Cisco Nexus 9000 Series and Cisco Nexus 3000 Series FPGA/EPLD Upgrade Release Notes, Release 7.0(3)I4(8z)

This document lists the current and past versions of EPLD images and describes how to update them for use with the Cisco Nexus 9000 Series switches.

The following table lists the changes to this document.

Date	Description
July 05, 2017	Created the release notes for Release 7.0(3)I4(8z).

Introduction

The Cisco Nexus 9000 Series NX-OS mode switches contain several programmable logical devices (PLDs) that provide hardware functionalities in all modules. Cisco provides electronic programmable logic device (EPLD) image upgrades to enhance hardware functionality or to resolve known issues. PLDs include electronic programmable logic 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 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 a line card 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 provides the latest EPLD images with each release. Typically, these images are the same as provided in earlier releases but occasionally some of these images are updated. These EPLD image updates are not mandatory unless otherwise specified. The EPLD image upgrades are independent from the Cisco 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

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 you might consider postponing the upgrade until a better time.

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

NOTE: Do not perform an EPLD upgrade during an ISSU system/kickstart upgrade.

Switch Requirements

The Cisco Nexus 9000 Series switch must be running the Cisco NX-OS operating system and include the following hardware:

- Supervisor modules (2)—each with at least 800 MB of available bootflash memory (Cisco Nexus 9504, 9508, and 9516 switches)
- System controller modules (2) (Cisco Nexus 9504, 9508, and 9516 switches)

- Line cards (Cisco Nexus 9504, 9508, and 9516 switches)
  - Cisco Nexus 9504 switch (1-4)
  - Cisco Nexus 9508 switch (1-8)
  - Cisco Nexus 9516 switch (1-16)
- Fabric modules (Cisco Nexus 9504, 9508, and 9516 switches)
  - Fabric modules for 40-Gigabit line cards on a Cisco Nexus 9504, 9508, or 9516 switch (3-6)
  - Fabric modules for 100-Gigabit –E line cards on a Cisco Nexus 9504 or 9508 switch (4)
  - Fabric modules for 100-Gigabit –S line cards on a Cisco Nexus 9504 or 9508 switch (4)
- Fan modules
  - Cisco Nexus 93120TX switch (2)
  - Cisco Nexus 93128TX, 9396PX, and 9396TX switch (3)
  - Cisco Nexus 93108TC-EX, 93180YC-EX, 9332PQ, 9372PX, 9372PX-E, 9372TX, or 9372TX-E switch (4)
  - Cisco Nexus 9504, 9508, or 9516 switch (3)
- Power supplies
  - 650-W AC, or 930-W DC, or 1200-W HVAC/HVDC power supplies (2 for the Cisco Nexus 92160YC-X, 92304QC, 93108TC-EX, 93180YC-EX, 9332PQ, 9372PX, 9372PX-E, 9372TX, 9372TX-E, 9396PX, and 9396TX switches
  - 1200-W AC power supplies (1 or 2) or 930-W DC power supplies (1 or 2) for the Cisco Nexus 9272Q, 93120TX, 93128TX, and 9336PQ switches
  - 3000-W AC power supplies or 3000-W Universal AC/DC or 3000-W DC power supplies for Cisco Nexus 9500 switches
    - Cisco Nexus 9504 switch (up to 4)
    - Cisco Nexus 9508 switch (up to 8)
    - Cisco Nexus 9516 switch (up to 10)
- Uplink module (Cisco Nexus 93128TX, 9396PX, and 9396TX switches only)
  - M4PC-CFP2

- M6PQ
- M6PQ-E
- M12PQ

You must be able to access the switch through a console, SSH, or Telnet (required for setting up a switch running in NX-OS mode but not required for a switch running in ACI-mode).

You must have administrator privileges to work with the Cisco Nexus 9000 Series switch.

EPLD Upgrades Available for NX-OS Mode Releases 7.0(3)I4(1) to 7.0(3)I4(8z)

Each EPLD image that you can download from http://www.cisco.com is a bundle of EPLD upgrades. To see the updated EPLD versions for the Cisco Nexus NX-OS mode 3000 switches, Cisco Nexus 93000 NX-OS mode fixed switches, and the Cisco Nexus 9500 NX-OS mode modular switches, see the following tables.

