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Cisco Nexus 7000 Series FPGA/EPLD Upgrade Release Notes, Release 4.2

Part Number: OL-20257-04 A0
Release Date: July 27, 2010

Table 1 shows the online history change for this document.

Table 1 Online History Change

Part Number	Revision	Date	Description
OL-20257-01	A0	8/10/2009	Created for Cisco NX-OS Release 4.2(1).
	B0	9/23/2009	Updated Table 2 and notes for Cisco NX-OS Release 4.2(2).
OL-20257-02	A0	12/21/2009	Updated release notes for Cisco NX-OS Release 4.2(3).
OL-20257-03	A0	02/26/2010	Updated release notes for Cisco NX-OS Release 4.2(4).
	B0	03/01/2010	Corrected release notes to reflect the new EPLD image for Cisco NX-OS Release 4.2(4). Added Resolved Caveats in Release 4.2(4).
OL-20257-04	A0	07/27/2010	Updated release notes for Cisco NX-OS Release 4.2(6)

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Introduction

The Cisco Nexus 7000 Series switches contain several programmable logical devices (PLDs) that provide hardware functionalities in all modules. Cisco provides electronic programmable logical device (EPLD) image upgrades to enhance hardware functionality or to resolve known issues. PLDs include electronic programmable logical devices (EPLDs), field programmable gate arrays (FPGAs), and complex programmable logic devices (CPLDs), but they do not include ASICs. In this document, the term EPLD is used for FPGA and CPLDs.

The great advantage of having EPLDs for some module functions is that when you need to upgrade those functions, you just upgrade their software images instead of replacing their hardware.



Note

EPLD image upgrades for an I/O module disrupt the traffic going through the module because the module must power down briefly during the upgrade. The system performs EPLD upgrades on one module at a time, so at any one time the upgrade disrupts only the traffic going through one module.

Cisco Systems does not provide upgrade EPLD images very frequently, and you do not have to upgrade your EPLD images unless they fix the functions for the hardware that you are using in your Cisco Nexus 7000 Series switch. The EPLD image upgrades are independent from the Cisco NX-OS In Service Software Upgrade (ISSU) process, which upgrades the system and kickstart images with no impact on the network environment.

When Cisco makes an EPLD image upgrade available, these release notes announce their availability, and you can download them from <http://www.cisco.com>.

Deciding When to Upgrade EPLDs

It is not always necessary to upgrade EPLD images; however, when new EPLD images are available, the upgrades are always recommended if your network environment allows for a maintenance period in which some level of traffic disruption is acceptable. If such a disruption is not acceptable at this time, then it is best to postpone the upgrade until a better time.

[Table 2](#) provides high-level guidelines to help network administrators determine whether an EPLD upgrade is necessary. The CDETS listed in this table can be found in the following earlier versions of FPGA/EPLD release notes:

- *Cisco Nexus 7000 Series FPGA/EPLD Upgrade Release Notes, Release 4.0*

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- *Cisco Nexus 7000 Series FPGA/EPLD Upgrade Release Notes, Release 4.1*

Table 2 **Conditions For Upgrading EPLD Images**

Condition	Modules Recommended for Upgrades ¹
Upgrading the Cisco NX-OS operating system from Release 4.0 to Release 4.1(2) or later	Supervisor modules (N7K-SUP1) <ul style="list-style-type: none"> • Cisco Nexus 7010—Required for CSCsr03766 and to fix a kernel booting failure. • Cisco Nexus 7018—Required for CSCsq28232, CSCsr03766, CSCsu55410, and to fix a kernel booting failure. 32-port 10-Gbps Ethernet I/O modules (N7K-M132XP-12) <ul style="list-style-type: none"> • Cisco Nexus 7010—Required for CSCsu50821. • Cisco Nexus 7018—Required for CSCsq28232 and CSCsu50821. 48-port 10/100/1000 Ethernet I/O modules (N7K-M148GT-11) <ul style="list-style-type: none"> • Cisco Nexus 7010—Required for CSCsq97271, CSCsr42519, and CSCsr44846. • Cisco Nexus 7018—Required for CSCsq28232, CSCsq97271, CSCsr42519, and CSCsr44846.
Moving 32-port 10-Gbps Ethernet I/O modules from a Cisco Nexus 7010 switch to a Cisco Nexus 7018 switch	32-port 10-Gbps Ethernet I/O modules (N7K-M132XP-12)
Moving 48-port 10/100/1000 Ethernet I/O modules from a Cisco Nexus 7010 switch to a Cisco Nexus 7018 switch	48-port 10/100/1000 Ethernet I/O modules (N7K-M148GT-11)
Moving the supervisor (N7K-SUP1) modules from a Cisco Nexus 7010 switch to a Cisco Nexus 7018 switch.	Supervisor (N7K-SUP1) modules
Upgrading the Cisco NX-OS operating system from Release 4.1(2) to Release 4.1(3) or later on a switch that shipped with Release 4.1(2).	32-port 10-Gbps Ethernet I/O modules (N7K-M132XP-12) <ul style="list-style-type: none"> • Cisco Nexus 7010 and 7018—Required for CSCsv92355. Fabric modules for Cisco Nexus 7018 (N7K-C7018-FAB1) <ul style="list-style-type: none"> • Required for CSCsv92355 and CSCsx22079.

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Table 2 **Conditions For Upgrading EPLD Images (continued)**

Condition	Modules Recommended for Upgrades ¹
Upgrading the Cisco NX-OS operating system from Release 4.1(2) to Release 4.1(3) or later on a switch that did not ship with Release 4.1(2) and a full EPLD upgrade to Release 4.1(2) was not performed.	Supervisor modules (N7K-SUP1) <ul style="list-style-type: none"> • Cisco Nexus 7010—Required for CSCsr03766 and to fix a kernel booting failure. • Cisco Nexus 7018—Required for CSCsq28232, CSCsr03766, CSCsu55410, and to fix a kernel booting problem. 48-port 10/100/1000 Ethernet I/O modules (N7K-M148GT-11) <ul style="list-style-type: none"> • Cisco Nexus 7010—Required for CSCsq97271, CSCsr42519, and CSCsr44846. • Cisco Nexus 7018—Required for CSCsq28232, CSCsq97271, CSCsr42519, and CSCsr44846.
Using vPC on a system that you are upgrading NX-OS from Release 4.0 to Release 4.1(2) or later.	32-port 10-Gbps Ethernet I/O modules (N7K-M132XP-12) <ul style="list-style-type: none"> • Cisco Nexus 7010 and 7018—Required upgrade for using vPC.
Using Cisco Trusted Security on a system that you are upgrading Cisco NX-OS from Release 4.0 to Release 4.1(2) or later.	32-port 10-Gbps Ethernet I/O modules (N7K-M132XP-12) <ul style="list-style-type: none"> • Cisco Nexus 7010 and 7018—Required upgrade for using Cisco Trusted Security.

