Cisco Nexus 1010 Software Installation and Upgrade Guide, Release 4.2(1) SP1(2)

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This document describes how to reinstall or upgrade the Cisco Nexus 1010 software, and includes the following topics:

Note For information about upgrading Cisco Nexus 1000V software on a VSB, see the *Cisco Nexus 1000V Software Upgrade Guide, Release 4.2(1)SV1(4)*.

For an overview of the Cisco Nexus 1010 system and procedures for configuring the software after it is installed, see the *Cisco Nexus 1010 Software Configuration Guide, Release 4.2(1)SP1(2)*.

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Audience

This document is for network administrators with knowledge of the Cisco Nexus 1000V and experience in the installation, upgrade, and management of Cisco Nexus 1000V VSMs.

Information About Software

Cisco Nexus 1010 software is pre installed as an ISO image that includes the following components:

- Cisco Nexus 1010 kickstart image
  This is the image for the Cisco Nexus 1010 Manager virtual machine which manages shelf and redundancy group configuration.
- Hypervisor with a Cisco Nexus 1010 agent

In the event of disk corruption on the Cisco Nexus 1010, the system can be brought up by copying the image from a CD.

When you upgrade the software, the operational data is retained without loss of persistent information.

Prerequisites

Before installing or upgrading to Cisco Nexus 1010 Release 4.2(1)SP1(2), you must know or do the following:

- You must have CIMC software Version 1.2.1(b) or higher installed. Use the "Verifying the CIMC Software Version" procedure on page 3 to verify you have this CIMC version installed.

  The upgrade or install fails if an earlier CIMC version is installed.

Guidelines and Limitations

Use the following guidelines and limitations when reinstalling or upgrading software:

Caution When you reinstall the software, all previous configuration is overwritten and lost.

- The only way to upgrade the software is by using the **install nexus1010** command
- The upgrade does not take effect until you save the configuration and reload the software.
- Boot variables must be set by the system when you use the **install** command. Never attempt to set the boot variables manually.

Verifying the CIMC Software Version

Use this procedure to verify that you have CIMC software Version 1.2.1(b) or higher installed on your Cisco Nexus 1010.

BEFORE YOU BEGIN

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

- You have upgraded to CIMC software Version 1.2.1(b) or higher.

  For more information, see the *CIMC Firmware Management on UCS C-Series Servers* document.
- If CIMC software Version 1.2.1(b) or higher is installed, you will see the product ID N1K-C1010 in the output of the **show hardware** command. This procedure includes steps for this verification.
- You are logged in to the Cisco Nexus 1010 from the CLI or a Web browser.

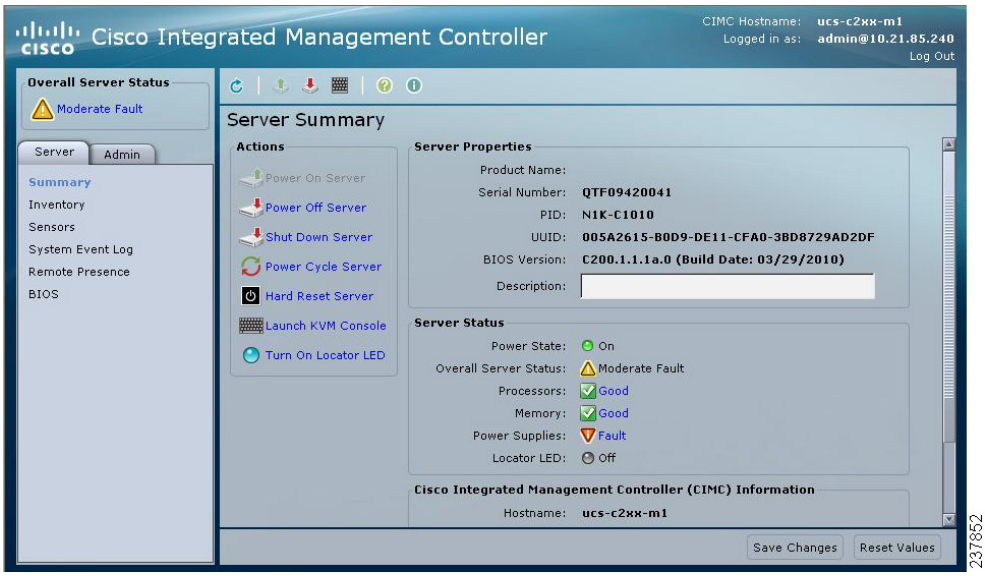
Step 1 From the Cisco Nexus 1010, do one of the following to display the product ID (PID):