NOTE: All updates to an image are shown in boldface. If more than one release is shown for a column, the boldface applies to the first release listed for the column.

Available EPLD Images for the Cisco Nexus 3000 Switches

Component	EPLD Device	Release 7.0(3)I4(2)	Release 7.0(3)I4(3)	Release 7.0(3)I4(6)	Release 7.0(3)I4(8z)
Cisco Nexus 31108PC-V (N3K-C31108PC-V)	IOFPGA	0x3 (0.003)	0x3 (0.003)	**0x5 (0.005)**	0x5 (0.005)
	MIFPGA	0x3 (0.003)	0x3 (0.003)	0x3 (0.003)	**0x4 (0.004)**
Cisco Nexus 31108TC-V (N3K-C31108TC-V)	IOFPGA	0x2 (0.002)	0x2 (0.002)	**0x5 (0.005)**	0x5 (0.005)
	MIFPGA	0x2 (0.002)	0x2 (0.002)	**0x3 (0.003)**	0x3 (0.003)
Cisco Nexus 31128PQ-10GE CPU (N3K-C31128PQ-10GE)	IOFPGA	**0x6 (0.006)**	0x6 (0.006)	0x6 (0.006)	0x6 (0.006)
	MIFPGA	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)
Cisco Nexus 31128PQ-10GE I/O (N3K-C31128PQ-10GE)	MIFPGA	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)
Cisco Nexus 3164Q (N3K-C3164Q)	IOFPGA	0x7 (0.007)	0x7 (0.007)	0x7 (0.007)	0x7 (0.007)
	MIFPGA	**0x24 (0.036)**	0x24 (0.036)	0x24 (0.036)	0x24 (0.036)
Cisco Nexus 3232C (N3K-C3232C)	IOFPGA	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	**0x11 (0.017)**
	MIFPGA	0x12 (0.018)	0x12 (0.018)	0x12 (0.018)	**0x12 (0.018)**
Cisco Nexus 3264Q (N3K-C3264Q)	IOFPGA	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)
	MIFPGA0	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)
	MIFPGA1	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)

Available EPLD Images for the Cisco Nexus 92000 and 93000 Top-of-Rack Switches

Component	EPLD Device	Release 7.0(3)I4(2)	Release 7.0(3)I4(3)	Release 7.0(3)I4(6)	Release 7.0(3)I4(8z)
Cisco Nexus 92160YC-X (N9K-C92160YC-X)	IOFPGA	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)	**0x17 (0.023)**
	MIFPGA	0x5 (0.005)	0x5 (0.005)	0x5 (0.005)	0x5 (0.005)
Cisco Nexus 92304QC (N9K-C92304QC)	IOFPGA	0x5 (0.005)	0x5 (0.005)	0x5 (0.005)	**0x10 (0.016)**
	MIFPGA0	0x1 (0.001)	0x1 (0.001)	0x1 (0.001)	0x1 (0.001)
	MIFPGA1	0x1 (0.001)	0x1 (0.001)	0x1 (0.001)	0x1 (0.001)
Cisco Nexus 9236C (N9K-C9236C)	IOFPGA	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)	**0x15 (0.021)**
	MIFPGA	0x6 (0.006)	0x6 (0.006)	0x6 (0.006)	**0x9 (0.009)**
Cisco Nexus 9272Q (N9K-C9272Q)	IOFPGA	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	**0x16 (0.022)**
	MIFPGA	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)
Cisco Nexus 93108TC-EX (N9K-C93108TC-EX)	IOFPGA	**0x3 (0.003)**	0x3 (0.003)	0x3 (0.003)	**0x10 (0.016)**
	MIFPGA	**0x2 (0.002)**	0x2 (0.002)	0x2 (0.002)	0x2 (0.002)
Cisco Nexus 93120TX (N9K-C93120TX)	IOFPGA	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)
	MIFPGA1	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)
	MIFPGA2	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)
Cisco Nexus 93128TX (N9K-C93128TX)	IOFPGA	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	**0x11 (0.017)**
	MIFPGA	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)
Cisco Nexus 93180YC-EX (N9K-C93180YC-EX)	IOFPGA	0x3 (0.003)	0x3 (0.003)	0x3 (0.003)	**0x9 (0.009)**
	MIFPGA	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)
Cisco Nexus 9332PQ (N9K-C9332PQ)	IOFPGA	0x11 (0.017)	0x11 (0.017)	**0x12 (0.018)**	0x12 (0.018)
	MIFPGA	0x16 (0.022)	0x16 (0.022)	0x16 (0.022)	**0x17 (0.023)**
Cisco Nexus 9372PX (N9K-C9372PX)	IOFPGA	**0x8 (0.008)**	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)
	MIFPGA	**0x15 (0.021)**	0x15 (0.021)	0x15 (0.021)	0x15 (0.021)
Cisco Nexus 9372PX-E (N9K-	IOFPGA	**0x8 (0.008)**	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)