1. It is recommended (not mandatory) that you upgrade the EPLD images for the supervisor, I/O, and fabric modules.

Switch Requirements

This section includes the following topics:

- [Hardware Requirements, page 4](#)
- [Supported Switch Operating Systems, page 5](#)

Hardware Requirements

The Cisco Nexus 7000 Series switch must include the following hardware:

- One or two supervisor modules, each with at least 120 MB of available bootflash or slot0 memory
- One or more I/O modules
- One or more fabric modules
- Two fabric fan tray modules (Cisco Nexus 7010)
- Two system fan tray modules (Cisco Nexus 7010)
- Two fan tray modules (Cisco Nexus 7018)

You must be able to access the switch through a console, SSH, or Telnet.

You must have administrator privileges to work with the Cisco Nexus 7000 Series switch.

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Supported Switch Operating Systems

The Cisco Nexus 7000 Series switch must be running the Cisco NX-OS operating system, which is used to perform the EPLD upgrades.

EPLDs Available with Release 4.2

Each EPLD image that you can download from <http://www.cisco.com> is a bundle of EPLD upgrades. To see the EPLD versions for each release, see [Table 3](#).

Table 3 EPLDs Updated for Cisco NX-OS Releases

Module Type	EPLD Device	Release									
		4.0(2)	4.0(3)/ 4.0(4)	4.1(1)	4.1(2)	4.1(3)	4.2(1)	4.2(2)	4.2(3)	4.2(4)	4.2(6)
Supervisor module (N7K-SUP1)											
	Power Manager	3.6	–	–	3.7	–	–	–	–	–	–
	IO	3.23	3.25	–	3.26	–	–	–	–	–	–
	INBAND	1.7	–	–	–	–	–	–	–	–	–
	Local Buss and CPLD	2.1	–	–	3.0	–	–	–	–	–	–
	CMP CPLD	6.0	–	–	–	–	–	–	–	–	–
48-port 10/100/1000 Ethernet I/O module (N7K-M148GT-11)											
	Power Manager	5.3	–	–	5.4	–	–	–	–	–	–
	IO	2.10	–	–	2.11	–	–	–	–	–	–
	Forwarding Engine	1.6	–	–	–	–	–	–	–	–	–
48-port 1 Gbps Ethernet I/O module (N7K-M148GS-11)											
	Power Manager	N.A.	N.A.	–	4.6	–	–	–	–	–	–
	IO	N.A.	N.A.	–	1.3	–	–	–	–	–	–
	SFP	N.A.	N.A.	–	1.4	–	–	–	–	–	–
	Forwarding Engine	N.A.	N.A.	–	1.6	–	–	–	–	–	–
32-port 10 Gbps Ethernet I/O module (N7K-M132XP-12)											
	Power Manager	4.4	–	–	4.6	–	–	–	–	–	–
	IO	1.10	–	–	1.13	–	–	–	–	1.14	1.15
	LinkSec Engine	1.7	1.8	–	–	–	–	–	–	1.13	–
	FE Bridge	186.3	–	–	–	–	–	–	–	–	–
	Forwarding Engine	1.6	–	–	–	–	–	–	–	–	–
Fabric module (Cisco Nexus 7010) (N7K-C7010-FAB1)											
	Power Manager	2.8	–	–	2.9	–	–	–	–	–	–
Fabric module (Cisco Nexus 7018) (N7K-C7018-FAB1)											
	Power Manager	N.A.	N.A.	N.A.	1.1	–	–	–	–	1.2	–

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Table 3 EPLDs Updated for Cisco NX-OS Releases (continued)

Module Type	Release									
	4.0(2)	4.0(3)/ 4.0(4)	4.1(1)	4.1(2)	4.1(3)	4.2(1)	4.2(2)	4.2(3)	4.2(4)	4.2(6)
Fan (Cisco Nexus 7010) (N7K-C7010-FAN-S)										
Fan Controller	0.7	-	-	-	-	-	-	-	-	-
Fan (Cisco Nexus 7018) (N7K-C7018-FAN)										
Fan Controller	N.A.	N.A.	N.A.	0.2	- ¹	-	-	-	-	-

1. Release 4.1(3) does not support EPLD upgrades for the Cisco Nexus 7018 fan controller.



Note

To list the EPLDs running on your switch, use the **show version *module_number* epld** command. If any of the versions that you list are older than the newest version listed in [Table 3](#), it is recommended that you update the EPLDs.

Determining Whether to Upgrade EPLD Images

You can upgrade EPLD images for all online modules on your switch (except for the active supervisor module) or for individual online modules.

This section includes the following topics:

- [Determining Whether to Upgrade EPLDs for All Modules, page 6](#)
- [Determining Whether to Upgrade EPLDs for an I/O or Supervisor Module, page 7](#)
- [Determining Whether to Upgrade EPLDs for a Fabric Module, page 8](#)
- [Determining Whether to Upgrade EPLDs for a Fan Tray Module, page 8](#)

Determining Whether to Upgrade EPLDs for All Modules

To determine whether you need to update the EPLDs for any of the online modules on your switch, use the **show install all impact epld *url*** command as shown in [Example 1](#). This command displays a report that indicates whether the upgrade is disruptive for the module, whether each module can be upgraded, and whether an upgrade is available for each EPLD on each module.