- From the CLI, view the output of the **show hardware** command.
  Look in the Switch Hardware ID information for the PID.
- From a WEB browser, open the Server Summary window and view the server properties. See Figure 1-1 for an example.

```
Example:
DOCS-CPPA# show hardware
Cisco Nexus Operating System (NX-OS) Software
TAC support: http://www.cisco.com/tac
Copyright (c) 2002-2010, Cisco Systems, Inc. All rights reserved.
The copyrights to certain works contained in this software are owned by other third
parties and used and distributed under license. Certain components of this software are
licensed under the GNU General Public License (GPL) version 2.0 or the GNU
Lesser General Public License (LGPL) Version 2.1. A copy of each
such license is available at http://www.opensource.org/licenses/gpl-2.0.php and
http://www.opensource.org/licenses/lgpl-2.1.php

Software
  loader:    version unavailable [last: image booted through mgmt0]
  kickstart: version 4.0(4)SP1(1)
  system:    version 4.0(4)SP1(1) [gdb]
  kickstart image file is:
  kickstart compile time:  4/19/2010 1:00:00
  system image file is:    bootflash:/nexus-1010-mzg.4.0.4.SP1.1.bin
  system compile time:     4/19/2010 1:00:00 [04/19/2010 13:07:00]

Hardware
  Cisco Nexus 1010 Chassis ("Cisco Nexus1010 Chassis")
   with 14666752 kB of memory.
  Device name: DOCS-CPPA
  bootflash:    3897832 kB
  Disk Storage capacity for VM virtual disks: 346428 GB
  Number of physical 1Gbps ethernet ports: 6
  Number of CPU Cores: 8
  CPU Cores details:
  model name    : Intel(R) Xeon(R) CPU           E5504  @ 2.00GHz
  model name    : Intel(R) Xeon(R) CPU           E5504  @ 2.00GHz
  model name    : Intel(R) Xeon(R) CPU           E5504  @ 2.00GHz
  model name    : Intel(R) Xeon(R) CPU           E5504  @ 2.00GHz
  model name    : Intel(R) Xeon(R) CPU           E5504  @ 2.00GHz
  model name    : Intel(R) Xeon(R) CPU           E5504  @ 2.00GHz
```

```
  model name    : Intel(R) Xeon(R) CPU           E5504  @ 2.00GHz
  model name    : Intel(R) Xeon(R) CPU           E5504  @ 2.00GHz

Kernel uptime is 116 day(s), 19 hour(s), 43 minute(s), 7 second(s)

plugin
  Core Plugin, Ethernet Plugin
--------------------------------
Switch hardware ID information
--------------------------------

Switch is booted up
  Switch type is : Nexus 1010 Chassis
  Model number is Nexus 1010
  Manufacture date is 03/29/2010
  PID-VID-SN: N1K-C1010-A-1383802872129225113
  UUID is D5A54100-D9A2-11DE-B0C7-6BFCF373D92E

--------------------------------
Chassis has 2 Module slots
--------------------------------

Module1  ok
  Module type is : Cisco Nexus1010 Chassis
  0 submodules are present
  Model number is Nexus 1010
  H/W version is .
  Manufacture Date is Year 0 Week 3
  Serial number is T023D7AF101

Module2  ok
  Module type is : Cisco Nexus1010 Chassis
  0 submodules are present
  Model number is Nexus 1010
  H/W version is .
  Manufacture Date is Year 0 Week 3
  Serial number is T023D7AF181
```

