NA 172 22 221 00	
	172.23.231.00	2cafb5b2=7a1c=11df==407	-4040640931-0	172 23 231 98	
	172.23.231.110	021dad27=7a17=11df=h0h6	-d0d0fd0931b2	localbost localdomain	
exu	s1000V#	versue (- (dr (-11dl-D3D0	204014050102	a construct of a could dollard	
					×
nne	ted to 172.23.231.146			55H2 - aes128-cbc - hmac-md5 - none   130x33   🍪	

The upgrade is complete.

# **Verification After the Upgrade**

```
Step 1 To verify the build number on the ESX host, run the following commands:
```

```
[root@hostname~] # rpm -qa | grep vmkernel | awk -F. `{print $5}'
260402
~ # vmware -v
VMware ESXi 4.1.0 build-260402
```

```
[root@hostname ~] # rpm -qa | grep vmkernel | awk -F. '{print $5}'
260402
    ~ # vmware -v
VMware ESXi 4.1.0 build-260402
    On Nexus 1000v side:
    Refer to the Compatibility matrix
    # show mod
    # vem status -v
    To verify the upgrade on the Cisco Nexus 1000V, run the following commands.
    switch# show mod
```

```
vem status -v
```

# Upgrading the ESX/ESXi Host with VEM Software Installed Using the CLI

You can use this procedure to upgrade an ESX or ESXi host by installing a VMware patch or update along with the compatible Cisco Nexus 1000V VEM software.

#### **BEFORE YOU BEGIN**

Before beginning this procedure, you must know or do the following:

- If you are using vCLI:
  - You have downloaded and installed the VMware vCLI. For information about installing vCLI, see the VMware vCLI documentation.
  - You are logged in to the remote host when vCLI is installed.

Note

Step 2

The vSphere Command-Line Interface (vSphere CLI) command set allows you to run common system administration commands against ESX/ESXi systems from any machine with network access to those systems. You can also run most vSphere CLI commands against a vCenter Server system and target any ESX/ESXi system that the vCenter Server system manages. vSphere CLI commands are especially useful for ESXi hosts because ESXi does not include a service console.

- If you are using the **esxupdate** command:
  - You are logged in to the ESX host.
- Check the *Cisco Nexus 1000V Compatibility Information, Release 4.2(1)SV1(4)* for compatible versions.
- You have already copied the ESX or ESXi host software and VEM software installation file to the /tmp directory.
- You know the name of the ESX or ESXi, and VEM software file to be installed.

#### **DETAILED STEPS**

```
Step 1 Go to the directory where the new VEM software was copied.
```

[root@serialport -]# cd tmp
[root@serialport tmp]#

- **Step 2** Determine which upgrade method you want to use and run the appropriate command:
  - If you are using vCLI, run the **vihostupdate** command and install the ESX/ESXi and VEM software simultaneously.

```
vihostupdate --install --bundle "[path to VMware Update offline bundle]","[path to
Cisco updated VEM offline bundle]" --server [vsphere host IP address]
```

```
<u>Note</u>
```

Put the host is maintenance mode prior to running the following command.

#### Example:

```
[root@serialport tmp]# vihostupdate --install --bundle ESXi-4.0.0-update01.zip,
VEM400-201007301.zip --server 192.0.2.0
Enter username: root
Enter password:
Please wait installation in progress ...
The update completed successfully, but the system needs to be rebooted for the changes
to be effective.
[root@serialport tmp]#
```

• If you are using the **esxupdate** command, from the ESX host /tmp directory, install the VEM software as shown in the following example:

Note

When using the **escupdate** command, you must log in to each host and run the command.

esxupdate --bundle=[Updated 1000V VEM offline bundle] --bundle=[VMware offline update
bundle] update

#### Example:

```
~ # esxupdate --bundle=/vmfs/volumes/datastore1/upgrade-from-esxi4.0-4.0_update02.zip
--bundle=/vmfs/volumes/datastore1/VEM400-201008401.zip update
Unpacking cross_cisco-vem-v130-esx_4.2.1.1.3.9-1.9.1
Unpacking deb_vmware-esx-firmware_4.0.0-2.17.261974
Unpacking deb_vmware-esx-viclient_4.0.0-2.17.261974
Unpacking deb_vmware-esx-tools-light_4.0.0-2.17.261974
Removing packages :vmware-esx-tools-light vmware-esx-viclient
Installing packages :deb vmware-esx-firmware 4.0.0-2.17.261974
Installing packages :cross_cisco-vem-v130-esx_4.2.1.1.3.9.0-1.9.1
```

~ #

This command loads the software manually onto the host, loads the kernel modules, and starts the VEM Agent on the running system.