Example 1 Determining Upgradability of All Online Modules

```
switch# show install all impact epld bootflash:n7000-s1-epld.4.2.6.img
```

```
Compatibility check:
Module  Type  Upgradable  Impact  Reason
-----  -
1      LC          Yes        disruptive  Module Upgradable
2      LC          Yes        disruptive  Module Upgradable
3      LC          Yes        disruptive  Module Upgradable
6      SUP        Yes        disruptive  Module Upgradable
1      Xbar       Yes        disruptive  Module Upgradable
2      Xbar       Yes        disruptive  Module Upgradable
3      Xbar       Yes        disruptive  Module Upgradable
```

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```

1 FAN          Yes    disruptive  Module Upgradable
2 FAN          Yes    disruptive  Module Upgradable
3 FAN          Yes    disruptive  Module Upgradable
4 FAN          Yes    disruptive  Module Upgradable

```

Retrieving EPLD versions... Please wait.

Images will be upgraded according to following table:

Module	Type	EPLD	Running-Version	New-Version	Upg-Required
1	LC	Power Manager	5.3	5.4	Yes
1	LC	IO	2.11	2.11	No
1	LC	Forwarding Engine	1.6	1.6	No
2	LC	Power Manager	4.6	4.6	No
2	LC	IO	1.2	1.3	Yes
2	LC	Forwarding Engine	1.6	1.6	No
2	LC	SFP	1.4	1.4	No
3	LC	Power Manager	4.6	4.6	No
3	LC	IO	1.14	1.15	Yes
3	LC	Forwarding Engine	1.6	1.6	No
3	LC	FE Bridge(1)	186.3	186.3	No
3	LC	FE Bridge(2)	186.3	186.3	No
3	LC	Linksec Engine(1)	1.8	1.13	No
3	LC	Linksec Engine(2)	1.8	1.13	No
3	LC	Linksec Engine(3)	1.8	1.13	No
3	LC	Linksec Engine(4)	1.8	1.13	No
3	LC	Linksec Engine(5)	1.8	1.13	No
3	LC	Linksec Engine(6)	1.8	1.13	No
3	LC	Linksec Engine(7)	1.8	1.13	No
3	LC	Linksec Engine(8)	1.8	1.13	No
6	SUP	Power Manager	3.6	3.7	Yes
6	SUP	IO	3.26	3.26	No
6	SUP	Inband	1.7	1.7	No
6	SUP	Local Bus CPLD	3.0	3.0	No
6	SUP	CMP CPLD	6.0	6.0	No
1	Xbar	Power Manager	2.9	2.9	No
2	Xbar	Power Manager	2.9	2.9	No
3	Xbar	Power Manager	2.9	2.9	No
1	FAN	Fan Controller (1)	0.7	0.7	No
1	FAN	Fan Controller (2)	0.7	0.7	No
2	FAN	Fan Controller (1)	0.7	0.7	No
2	FAN	Fan Controller (2)	0.7	0.7	No
3	FAN	Fan Controller (1)	0.7	0.7	No
3	FAN	Fan Controller (2)	0.7	0.7	No
4	FAN	Fan Controller (1)	0.7	0.7	No
4	FAN	Fan Controller (2)	0.7	0.7	No

Determining Whether to Upgrade EPLDs for an I/O or Supervisor Module

To determine whether you need to update the EPLDs for an online I/O or supervisor module, use the **show install module number impact epld url** command as shown in [Example 2](#). This command displays a report that indicates which EPLDs need to be upgraded for the module that you specified.

Example 2 Determining Upgradability of an I/O or Supervisor Module

```
switch# show install module 5 impact epld bootflash:n7000-s1-epld.4.2.6.img
```

Retrieving EPLD versions... Please wait.

Images will be upgraded according to following table:

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Module	Type	EPLD	Running-Version	New-Version	Upg-Required
5	SUP	Power Manager	3.7	3.7	No
5	SUP	IO	3.26	3.26	No
5	SUP	Inband	1.7	1.7	No
5	SUP	Local Bus CPLD	3.0	3.0	No
5	SUP	CMP CPLD	6.0	6.0	No

Determining Whether to Upgrade EPLDs for a Fabric Module

To determine whether you need to update the EPLDs for an online fabric module, use the **show install xbar-module number impact epld url** command as shown in [Example 3](#). This command displays a report that indicates which EPLDs need to be upgraded for the fabric module that you specified.

Example 3 Determining Upgradability of a Fabric Module

```
switch# show install xbar-module 1 impact epld bootflash:n7000-s1-epld.4.2.6.img

Retrieving EPLD versions... Please wait.

Images will be upgraded according to following table:
Module  Type      EPLD              Running-Version  New-Version  Upg-Required
-----  -
      1  Xbar  Power Manager           2.9            2.9            No
```

Determining Whether to Upgrade EPLDs for a Fan Tray Module

To determine whether you need to update the EPLDs for an online fan tray module, use the **show install fan-module number impact epld url** command as shown in [Example 4](#). This command displays a report that indicates which EPLDs need to be upgraded for the fan module that you specified.

Example 4 Determining Upgradability of a Fan Module

```
switch# show install fan-module 1 impact epld bootflash:n7000-s1-epld.4.2.6.img

Retrieving EPLD versions... Please wait.

Images will be upgraded according to following table:
Module  Type      EPLD              Running-Version  New-Version  Upg-Required
-----  -
      1  FAN  Fan Controller (1)  0.7            0.7            No
      1  FAN  Fan Controller (2)  0.7            0.7            No
```

EPLD Images Needed for vPCs

The virtual port channel (vPC) feature is available beginning with Cisco NX-OS Release 4.1(3). When you enable vPC on the chassis, you must have EPLD Release 186.3 on the 32-port 10 Gbps Ethernet IO modules (N7K-M132XP-12).



Note

The EPLD upgrade operation is a disruptive operation. You should execute this operation only at a programmed maintenance time. The system/kickstart ISSU upgrade is a nondisruptive upgrade.

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Most of the N7K-M132XP-12 modules in the chassis already meet this minimum EPLD requirement, but if you are working with a N7K-M132XP-12 module that was shipped before June 2008, you might need to upgrade the EPLD version.

To determine the EPLD version for all N7K-M132XP-12 modules, enter the **show version module *module_id* epld**. If the line FE Bridge(x) version displays a version earlier than 186.3 (for example, 186.2), you should schedule an EPLD upgrade to a version that is compatible with the target NX-OS release. For example, if you want to run Cisco NX-OS Release 4.1(3), you should choose Release 4.1(3) EPLDs.

The following example shows Release 186.3 on the FE Bridge line, which is the correct EPLD version:

```
switch(config)# show ver mod 7 epld
```

EPLD Device	Version
Power Manager	4.6
IO	1.15
Forwarding Engine	1.6
FE Bridge(1)	186.3 << OK!
FE Bridge(2)	186.3 << OK!
Linksec Engine(1)	1.13
Linksec Engine(2)	1.13
Linksec Engine(3)	1.13
Linksec Engine(4)	1.13
Linksec Engine(5)	1.13
Linksec Engine(6)	1.13
Linksec Engine(7)	1.13
Linksec Engine(8)	1.13

Installation Guidelines

You can upgrade (or downgrade) EPLDs using CLI commands on the Cisco Nexus 7000 Series switch. Follow these guidelines when you upgrade or downgrade EPLDs:

- Before you upgrade any EPLD images, be sure that you have updated the Cisco NX-OS operating system to the level required for the image and you have downloaded the EPLD images for the current version of the Cisco NX-OS operating system.
- You can execute an upgrade from the active supervisor module only. All the modules, including the active supervisor module, can be updated individually.
- You can individually update each module whether it is online or offline as follows:
 - If you upgrade EPLD images on an online module, only the EPLD images with version numbers that differ from the new EPLD images are upgraded.
 - If you upgrade EPLD images on an offline module, all of the EPLD images are upgraded.
- On a switch that has two supervisor modules, upgrade the EPLDs for the standby supervisor and then switch the active supervisor to standby mode to upgrade its EPLDs (the supervisor switchover is not disruptive to traffic on Cisco Nexus 7000 switches). On a switch that has only one supervisor module, you can upgrade the active supervisor, but this will disrupt its operations during the upgrade.
- If you interrupt an upgrade, you must upgrade the module that is being upgraded again.
- The upgrade process disrupts traffic on the targeted module.
- Do not insert or remove any modules while an EPLD upgrade is in progress.

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Downloading the EPLD Images

Before you can prepare the EPLD images for installation, you must download them to the FTP or management server.

To download the EPLD images, follow these steps:

-
- Step 1** From a browser, go to the following URL:
<http://www.cisco.com>
 The browser will display the Cisco web site.
- Step 2** From the Products & Services tab, choose **Switches**.
 The Switches page opens.
- Step 3** In the Data Center area, click the arrow next to View Products.
 The page lists the Data Center products.
- Step 4** Click **Nexus 7000**.
 The Cisco Nexus 7000 Series Switches page opens.
- Step 5** In the Support area, click **Download Software**.
 The Downloads page opens and lists the Data Center switches.
- Step 6** Choose a Cisco Nexus 7000 Series switch from the list under Data Center Switches > Cisco Nexus 7000 Series Switches.
 The Log In page opens.
- Step 7** If you are an existing user, enter your username in the **User Name** field and your password in the **Password** field. If you are a new user, click **Register Now** and provide the required information before returning to the Log In page and logging in with your new username.
 The Downloads page lists the software types that can be downloaded for the switch you specified.
- Step 8** Click **NX-OS EPLD Updates**.
 The Downloads page lists software releases that you can download.
- Step 9** Choose **Latest Releases > 4.2(4)**.
 The Downloads page displays image information, including a link to the downloadable Tar file, to the right of the releases.
- Step 10** Click the link for the Tar file.
 The Downloads page displays a Download button and lists information for the Tar file.
- Step 11** Click **Download**.
 The Supporting Documents page opens to display the rules for downloading the software.
- Step 12** Read the rules and click **Agree**.
 A File Download dialog box opens to ask if you want to open or save the images file.
- Step 13** Click **Save**.
 The Save As dialog box appears.
- Step 14** Indicate where to save the Tar file and click **Save**.

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The Tar file saves to the location that you specified.

You are ready to prepare the EPLD images for Installation (see the “[Preparing the EPLD Images for Installation](#)” section on page 11).

Preparing the EPLD Images for Installation

Before you can update the EPLD images for each of your switch modules, you must determine the Cisco NX-OS version that your switch is using, make sure there is space for the new EPLD images, and download the images.

To prepare the EPLD images for installation, follow these steps:

- Step 1** Log into the switch through the console port, an SSH session, or a Telnet session.
- Step 2** Verify that the switch is using the expected version of the Cisco NX-OS operating system. The kickstart and system lines indicate the Cisco NX-OS version. This step determines the versions of EPLD images that you must download.

```
switch# show version
Cisco Nexus Operating System (NX-OS) Software
TAC support: http://www.cisco.com/tac
Copyright (c) 2002-2009, 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
  BIOS:      version 3.19.0
  loader:    version N/A
  kickstart: version 4.2(4) [gdb]
  system:    version 4.2(4) [gdb]
...
```

- Step 3** Verify that you have 120 MB of free space on the active or standby supervisor memory devices for the EPLD images that you will be downloading by using the **dir bootflash:** or **dir slot0:** commands. By default, these commands display the used and free memory for the active supervisor. If your switch has an additional supervisor (a standby supervisor), use the **show module** command to find the module number for the other supervisor, use the **attach module** command to attach to the module number, and then use the **dir bootflash:** or **dir slot0:** command to determine the amount of used and free memory. See [Example 5](#) to determine the amount of available bootflash memory, and see [Example 6](#) to determine the amount of available slot0 memory.

Example 5 Determining the Amount of Available Bootflash Memory

```
switch# dir bootflash:
 4096      Mar 18 17:31:11 2008 bak/
2429706    May 23 10:57:10 2008 dplug
89154513   May 27 22:04:37 2008 n7-dk9-nk
89151767   May 23 16:06:01 2008 n7-dk9-nk-old
```

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```

2429706    May 23 10:53:50 2008 n7000-s1-debug-sh.4.0.2.bin1
22171136    May 23 10:55:40 2008 n7000-s1-kickstart.4.0.2.bin1
    4096      May 23 13:03:37 2008 newer-fs/
    4096      May 28 15:13:30 2008 nk/
    127      Mar 20 16:37:59 2008 setip.sh
    
```

```

Usage for bootflash://sup-local
572186624 bytes used
306606080 bytes free
878792704 bytes total
    
```

```

switch# show module
Mod  Ports  Module-Type                Model                Status
---  -
2    32     10 Gbps Ethernet Module   N7K-M132XP-12       ok
5    0      Supervisor module-1X      N7K-SUP1             ha-standby
6    0      Supervisor module-1X      N7K-SUP1             active *
...
    
```

```

switch(standby)# dir bootflash:
...
    4096      Mar 18 17:31:11 2008 bak/
    2429706    May 23 10:57:10 2008 dplug
    89154513    May 27 22:04:37 2008 n7-dk9-nk
    89151767    May 23 16:06:01 2008 n7-dk9-nk-old
    2429706    May 23 10:53:50 2008 n7000-s1-debug-sh.4.2.1.bin1
    22171136    May 23 10:55:40 2008 n7000-s1-kickstart.4.2.1.bin1
    4096      May 23 13:03:37 2008 newer-fs/
    4096      May 28 15:13:30 2008 nk/
    127      Mar 20 16:37:59 2008 setip.sh
    
```

```

Usage for bootflash://sup-local
572186624 bytes used
306606080 bytes free
878792704 bytes total
    
```

Example 6 Determining the Amount of Available Slot0 Memory

```

switch# dir slot0:
...
    
```

```

Usage for slot:
642273280 bytes used
261824512 bytes free
904097792 bytes total
    
```

```

switch# show module
Mod  Ports  Module-Type                Model                Status
---  -
2    32     10 Gbps Ethernet Module   N7K-M132XP-12       ok
5    0      Supervisor module-1X      N7K-SUP1             ha-standby
6    0      Supervisor module-1X      N7K-SUP1             active *
...
    
```

```

switch# dir slot0://sup-standby/
...
    
```

```

Usage for slot:
642273280 bytes used
261824512 bytes free
904097792 bytes total
    
```

Step 4 If there is not at least 120 MB of memory free for the EPLD files, delete some unneeded files, such as earlier images, so there is enough free memory.