Figure 1-1 CIMC Window with Product ID (PID)



Step 2 Do one of the following:

- If the PID displayed is N1K-C1010, you can proceed with the install or upgrade to Cisco Nexus 1010 Release 4.2(1)SP1(2).
- If the PID displayed is not N1K-C1010, do not install or upgrade to Release 4.2(1)SP1(2). Instead you must replace the Cisco Nexus 1010 using the RMA process.

Reinstalling the Software

You can use this procedure to reinstall the software from your software CD in the event that the system disk becomes corrupted.

BEFORE YOU BEGIN

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

- You have verified that you have the following product ID (PID) on your Cisco Nexus 1010, using the "Verifying the CIMC Software Version" procedure on page 3.
  - N1K-C1010

Caution You cannot install or upgrade to Cisco Nexus 1010 Release 4.2(1)SP1(2) unless you have the product ID (PID) N1K-C1010.

Caution Potential Loss of Data
When you reinstall the software, all previous configuration is overwritten and lost.

DETAILED STEPS

Step 1 From a terminal server, connect to the serial port of the Cisco Nexus 1010.

Step 2 Insert the installation CD in the DVD-RW drive.

Step 3 On the Cisco Nexus 1010, press the Power button.

The Cisco Nexus 1010 reboots and the management software setup process begins.

To configure the software, see the *Cisco Nexus 1010 Software Configuration Guide, Release 4.2(1)SP1(2)*.

Upgrading the Software

You can use this procedure to upgrade the Cisco Nexus 1010 software while retaining operational data and persistent information.

Note For information about upgrading Cisco Nexus 1000V software on a VSB, see the *Cisco Nexus 1000V Software Upgrade Guide, Release 4.2(1)SV1(4)*.

BEFORE YOU BEGIN

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

- You have verified that you have the following product ID (PID) on your Cisco Nexus 1010, using the "Verifying the CIMC Software Version" procedure on page 3.
  - N1K-C1010

Caution You cannot install or upgrade to Cisco Nexus 1010 Release 4.2(1)SP1(2) unless you have the product ID (PID) N1K-C1010.

- You are logged in to the CLI from the CIMC/Serial over LAN port on the rear of the Cisco Nexus 1010.

Note Do not log in using the management IP for this procedure. This procedure requires you to first upgrade and reload the standby Cisco Nexus 1010 after which the HA pair have incompatible software versions. By logging in using serial over LAN, you prevent the split brain that occurs in this configuration.

- If you upgrade the software on the active switch in a redundant pair of Cisco Nexus 1010s, then the standby switch is upgraded automatically.
- To keep VSMs available, reload the redundant VSB modules separately as described in this procedure.
- You have already saved a backup copy of your running configuration on an external server.
- You have saved a copy of the new Cisco Nexus 1010 software file from the following Cisco.com software download site to an external server.

  www.cisco.com/go/1010download

DETAILED STEPS

Step 1 From the Cisco Nexus 1010 serial over LAN connection, copy any unsaved configuration from the running configuration to startup so that it is preserved after the reload.

copy running-config startup-config

```
Example:
switch# copy running-config startup-config
[########################################] 100%
switch#
```

Step 2 Copy the new software image from the external server to the following directory.

bootflash: \repository

copy scp://user@*path/filename* **bootflash:***filename*

```
Example:
n1010# copy scp://user@linux-box.cisco.com/home/user/nexus-1010.4.2.1.SP1.1.2.iso
bootflash:repository
Enter vrf (If no input, current vrf 'default' is considered):
user@linux-box.cisco.com's password:
nexus-1010.4.2.1.SP1.1.2.iso       100%  258234  10.3KB/s   00:15
n1010#
```

Step 3 Install the new image.

install nexus1010 *full_path_to_filename*

The following things occur on the switch:

- The new software image is copied to bootflash.
- Bootflash variables are updated with the names of the new system and kickstart images.
- The new image and bootflash variable information is saved in the running configuration.