Component	EPLD Device	Release 7.0(3)I4(2)	Release 7.0(3)I4(3)	Release 7.0(3)I4(6)	Release 7.0(3)I4(8z)
C9372PX-E)	MIFPGA	**0x15 (0.021)**	0x15 (0.021)	0x15 (0.021)	0x15 (0.021)
Cisco Nexus 9372TX (N9K-C9372TX)	IOFPGA	0x5 (0.005)	0x5 (0.005)	**0x6 (0.006)**	0x6 (0.006)
	MIFPGA	0x15 (0.021)	0x15 (0.021)	0x15 (0.021)	0x15 (0.021)
Cisco Nexus 9372TX-E (N9K-C9372TX-E)	IOFPGA	0x5 (0.005)	0x5 (0.005)	**0x6 (0.006)**	0x6 (0.006)
	MIFPGA	0x3 (0.003)	0x3 (0.003)	0x3 (0.003)	0x3 (0.003)
Cisco Nexus 9396PX (N9K-C9396PX)	IOFPGA	0x15 (0.021)	0x15 (0.021)	**0x16 (0.022)**	0x16 (0.022)
	MIFPGA	0x14 (0.020)	0x14 (0.020)	**0x15 (0.021)**	0x15 (0.021)
Cisco Nexus 9396TX (N9K-C9396TX)	IOFPGA	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)	**0x9 (0.009)**
4-port 100-Gigabit optical uplink module (N9K-M4PC-CFP2)	MIFPGA	0x11 (0.017)	0x11 (0.017)	0x11 (0.017)	0x11 (0.017)
6-port 40-Gigabit optical uplink module (N9K-M6PQ and N9K-M6PQ-E)	MIFPGA	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)
12-port optical uplink module (N9K-M12PQ)	MIFPGA	0x20 (0.032)	0x20 (0.032)	0x20 (0.032)	0x20 (0.032)

Available EPLD Images for the Cisco Nexus 9500 Modular Switches

Component	EPLD Device	Release 7.0(3)I4(2)	Release 7.0(3)I4(3)	Release 7.0(3)I4(7)	Release 7.0(3)I4(8z)
Supervisor A (N9K-SUP-A)	IOFPGA	0x27 (0.039)	0x27 (0.039)	0x27 (0.039)	0x27 (0.039)
Supervisor B (N9K-SUP-B)	IOFPGA	0x27 (0.039)	0x27 (0.039)	0x27 (0.039)	0x27 (0.039)
System Controller (N9K-SC-A)	IOFPGA	0x20 (0.032)	0x20 (0.032)	0x20 (0.032)	0x20 (0.032)
8-port 100-Gigabit CFP2 line card (N9K-X9408)	IOFPGA	0x5 (0.005)	0x5 (0.005)	0x5 (0.005)	0x5 (0.005)
	MIFPGA	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)
32-port 100-Gigabit QSFP28 line card (N9K-X9732C-EX) (for –E fabric modules)	IOFPGA	**0x10 (0.016)**	0x10 (0.016)	0x10 (0.016)	**0x12 (0.018)**
	MIFPGA	0x6 (0.006)	0x6 (0.006)	0x6 (0.006)	**0x8 (0.008)**
32-port 100-Gigabit QSFP28 line card (N9K-X9732C-S) (for –S fabric modules)	IOFPGA	0x13 (0.019)	0x13 (0.019)	0x13 (0.019)	0x13 (0.019)
	MIFPGA	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)	0x4 (0.004)
32-port 40-Gigabit QSFP+ line card (N9K-X9432PQ)	IOFPGA	0x16 (0.022)	0x16 (0.022)	0x16 (0.022)	0x16 (0.022)
	MIFPGA	0x13 (0.019)	0x13 (0.019)	0x13 (0.019)	0x13 (0.019)
36-port 40-Gigabit QSFP+ aggregation line card (N9K-X9636PQ)	IOFPGA	0x16 (0.022)	0x16 (0.022)	0x16 (0.022)	0x16 (0.022)
	MIFPGA	0x13 (0.019)	0x13 (0.019)	0x13 (0.019)	0x13 (0.019)
36-port 40-Gigabit QSFP+ line card (N9K-X9536PQ)	IOFPGA	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	**0x11 (0.017)**
	MIFPGA	0x7 (0.007)	0x7 (0.007)	0x7 (0.007)	0x7 (0.007)
48-port 1/10GBASE-T and 4-port 40-Gigabit QSFP+ line card (N9K-X9464TX)	IOFPGA	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)
	MIFPGA	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)