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```
switch# delete bootflash:n7000-s1-kickstart.4.2.6.bin
```

- Step 5** Copy the EPLD image file from the FTP or management server to the bootflash or slot0 memory in the active supervisor module. The following example shows how to copy from the FTP server to the bootflash memory.

```
switch# copy ftp://10.1.7.2/n7000-s1-epld.4.2.6.img bootflash:n7000-s1-epld.4.2.6.img
```

- Step 6** Copy the EPLD image to the standby supervisor.

```
switch# copy bootflash:n7000-s1-epld.4.2.6.img
bootflash://sup-standby/n7000-s1-epld.4.2.6.img
```

You are ready to upgrade the EPLD images (see the “[Upgrading EPLD Images](#)” section on page 13).

Upgrading EPLD Images

You can update the EPLD images for all of the installed modules or a specific installed module. When you request an upgrade, the Cisco NX-OS software tries to list the current and new versions for each EPLD with the following results:

- If a module is installed and online, the software lists the installed and new versions for each EPLD. Where there is a difference in versions, the software indicates an upgrade or downgrade to occur when you confirm the upgrade.
- If a module is installed and offline, the software cannot list its current EPLD versions so all EPLDs will be updated when you confirm the upgrade.
- If a module is not installed, the software displays an error message and does not upgrade the EPLDs.

The following sections explain how to upgrade the EPLD images for I/O and standby modules, the active supervisor module on switches with single-supervisor modules, fabric modules, and fan tray modules.

- [Upgrading the EPLD Images for All Installed Modules, page 13](#)
- [Upgrading the EPLD Images for an I/O or Standby Supervisor Module, page 15](#)
- [Upgrading EPLDs for the Active Supervisor Module, page 16](#)
- [Upgrading EPLDs for a Fabric Module, page 18](#)
- [Upgrading EPLDs for a Fan Tray Module, page 19](#)

Upgrading the EPLD Images for All Installed Modules

You can upgrade the EPLD images for all installed modules while the switch is operational. This type of upgrade includes updates of EPLD images for the standby supervisor module, all I/O modules, all fabric modules, and all fan modules, but this upgrade does not update the EPLDs for the active supervisor module. To upgrade the EPLDs for the active supervisor module, see the “[Upgrading EPLDs for the Active Supervisor Module](#)” section on page 16.

To upgrade EPLDs for all installed modules (except the active supervisor module), follow these steps:

- Step 1** Enter the `install all epld url` command.

```
switch# install all epld bootflash:n7000-s1-epld.4.2.6.img
```

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Compatibility check:

Module	Type	Upgradable	Impact	Reason
1	LC	Yes	disruptive	Module Upgradable
2	LC	Yes	disruptive	Module Upgradable
3	LC	Yes	disruptive	Module Upgradable
6	SUP	Yes	disruptive	Module Upgradable
1	Xbar	Yes	disruptive	Module Upgradable
2	Xbar	Yes	disruptive	Module Upgradable
3	Xbar	Yes	disruptive	Module Upgradable
1	FAN	Yes	disruptive	Module Upgradable
2	FAN	Yes	disruptive	Module Upgradable
3	FAN	Yes	disruptive	Module Upgradable
4	FAN	Yes	disruptive	Module Upgradable

Retrieving EPLD versions... Please wait.

Images will be upgraded according to following table:

Module	Type	EPLD	Running-Version	New-Version	Upg-Required
1	LC	Power Manager	5.3	5.4	Yes
1	LC	IO	2.11	2.11	No
1	LC	Forwarding Engine	1.6	1.6	No
2	LC	Power Manager	4.6	4.6	No
2	LC	IO	1.2	1.3	Yes
2	LC	Forwarding Engine	1.6	1.6	No
2	LC	SFP	1.4	1.4	No
3	LC	Power Manager	4.6	4.6	No
3	LC	IO	1.14	1.15	Yes
3	LC	Forwarding Engine	1.6	1.6	No
3	LC	FE Bridge(1)	186.3	186.3	No
3	LC	FE Bridge(2)	186.3	186.3	No
3	LC	Linksec Engine(1)	1.8	1.13	No
3	LC	Linksec Engine(2)	1.8	1.13	No
3	LC	Linksec Engine(3)	1.8	1.13	No
3	LC	Linksec Engine(4)	1.8	1.13	No
3	LC	Linksec Engine(5)	1.8	1.13	No
3	LC	Linksec Engine(6)	1.8	1.13	No
3	LC	Linksec Engine(7)	1.8	1.13	No
3	LC	Linksec Engine(8)	1.8	1.13	No
6	SUP	Power Manager	3.6	3.7	Yes
6	SUP	IO	3.26	3.26	No
6	SUP	Inband	1.7	1.7	No
6	SUP	Local Bus CPLD	3.0	3.0	No
6	SUP	CMP CPLD	6.0	6.0	No
1	Xbar	Power Manager	2.9	2.9	No
2	Xbar	Power Manager	2.9	2.9	No
3	Xbar	Power Manager	2.9	2.9	No
1	FAN	Fan Controller (1)	0.7	0.7	No
1	FAN	Fan Controller (2)	0.7	0.7	No
2	FAN	Fan Controller (1)	0.7	0.7	No
2	FAN	Fan Controller (2)	0.7	0.7	No
3	FAN	Fan Controller (1)	0.7	0.7	No
3	FAN	Fan Controller (2)	0.7	0.7	No
4	FAN	Fan Controller (1)	0.7	0.7	No
4	FAN	Fan Controller (2)	0.7	0.7	No

The above modules require upgrade.

Do you want to continue (y/n) ? [n] y

Step 2 If one or more of the EPLDs should be upgraded, enter **y** to begin the upgrade. Otherwise, enter **n** for no upgrade.

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Upgrading the EPLD Images for an I/O or Standby Supervisor Module

You can upgrade the EPLD images for an I/O module or standby supervisor module while the switch is operational. If you need to upgrade EPLD images for a single supervisor module, see the “[Upgrading EPLDs for the Active Supervisor Module](#)” section on page 16.



Caution

Upgrading EPLD images for an online I/O module can disrupt traffic going through that module.

To upgrade EPLDs for an I/O module or the standby supervisor module, follow these steps:

- Step 1** Determine the slot number for the module that you are upgrading EPLDs by entering the **show module** command.