Example:
```
switch# install nexus1010 bootflash:repository/nexus-1010.4.2.1.SP1.1.2.iso
```

Step 4 Save the new boot parameters in the startup configuration.

```
switch# copy running-config startup-config
[########################################] 100%
```

Caution If you do not copy the running configuration to the startup configuration, the new boot parameters are not saved when you reload the software in Step 5.

Step 5 Reload the software to refresh the software image with the new image file.

reload

The software image is replaced in Cisco Nexus 1010 pair with the version named in bootflash variables.
The Cisco Nexus 1010s sync.
Any unsaved configuration is lost.

Example:
```
switch# reload
This command will reboot the system. (y/n)? [n] y
2009 Oct 30 21:51:34 s1 %$ VDC-1 %$ %PLATFORM-2-PFM_SYSTEM_RESET: Manual system restart
from Command Line Interface
switch#
```

Step 6 From the CLI for each module, verify that both VSBs are in HA mode.

show system redundancy status

Example:
```
switch# show system redundancy status
Redundancy role
---------------
      administrative:   primary
         operational:   primary
Redundancy mode
---------------
      administrative:   HA
         operational:   None
This supervisor (sup-1)
-----------------------
    Redundancy state:   Active
    Supervisor state:   Active
      Internal state:   Active with HA standby
Other supervisor (sup-2)
------------------------
    Redundancy state: standby
    Supervisor state: HA standby
      Internal state: HA standby
switch#
---- ----
```

Step 7 Verify that the new software is loaded.

show module

```
switch# show module
Mod  Ports  Module-Type                      Model              Status
---  -----  -------------------------------- ------------------ ------------
1    0      Cisco Nexus1010 Chassis          Nexus1010          active *
2    0      Cisco Nexus1010 Chassis          Nexus1010          ha-standby

Mod  Sw               Hw
---  ---------------  ------
1    4.2(1)SP1(2)     0.0
2    4.2(1)SP1(2)     0.0

Mod  MAC-Address(es)                         Serial-Num
---  --------------------------------------  ----------
1    00-19-07-6c-5a-a8 to 00-19-07-6c-62-a8  NA
2    00-19-07-6c-5a-a8 to 00-19-07-6c-62-a8  NA

Mod  Server-IP        Server-UUID                           Server-Name
---  ---------------  ------------------------------------  --------------------
1    172.23.231.113   NA                                    NA
2    172.23.231.113   NA                                    NA


* this terminal session
switch#
```

Step 8 Save the new upgrade configuration persistently through reboots and restarts by copying it to the startup configuration.

copy running-config startup-config

Example:

```
switch# copy running-config startup-config
[########################################] 100%
switch#
```

Additional References

Related Topic	Document Title
Hardware installation	*Cisco Nexus 1010 Virtual Services Appliance Installation Guide*
Cisco Nexus 1010 software configuration	*Cisco Nexus 1010 Software Configuration Guide, Release 4.2(1)SP1(2)*
Cisco Nexus 1010 commands	*Cisco Nexus 1010 Command Reference, Release 4.2(1)SP1(2)*
CIMC management	*CIMC Firmware Management on UCS C-Series Servers*

Feature History for Software Installation and Upgrade

This section provides the software installation and upgrade release history.

Feature Name	Releases	Feature Information
software reinstall or upgrade	4.0(4)SP1(1)	This feature was introduced.

Available Documents

This section lists the documents used with the Cisco Nexus 1000V and Cisco Nexus 1010 and available on Cisco.com at the following urls:

http://www.cisco.com/en/US/products/ps9902/tsd_products_support_series_home.html

http://www.cisco.com/en/US/products/ps12752/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 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

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