#### **Step 3** Reboot the host.

```
Step 4 Verify that the installation was successful.
```

```
[root@serialport tmp]# vmware -v
VMware ESXi 4.0.0 build-236512
root@serialport tmp]# esxupdate --vib-view query | grep cisco
cross_cisco-vem-v120-esx_4.0.4.1.3.0.0-1.9.2 retired
2010-07-18T16:56:00.787147+00:00
cross_cisco-vem-v130-esx_4.2.1.1.3.9.0-1.9.1 installed
2010-07-18T17:06:53.675403+00:00
[root@serialport tmp]# esxupdate query
-----Bulletin ID----- Installed----- Summary-----Summary------
ESX1400-200911203-UG 2010-07-18T14:30:58 VI Client update for 4.0 U1 release
ESXi400-Update01
                       2010-07-18T14:30:58 VMware ESXi 4.0 Update 1
ESXi400-201002401-BG 2010-07-18T17:07:14 Updates Firmware
ESXi400-201002402-BG 2010-07-18T17:07:14 Updates VMware Tools
VEM400-201004265454109-BG 2010-07-18T17:07:14 Cisco Nexus 1000V 4.0(4)SV1(3a)
[root@serialport tmp]# vem status -v
Package vssnet-esx4.1.2-00000-release
Version 4.0.4.1.3.0.0-1.11.2
Build 2
Date Mon Apr 26 21:47:24 PDT 2010
Number of PassThru NICs are 0
VEM modules are loaded
Switch Name Num Ports Used Ports Configured Ports MTU
                                                               Uplinks
vSwitch0 64 3 64
                                                      1500
                                                               vmnic0
DVS Name
            Num Ports Used Ports Configured Ports Uplinks
              256
                                     256
nexus
                          50
                                                       vmnic3
Number of PassThru NICs are 0
VEM Agent (vemdpa) is running
```

Note

If the VEM Agent is not running, see the *Cisco Nexus 1000V Troubleshooting Guide, Release* 4.2(1)SV1(4).

**Step 5** Run the following command from the VSM.

```
bldvs3# show module
Mod Ports Module-Type
                              Model
                                            Status
____ ____
       Virtual Supervisor Module
                             Nexus1000V
                                           active *
   0
1
4
       Virtual Ethernet Module
   248
                              NA
                                            ok
Mod Sw
               Ηw
_ _ _
   _____
               _____
   4.2(1)SV1(4) 0.0
1
              VMware ESXi 4.0.0 Releasebuild-261974 (1.20)
4
   4.2(1)SV1(4)
Mod MAC-Address(es)
                              Serial-Num
```



Note

The highlighted text in the previous command output confirms that the upgrade was successful.

**Step 6** Do one of the following:

- If the installation was successful, the installation procedure is complete.
- If not, see the *Recreating the Cisco Nexus 1000V Installation* section in *Cisco Nexus 1000V Troubleshooting Guide, Release 4.2(1)SV1(4).*

You have completed this procedure.

# Installing or Upgrading the VEM Software Using VUM

Æ Caution

If removable media is still connected, for example, if you have installed the VSM using ISO and forgot to remove the media, then host movement to maintenance mode fails and the VUM upgrade fails.

When installing or upgrading the VEM software, VMware Update Manager (VUM) will automatically select the correct VEM software to be installed on the host.

VEM software is installed on the host in one of the following procedures:

- When upgrading the VEM software, the VUM operation is initiated by the network administrator when he executes the **vmware vem upgrade proceed** command.
- VUM operation is initiated by the server administrator when adding a new host to the Nexus 1000V DVS.



Make sure you read Prerequisites for Installing VEM Software, page 5 to ensure that the VUM operation proceeds without failure.