Component	EPLD Device	Release 7.0(3)I4(2)	Release 7.0(3)I4(3)	Release 7.0(3)I4(7)	Release 7.0(3)I4(8z)
48-port 1/10GBASE-T and 4-port 40-Gigabit QSFP+ line card (N9K-X9564TX)	IOFPGA	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)	**0x10 (0.016)**
	IOFPGA	N/A	N/A	N/A	**0x10 (0.016)**
	MIFPGA	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)	0x8 (0.008)
48-port 1/10GBASE-T and 4-port 40-Gigabit QSFP+ line card (N9K-X9564TX2)	IOFPGA	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)	0x9 (0.009)
	MIFPGA	0x3 (0.003)	0x3 (0.003)	0x3 (0.003)	0x3 (0.003)
48-port 1-/10-Gigabit SFP+ and 4-port 40-Gigabit QSFP+ line card (N9K-X9564PX)	IOFPGA	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	0x11 (0.017)
	MIFPGA	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)
48-port 1-/10-Gigabit SFP+ and 4-port 40-Gigbit QSFP+ line card (N9K-X9464PX)	IOFPGA	0x11 (0.017)	0x11 (0.017)	0x11 (0.017)	0x11 (0.017)
	MIFPGA	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)	0x10 (0.016)
Fabric module for 40-Gigabit line cards in Cisco Nexus 9504 chassis (N9K-C9504-FM)	IOFPGA	0x19 (0.025)	0x19 (0.025)	0x19 (0.025)	0x19 (0.025)
Fabric module for –EX 100-Gigabit line cards in the Cisco Nexus 9504 chassis (N9K-C9504-FM-E)	IOFPGA	**0x12 (0.018)**	0x12 (0.018)	**0x13 (0.019)**	**0x14 (0.020)**

Component	EPLD Device	Release 7.0(3)I4(2)	Release 7.0(3)I4(3)	Release 7.0(3)I4(7)	Release 7.0(3)I4(8z)
Fabric module for –S 100-Gigabit line cards in the Cisco Nexus 9504 chassis (N9K-C9504-FM-S)	IOFPGA	0x11 (0.017)	0x11 (0.017)	0x11 (0.017)	0x11 (0.017)
Fabric module for 40-Gigabit line cards in the Cisco Nexus 9508 chassis (N9K-C9508-FM)	IOFPGA	0x19 (0.025)	0x19 (0.025)	0x19 (0.025)	0x19 (0.025)
Fabric module for –EX 100-Gigabit line cards in the Cisco Nexus 9508 chassis (N9K-C9508-FM-E)	IOFPGA	**0x12 (0.018)**	0x12 (0.018)	0x12 (0.018)	**0x13 (0.019)**
Fabric module for –S 100-Gigabit line cards in the Cisco Nexus 9508 chassis (N9K-C9508-FM-S)	IOFPGA	0x11 (0.017)	0x11 (0.017)	0x11 (0.017)	0x11 (0.017)
Fabric module for 40-Gigabit line cards in the Cisco Nexus 9516 chassis (N9K-C9516-FM)	IOFPGA	0x13 (0.019)	0x13 (0.019)	0x13 (0.019)	0x13 (0.019)

Determining Whether to Upgrade EPLD Images

To determine which devices need upgraded EPLDs, use the **show install impact epld bootflash:** command for a device and indicate the latest EPLD image file (n9000-epld.7.0.3.I4.3.img). The output for this command indicates the current EPLD images, new EPLD images, and whether the upgrades would be disruptive to switch operations. If the currently installed EPLD version number is greater than the new EPLD image number, you can skip the upgrade.