```
switch# show module
Mod Ports Module-Type Model Status
-----
1 48 10/100/1000 Mbps Ethernet Module N7K-N148GT-11 ok
3 32 10 Gbps Ethernet Module N7K-M132XP-12 ok
5 0 Supervisor module-1X N7K-SUP1 active
6 0 Supervisor module-1X N7K-SUP1 ha-standby
10 48 10/100/1000 Mbps Ethernet Module N7K-M148GT-11 ok

Mod Sw Hw World-Wide_name(s) (WWN)
---
1 4.0(2) 0.503 --
3 4.0(2) 0.601 --
5 4.0(2) 0.900 --
6 4.0(2) 0.802 --
10 4.0(2) 0.902 --

Mod MAC-Address(es) Serial-Num
---
1 00-19-07-6c-c0-6c to 00-19-07-6c-c0-a0 JAB11060144
3 00-1b-54-c1-33-98 to 00-1b-54-c1-33-bc JAB1152010K
5 00-1b-54-c1-16-18 to 00-1b-54-c1-16-20 JAB114902HF
6 00-19-07-c1-00-b8 to 00-1b-54-c1-00-c0 JAB114402JX
10 00-1b-54-c1-07-88 to 00-1b-54-c1-07-bc JAB114501RW

* this terminal session
switch#
```

- Step 2** Enter the **install module slot_number epld url** command.

```
switch# install module 6 epld bootflash:n7000-s1-epld.4.2.6.img

Retrieving EPLD versions... Please wait.

Images will be upgraded according to following table:
Module Type EPLD Running-Version New-Version Upg-Required
-----
6 SUP Power Manager 3.6 3.7 Yes
6 SUP IO 3.26 3.26 No
6 SUP Inband 1.7 1.7 No
6 SUP Local Bus CPLD 3.0 3.0 No
6 SUP CMP CPLD 6.0 6.0 No

Module 6 will be powered down.
Do you want to continue (y/n) ?
```

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Step 3 If one or more EPLDs require an upgrade, enter **Y** for yes.

Do you want to continue (y/n) ? **Y**

Step 4 For Release 4.0(2) or earlier releases, if you updated the power management EPLD image, you must reset the power for the module so that EPLD can take effect (this is not required for Release 4.0(3) or later releases). You can reset the power in one of the following two ways:

- To reset the power for a module, physically remove the module and reinstall it.



Note A module reload or just pressing the ejector buttons on the module is not sufficient for this reset requirement.

- To reset an entire switch, power cycle the switch.

To confirm the EPLD upgrade, see the [“Displaying EPLD Versions for an I/O or Supervisor Module” section on page 20](#).



Caution

Resetting the power disrupts any data traffic going through the affected modules. If you power cycle the entire switch, all data traffic going through the switch at the time of the power cycling is disrupted. This is not necessary for Release 4.0(3) or later releases.



Note

As of Release 4.0(3) or later releases, the switch automatically loads the new power management EPLD after an upgrade, so it is no longer necessary to reset the power for the module or switch.

Upgrading EPLDs for the Active Supervisor Module

When you upgrade EPLDs on a switch with only one supervisor module, data traffic on the switch will be affected when you reload the device after the upgrade. If you are upgrading EPLDs for a switch with two supervisor modules, you can upgrade the standby supervisor while the switch is operational as described in the [“Upgrading the EPLD Images for an I/O or Standby Supervisor Module” section on page 15](#), and then switch the active supervisor into standby mode and update that module.

To upgrade EPLDs for the active supervisor module, follow these steps:

Step 1 Enter the **show module** command to determine the slot number for the active supervisor module. On a Cisco Nexus 7010, the active supervisor module is in either slot 5 or slot 6. On a Cisco Nexus 7018, the active supervisor module is in either slot 9 or slot 10.

```
switch# show module
Mod Ports Module-Type Model Status
-----
1 48 10/100/1000 Mbps Ethernet Module N7K-N148GT-11 ok
3 32 10 Gbps Ethernet Module N7K-M132XP-12 ok
5 0 Supervisor module-1X N7K-SUP1 active
10 48 10/100/1000 Mbps Ethernet Module N7K-M148GT-11 ok

Mod Sw Hw World-Wide_name(s) (WWN)
-----
```


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```

1    4.0(2)          0.503  --
3    4.0(2)          0.601  --
5    4.0(2)          0.900  --
10   4.0(2)          0.902  --

```

```

Mod  MAC-Address(es)                               Serial-Num
----  -
1    00-19-07-6c-c0-6c to 00-19-07-6c-c0-a0  JAB11060144
3    00-1b-54-c1-33-98 to 00-1b-54-c1-33-bc  JAB1152010K
5    00-1b-54-c1-16-18 to 00-1b-54-c1-16-20  JAB114902HF
10   00-1b-54-c1-07-88 to 00-1b-54-c1-07-bc  JAB114501RW

```

* this terminal session

Step 2 Enter the `install module slot_number epld url` command.

```
switch# install module 5 epld bootflash:n7000-s1-epld.4.2.6.img
```

Retrieving EPLD versions... Please wait.

Images will be upgraded according to following table:

Module	Type	EPLD	Running-Version	New-Version	Upg-Required
5	SUP	Power Manager	3.6	3.7	Yes
5	SUP	IO	3.23	3.26	No
5	SUP	Inband	1.7	1.7	No
5	SUP	Local Bus CPLD	2.1	3.0	No
5	SUP	CMP CPLD	6.0	6.0	No

Active Supervisor is being upgraded.
The switch will reload after the upgrade process.
Do you want to continue (y/n) ?

Step 3 If there are EPLDs to be upgraded, enter **Y** to confirm the upgrade. Otherwise, enter **N**.

Do you want to continue (y/n) ? **Y**

The Cisco Nexus 7000 Series switch will reload as soon as the upgrade occurs.

Step 4 For Release 4.0(2) or earlier releases, if you updated the power management EPLD image, you must reset the power for the module so that EPLD can take effect (this is not required for Release 4.0(3) or later releases). You can reset the power in one of the following two ways:

- To reset the power for a module, physically remove the module and reinstall it.