 If you are using VUM, then the Cisco Nexus 1000V VEM software will be installed automatically when the host is added to the Cisco Nexus 1000V DVS. When VEM upgrades are triggered from the VSM, the VEM software will be automatically upgraded on the host. To determine which VUM upgrade procedure you should follow, see Installing or Upgrading the VEM Software Using VUM, page 43.

L

# Installing or Upgrading the VEM Software Using the CLI

You can use this procedure to install the Cisco Nexus 1000V VEM software on an ESX/ESXi host.

#### **BEFORE YOU BEGIN**

Before beginning this procedure, you must know or do the following:

- If you are using vCLI:
  - You have downloaded and installed the VMware vCLI. For information about installing vCLI, see the VMware vCLI documentation.
  - You are logged in to the remote host where vCLI is installed.



The vSphere Command-Line Interface (vCLI) command set allows you to run common system administration commands against ESX/ESXi systems from any machine with network access to those systems. You can also run most vCLI commands against a vCenter Server system and target any ESX/ESXi system that the vCenter Server system manages. vCLI commands are especially useful for ESXi hosts because ESXi does not include a service console.

- If you are using the **esxupdate** command:
  - You are logged in to the ESX host.
- Check the *Cisco Nexus 1000V Compatibility Information, Release 4.2(1)SV1(4)* for compatible versions.
- You have already copied the VEM software installation file to the /tmp directory.
- You know the name of the VEM software file to be installed.

#### PROCEDURE

```
Step 1 Go to the directory where the new VEM software was copied.
[root@serialport -]# cd tmp
[root@serialport tmp]#
Step 2 Determine which upgrade method you want to use and run the appropriate command:

If you are using vCLI, run the vihostupdate command and install the ESX/ESXi and VEM software simultaneously.
vihostupdate --install --bundle [path to Cisco updated VEM offline bundle]" --server [vsphere host IP address]

Note
Put the host is maintenance mode prior to running the following command.
```

#### Example:

```
[root@serialport tmp]# vihostupdate -i --bundle cisco-vem-v130-4.2.1.1.3.9.0-1.9.1.zip
--server 192.0.2.0
Enter username: root
Enter password:
Please wait installation in progress ...
The update completed successfully, but the system needs to be rebooted for the changes
to be effective.
```

[root@serialport tmp]#

• If you are using the **esxupdate** command, from the ESX host /tmp directory, install the VEM software as shown in the following example:

Note

When using the **esxupdate** command, you must log in to each host and run the command.

This command loads the software manually onto the host, loads the kernel modules, and starts the VEM Agent on the running system.

**Step 3** Run the following commands and compare the output with the *Cisco Nexus 1000V Compatibility Information, Release 4.2(1)SV1(4).* 

```
[root@serialport tmp]# vmware -v
VMware ESXi 4.0.0 build-208167
[root@serialport tmp]# esxupdate --vib-view query | grep cisco
cisco-vem-v130-4.2.1.1.3.9.0-1.9.1 installed 2010-07-18T16:56:00.787147+00:00
```

The highlighted text shows the upgraded Cisco VEM.

```
root@serialport tmp]# esxupdate query
-----Bulletin ID----- -----Installed----- ------Summary-------
ESXi400-Update01
                 2010-07-18T14:30:58
                                       VMware ESXi 4.0 Update 1
VEM400-201004265419109-BG 2010-07-18T16:56:00 Cisco Nexus 1000V 4.0(4)SV1(3a)
root@serialport tmp]# vem status -v
Package vssnet-esx4.1.0-00000-release
Version 4.2.1.1.3.9.0-1.9.1
Build 2
Date Mon Apr 26 21:47:24 PDT 2010
Number of PassThru NICs are 0
VEM modules are loaded
Switch Name Num Ports Used Ports Configured Ports MTU
                                                              Uplinks
vSwitch0
            64
                         3
                                    64
                                                      1500
                                                              vmnic0
DVS Name
             Num Ports
                         Used Ports Configured Ports Uplinks
              256
                         50
                                    256
nexus
                                                      vmnic3
Number of PassThru NICs are 0
VEM Agent (vemdpa) is running
```

#### **Step 4** Run the following command from the VSM.

and tab# above mod

SWIL	CII# <b>5110</b>	w mou		
Mod	Ports	Module-Type	Model	Status
1	0	Virtual Supervisor Module	Nexus1000V	active *
2	0	Virtual Supervisor Module	Nexus1000V	standby
3	248	Virtual Ethernet Module	NA	ok
Mod	Sw	Hw		

L

```
1
   4.0(4)SV1(3)
                0.0
                0.0
2
   4.0(4)SV1(3)
3
   4.2(1)SV1(4)
                VMware ESXi 4.0.0 build-208167 (1.9)
Mod MAC-Address(es)
                                  Serial-Num
   -----
                                  _____
   00-19-07-6c-5a-a8 to 00-19-07-6c-62-a8 NA
1
   02-00-0c-00-04-00 to 02-00-0c-00-04-80 NA
4
Mod Server-IP
               Server-UUID
                                              Server-Name
   _____
                                             _____
_ _ _
   10.104.62.220 NA
1
                                              NA
   10.104.62.217 3fa746d4-de2f-11de-bd5d-c47d4f7ca460 visor
4
```

```
Note
```

The highlighted text in the previous command output confirms that the upgrade was successful.

**Step 5** Do one of the following:

- If the installation was successful, the installation procedure is complete.
- If not, see the *Recreating the Cisco Nexus 1000V Installation* section in *Cisco Nexus 1000V Troubleshooting Guide, Release 4.2(1)SV1(4).*

You have completed this procedure.

# Uninstalling the VEM Software

You can use this procedure to uninstall the Cisco Nexus 1000V software from a VEM.

#### **BEFORE YOU BEGIN**

Before beginning this procedure, you must know or do the following:

- Make sure the host is not currently a part of any DV switch by removing all of the following active ports from the DV switch:
  - VMware kernel NICs
  - Virtual switch interfaces
  - Virtual NICs
- You are logged in to the ESX/ESXi host remotely using SSH.

#### **DETAILED STEPS**

Step 1

Uninstall the VEM software using the vem-remove -d command.

This command removes the software from the host, removes the kernel modules, and stops the VEM Agent on the running system.



The following example is being run on ESX.

[root@fcs-cos2 ~] # vem-remove -d

```
watchdog-vemdpa: Terminating watchdog with PID 14574
Module vem-v130-stun being unloaded..
Module vem-v130-stun unloaded..
Module vem-v130-vssnet being unloaded ..
Module vem-v130-vssnet unloaded..
Module vem-v130-n1kv being unloaded.
Module vem-v130-n1kv unloaded..
Module vem-v130-12device being unloaded ..
Module vem-v130-12device unloaded..
Removing CIsco VEM VIB from COS system
Removing VIB cross_cisco-vem-v130-esx_4.2.1.1.3.9.0-1.11.3
Removing cisco-vem-v130-esx
# [100%]
Running [/usr/sbin/vmkmod-install.sh]...
ok.
```

root@fcs-cos2 ~]#



The following example is being run on ESXi.

Running [/usr/sbin/vmkmod-install.sh]...

ok.

**Step 2** Verify that the software was successfully removed by checking for the output of the **esxupdate --vib-view query** command:

[root@fcs-cos2 -]# esxupdate --vib-view query

```
~ # esxupdate --vib-view query | grep cisco | grep retired
```

**Step 3** Do one of the following:

- If the removal was successful, reboot the host and your uninstall is complete.
- If not, see the *Recreating the Cisco Nexus 1000V Installation* section in *Cisco Nexus 1000V Troubleshooting Guide, Release 4.2(1)SV1(4).*

L

You have completed this procedure.