Note A module reload or just pressing the ejector buttons on the module is not sufficient for this reset requirement.

- To reset an entire switch, power cycle the switch.

To confirm the EPLD upgrade, see the [“Displaying EPLD Versions for an I/O or Supervisor Module”](#) section on page 20.



Caution

Resetting the power disrupts any data traffic going through the affected modules. If you power cycle the entire switch, all data traffic going through the switch at the time of the power cycling is disrupted. This is not necessary for Release 4.0(3) or later releases.

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**Note**

As of Release 4.0(3), the switch automatically loads the new power management EPLD after an upgrade, so it is no longer necessary to reset the power for the module or switch.

Upgrading EPLDs for a Fabric Module

You can upgrade EPLDs for a fabric (Xbar) module while the switch is operational as long as at least one other fabric module is operational.

To upgrade EPLDs for a fabric module, follow these steps:

- Step 1** Enter the **show module xbar** command to determine the slot number for the fabric module that you are upgrading.

```
switch# show module xbar
Xbar  Ports  Module-Type                               Model                               Status
-----
1      0      Xbar                                         N7K-C7010-FAB-1                    ok
2      0      Xbar                                         N7K-C7010-FAB-1                    ok
3      0      Xbar                                         N7K-C7010-FAB-1                    ok

Xbar Sw          Hw      World-Wide-Name(s) (WWN)
-----
1      NA      0.404  --
2      NA      0.405  --
4      NA      0.405  --

Xbar MAC-Address(es)                               Serial-Num
-----
1      NA      JAB114700WL
2      NA      JAB115000LU
4      NA      JAB115000LJ
```

* this terminal session

- Step 2** Enter the **install xbar-module slot_number epld url** command.

```
switch# install xbar-module 1 epld bootflash:n7000-s1-epld.4.2.6.img

Retrieving EPLD versions... Please wait.

Images will be upgraded according to following table:
Module  Type          EPLD          Running-Version  New-Version  Upg-Required
-----
1      Xbar  Power Manager          2.8            2.9            Yes
```

Xbar Module 1 will be powered down.
Do you want to continue (y/n) ? [n]

- Step 3** If one or more EPLDs require an upgrade, enter **Y** to upgrade. Otherwise, enter **N**.

Do you want to continue (y/n) ? [n] **y**

To confirm the EPLD upgrade, see the [“Displaying EPLD Versions for a Fabric Module”](#) section on page 20.

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Upgrading EPLDs for a Fan Tray Module

You can upgrade EPLDs for a fan tray module while the switch is operational.

To upgrade EPLDs for a fan tray module, follow these steps:

Step 1 Display fan tray information, such as module numbers and fan tray types.

```
switch# show environment fan

Fan:
-----
Fan          Model          Hw          Status
-----
Fan1(sys_fan1)          0.0         Ok
Fan2(sys_fan2)          0.0         Ok
Fan3(fab_fan1)          0.0         Ok
Fan4(fab_fan2)          0.0         Ok
Fan_in_PS1    --             --          Ok
Fan_in_PS2    --             --          Ok
Fan_in_PS3    --             --          Ok
Fan Air Filter : Absent
switch#
```

Step 2 Enter the `install fan-module slot_number epld url` command.

```
switch# install fan-module 1 epld bootflash:n7000-s1-epld.4.2.6.img

Retrieving EPLD versions... Please wait.

Images will be upgraded according to following table:
Module  Type          EPLD          Running-Version  New-Version  Upg-Required
-----  ---  -----
      1   FAN  Fan Controller (1)          0.6          0.7          Yes
      1   FAN  Fan Controller (2)          0.6          0.7          Yes

Programming Fan Module 1
Do you want to continue (y/n) ? [n]
```

Step 3 If one or more EPLDs need to be upgraded, enter **Y** to confirm the upgrade. Otherwise, enter **N**.

```
Do you want to continue (y/n) ? [n] Y
```

To confirm the EPLD upgrade, see the [“Displaying EPLD Versions for a Fan Tray Module”](#) section on page 20.

Displaying the EPLD Versions

The following sections describe how to display the EPLD versions on each module in your switch and the available EPLD versions:

- [Displaying EPLD Versions for an I/O or Supervisor Module, page 20](#)
- [Displaying EPLD Versions for a Fabric Module, page 20](#)
- [Displaying EPLD Versions for a Fan Tray Module, page 20](#)
- [Displaying the Available EPLD Versions, page 21](#)

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Displaying EPLD Versions for an I/O or Supervisor Module

To display all of the current EPLD versions on a specific I/O or supervisor module, use the **show version module slot_number epld** command as shown in [Example 7](#).

Example 7 *Displaying the Current EPLD Versions for a Module*

```
switch# show version module 2 epld
```

EPLD Device	Version
Power Manager	4.6
IO	1.15
Forwarding Engine	1.6
FE Bridge(1)	186.3
FE Bridge(2)	186.3
Linksec Engine(1)	1.13
Linksec Engine(2)	1.13
Linksec Engine(3)	1.13
Linksec Engine(4)	1.13
Linksec Engine(5)	1.13
Linksec Engine(6)	1.13
Linksec Engine(7)	1.13
Linksec Engine(8)	1.13

Displaying EPLD Versions for a Fabric Module

To view all current EPLD versions on a fabric module, use the **show version xbar slot_number epld** command as shown in [Example 8](#).

Example 8 *Displaying the Current EPLD Versions for a Fabric Module*

```
switch# show version xbar 1 epld
```

EPLD Device	Version
Power Manager	2.9

Displaying EPLD Versions for a Fan Tray Module

To view all current EPLD versions on a specific fan tray, use the **show version fan slot_number epld** command as shown in [Example 9](#).

Example 9 *Displaying Current EPLD Versions for Fan Tray 1*

```
switch# show version fan 1 epld
```

EPLD Device	Version
Fan Controller(BUS A)	0.7
Fan Controller(BUS B)	0.7

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Displaying the Available EPLD Versions

To view the available EPLD versions, use the `show version epld url` command as shown in [Example 10](#).

Example 10 Displaying the Available EPLD Versions

```
switch# show version epld bootflash:n7000-s1-epld.4.2.6.img

...
Module Type                               EPLD Device           Version
-----
Supervisor-1X                             Power Manager         3.7
Supervisor-1X                             IO                   3.26
Supervisor-1X                             Inband               1.7
Supervisor-1X                             Local Bus CPLD       3.0
Supervisor-1X                             CMP CPLD             6.0

10/100/1000 Mbps Eth Module               Power Manager         5.4
10/100/1000 Mbps Eth Module               IO                   2.11
10/100/1000 Mbps Eth Module               Forwarding Engine    1.6

10 Gbps Ethernet Module                   Power Manager         4.6
10 Gbps Ethernet Module                   IO                   1.15
10 Gbps Ethernet Module                   Forwarding Engine    1.6
10 Gbps Ethernet Module                   FE Bridge            186.3
10 Gbps Ethernet Module                   Linksec Engine       1.13

1000 Mbps Optical Ethernet Module         Power Manager         4.6
1000 Mbps Optical Ethernet Module         IO                   1.3
1000 Mbps Optical Ethernet Module         Forwarding Engine    1.6
1000 Mbps Optical Ethernet Module         SFP                  1.4

Fabric Module                             Power Manager         2.9

Fabric Module 2                           Power Manager         1.2

Fan(Cisco Nexus 7010)                     Fan Controller        0.7
Fan(Cisco Nexus 7010)                     Fan Controller        0.7

Fan(Cisco Nexus 7018)                     Fan Controller        0.2
Fan(Cisco Nexus 7018)                     Fan Controller        0.2
```

Displaying the Status of EPLD Upgrades

To display the status of EPLD upgrades on the switch, use the `show install epld status` command.

Example 11 Displaying EPLD Upgrades

```
switch# show install epld status

...
Status: EPLD Upgrade was Successful

EPLD                               Curr Ver   Old Ver
-----
Power Manager                       5.4       5.0
IO                                   2.11     2.8
Forwarding Engine                    1.6       1.3
```

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Default Settings

Table 4 lists the default hardware settings.

Table 4 **Default Hardware Settings**

Parameters	Default
Power mode	Power supply redundancy mode.

Caveats

This section includes the following topics:

- [Open Caveats in Release 4.2\(6\), page 22](#)
- [Resolved Caveats in Release 4.2\(6\), page 22](#)
- [Open Caveats in Release 4.2\(5\), page 22](#)
- [Resolved Caveats in Release 4.2\(5\), page 23](#)
- [Open Caveats in Release 4.2\(4\), page 23](#)
- [Resolved Caveats in Release 4.2\(4\), page 23](#)
- [Open Caveats in Release 4.2\(3\), page 23](#)
- [Resolved Caveats in Release 4.2\(3\), page 23](#)
- [Open Caveats in Release 4.2\(1\), page 23](#)
- [Resolved Caveats in Release 4.2\(1\), page 23](#)

Open Caveats in Release 4.2(6)

There are no open caveats for Release 4.2(6).

Resolved Caveats in Release 4.2(6)

The following caveats were resolved in Release 4.2(6).

- CSCtc26802

Symptom: Interrupts from the port ASIC instances 5 to 8 did not propagate to the CPU.

Condition: When one or more of the port ASIC instances 5 to 8 generate interrupts in a 32-port 10-Gbps Ethernet I/O module, the CPU does not receive the interrupts.

Workaround: None.

Resolution: The following FPGAs fix this problem:

- IOFPGA version 1.15 for the 32-port 10-Gbps Ethernet I/O module

Open Caveats in Release 4.2(5)

There are no open caveats for Release 4.2(5).

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Resolved Caveats in Release 4.2(5)

There are no resolved caveats for Release 4.2(5).

Open Caveats in Release 4.2(4)

There are no open caveats for Release 4.2(4).

Resolved Caveats in Release 4.2(4)

The following caveats are resolved in Release 4.2(4).

- CSCtb34740

Symptom: On the 32-port 10 Gbps Ethernet I/O module, N7K-M132XP-12, traffic might stop and the Cisco Trusted Security (CTS) protocol handshake might fail. This failure is specific to a N7K-M132XP-12 and does not apply to any other I/O module. It only occurs when CTS is enabled and SGACLs/SGTs are propagated.

Workaround: This issue is resolved by upgrading to FPGA/EPLD Release 4.2(4).

- CSCtc57325

Symptom: On the 32-port 10 Gbps Ethernet I/O module, N7K-M132XP-12, traffic might stop and the Cisco Trusted Security (CTS) protocol handshake might fail. This failure is specific to a N7K-M132XP-12 and does not apply to any other I/O module. It only occurs when CTS is enabled and SGACLs/SGTs are propagated.

Workaround: This issue is resolved by upgrading to FPGA/EPLD Release 4.2(4).

Open Caveats in Release 4.2(3)

There are no open caveats for Release 4.2(3).

Resolved Caveats in Release 4.2(3)

There are no resolved caveats for Release 4.2(3).

Open Caveats in Release 4.2(1)

There are no open caveats for Release 4.2(1).

Resolved Caveats in Release 4.2(1)

There are no resolved caveats for Release 4.2(1).

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Limitations

When EPLDs are upgraded or downgraded, the following guidelines and observations apply:

- You cannot upgrade the Local Bus CPLD and CMP CPLD while you are upgrading a supervisor module in the 4.0(1) release only.
- You must upgrade each installed module individually. If the module is online, Cisco NX-OS upgrades only the EPLD images that have different current and new versions. If the module is offline, all EPLDs are upgraded, even if their version numbers are the same.
- If you interrupt an upgrade, you must upgrade the module again.
- You can execute an upgrade or downgrade only from the active supervisor module. On switches with two supervisors, upgrade the standby supervisor and then switch the standby supervisor to active to place the previously active supervisor module in standby mode. Upgrade the EPLDs on the standby supervisor. On switches that have only one supervisor, you must upgrade or downgrade the EPLDs on the active supervisor, which will interfere with data traffic during the upgrade.
- Release 4.1(2) does not provide EPLD upgrades for the Cisco Nexus 7018 fan controller.

Related Documentation

Cisco Nexus 7000 Series documentation is available at the following URL:

http://www.cisco.com/en/US/products/ps9402/tsd_products_support_series_home.html

The documentation set includes the following documents:

- *Cisco Nexus 7000 Series Site Preparation Guide*
- *Cisco Nexus 7000 Series Hardware Installation and Reference Guide*
- *Cisco Nexus 7000 Series Regulatory Compliance and Safety Information*
- *Cisco Nexus 7000 Series Connectivity Management Processor Configuration Guide*

The release notes for upgrading Cisco NX-OS are available at the following URL:

http://www.cisco.com/en/US/docs/switches/datacenter/sw/4_2/nx-os/release/notes/42_nxos_release_note.html

The release notes for upgrading DCNM are available at the following URL:

http://www.cisco.com/en/US/docs/switches/datacenter/sw/4_2/dcnm/release/notes/dcnm_4_2_relnotes.html

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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