# **Available Documents**

This section lists the documents used with the Cisco Nexus 1000 and available on Cisco.com at the following url:

http://www.cisco.com/en/US/products/ps9902/tsd\_products\_support\_series\_home.html

#### **General Information**

Cisco Nexus 1000V Documentation Roadmap, Release 4.2(1)SV1(4) Cisco Nexus 1000V Release Notes, Release 4.2(1)SV1(4) Cisco Nexus 1000V Compatibility Information, Release 4.2(1)SV1(4) Cisco Nexus 1010 Management Software Release Notes, Release 4.2(1)SP1(2)

#### **Install and Upgrade**

Cisco Nexus 1000V Virtual Supervisor Module Software Installation Guide, Release 4.2(1)SV1(4) Cisco Nexus 1000V Software Upgrade Guide, Release 4.2(1)SV1(4) Cisco Nexus 1000V VEM Software Installation and Upgrade Guide, Release 4.2(1)SV1(4) Cisco Nexus 1010 Virtual Services Appliance Hardware Installation Guide Cisco Nexus 1010 Software Installation and Upgrade Guide, Release 4.2(1)SP1(2)

#### **Configuration Guides**

Cisco Nexus 1000V License Configuration Guide, Release 4.2(1)SV1(4) Cisco Nexus 1000V Getting Started Guide, Release 4.2(1)SV1(4) Cisco Nexus 1000V High Availability and Redundancy Configuration Guide, Release 4.2(1)SV1(4) Cisco Nexus 1000V Interface Configuration Guide, Release 4.2(1)SV1(4) Cisco Nexus 1000V Layer 2 Switching Configuration Guide, Release 4.2(1)SV1(4) Cisco Nexus 1000V Port Profile Configuration Guide, Release 4.2(1)SV1(4) Cisco Nexus 1000V Quality of Service Configuration Guide, Release 4.2(1)SV1(4) Cisco Nexus 1000V Security Configuration Guide, Release 4.2(1)SV1(4) Cisco Nexus 1000V System Management Configuration Guide, Release 4.2(1)SV1(4) Cisco Nexus 1010 Software Configuration Guide, Release 4.2(1)SP1(2)

#### **Programming Guide**

Cisco Nexus 1000V XML API User Guide, Release 4.2(1)SV1(4)

#### **Reference Guides**

Cisco Nexus 1000V Command Reference, Release 4.2(1)SV1(4)

Cisco Nexus 1000V VEM Software Installation and Upgrade Guide, Release 4.2(1) SV1(4)

Cisco Nexus 1000V MIB Quick Reference

Cisco Nexus 1010 Command Reference, Release 4.2(1)SP1(2)

#### **Troubleshooting and Alerts**

Cisco Nexus 1000V Troubleshooting Guide, Release 4.2(1)SV1(4)

Cisco Nexus 1000V Password Recovery Guide

Cisco NX-OS System Messages Reference

#### **Virtual Security Gateway Documentation**

Cisco Virtual Security Gateway for Nexus 1000V Series Switch Release Notes, Release 4.2(1)VSG(1)

Cisco Virtual Security Gateway, Release 4.2(1)VSG1(1) and Cisco Virtual Network Management Center, Release 1.0.1 Installation Guide

Cisco Virtual Security Gateway for Nexus 1000V Series Switch License Configuration Guide, Release 4.2(1)VSG1(1)

Cisco Virtual Security Gateway for Nexus 1000V Series Switch Configuration Guide, Release 4.2(1)VSG1(1)

Cisco Virtual Security Gateway for Nexus 1000V Series Switch Command Reference, Release 4.2(1)VSG1(1)

#### **Virtual Network Management Center**

Release Notes for Cisco Virtual Network Management Center, Release 1.0.1

Cisco Virtual Security Gateway, Release 4.2(1)VSG1(1) and Cisco Virtual Network Management Center, Release 1.0.1 Installation Guide

Cisco Virtual Network Management Center CLI Configuration Guide, Release 1.0.1

Cisco Virtual Network Management Center GUI Configuration Guide, Release 1.0.1

Cisco Virtual Network Management Center XML API Reference Guide, Release 1.0.1

#### **Network Analysis Module Documentation**

Cisco Network Analysis Module Software Documentation Guide, 4.2 Cisco Nexus 1000V NAM Virtual Service Blade Installation and Configuration Guide Network Analysis Module Command Reference Guide, 4.2 User Guide for the Cisco Network Analysis Module Virtual Service Blades, 4.2 Cisco Network Analysis Module Software Release Notes, 4.2

# **Obtaining Documentation and Submitting a Service Request**

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.

This document is to be used in conjunction with the documents listed in the section.

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