- To determine the EPLD upgrades needed for a Cisco Nexus 3000 switch, use the **show install impact epld bootflash:** command on that switch and indicate the n9000-epld.7.0.3.I4.3 image. In the following example, the MIFPGA and IOFPGA EPLD images do not need to be upgraded.

```
Nexus3164PQ_switch# show install all impact epld n9000-epld.7.0.3.I4.8.img
Compatibility check:
Module        Type         Upgradable        Impact   Reason
------  -----------------  ----------    ----------   ------
     1            SUP           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   SUP  MI FPGA                    0x23        0x23             No
     1   SUP  IO FPGA                    0x06        0x06             No
     1   SUP  MI FPGA2                   0x23        0x23             No
```

- To determine the EPLD upgrades needed for a Cisco Nexus 92000 or 93000 switch, use the **show install impact epld bootflash:** command on that switch and indicate the n9000-epld.7.0.3.I4.8 image. In the following example, the MIFPGA and IOFPGA EPLD images can be upgraded for the switch supervisor (slot 1) and the MIFPGA2 EPLD image can be upgraded for the supervisor in the uplink module (slot 2). Both upgrades are disruptive.

```
Nexus93xx_switch# show install all impact epld bootflash:n9000-epld.7.0.3.I4.8.img
Compatibility check:
Module        Type         Upgradable        Impact   Reason
------  -----------------  ----------    ----------   ------
     1            SUP           Yes       disruptive   Module Upgradable
     2      Expansion           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   SUP  MI FPGA                    0x11        0x12             Yes
     1   SUP  IO FPGA                    0x06        0x06             No
...
Nexus93xx_switch#
```

- To determine the EPLD upgrades needed for a Cisco Nexus 9500 modular switch, use the **show install impact epld bootflash:** command on that switch and indicate the n9000-epld.7.0.3.I4.8 image. In the following example, the MIFPGA and IOFPGA EPLD images can be upgraded for the line cards in slots 2 through 7 and all of the fabric modules. These upgrades are disruptive.

```
Nexus95xx_switch# show install all impact epld bootflash:n9000-epld.7.0.3.I4.8.img
Compatibility check:
Module        Type         Upgradable        Impact   Reason
------  -----------------  ----------    ----------   ------
     2             LC           Yes       disruptive   Module Upgradable
     6             LC            No             none   Module is not Online
     7             LC           Yes       disruptive   Module Upgradable
    22             FM           Yes       disruptive   Module Upgradable
    23             FM           Yes       disruptive   Module Upgradable
```

```
    24              FM           Yes       disruptive   Module Upgradable
    25              FM           Yes       disruptive   Module Upgradable
    26              FM           Yes       disruptive   Module Upgradable
    27             SUP           Yes       disruptive   Module Upgradable
    29              SC           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
------  ----  -------------      ---------------   -----------  ------------
     2    LC  MI FPGA                    0x12         0x13            Yes
     2    LC  IO FPGA                    0x16         0x16             No
     7    LC  MI FPGA                    0x12         0x13            Yes
     7    LC  IO FPGA                    0x16         0x16             No
    22    FM  IO FPGA                    0x18         0x19            Yes
    23    FM  IO FPGA                    0x18         0x19            Yes
    24    FM  IO FPGA                    0x18         0x19            Yes
    25    FM  IO FPGA                    0x18         0x19            Yes
    26    FM  IO FPGA                    0x18         0x19            Yes
    27   SUP  IO FPGA                    0x22         0x22             No
    29    SC  IO FPGA                    0x17         0x19             No
```

Downloading the EPLD Images

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

Procedure

Step 1 From a browser, go to http://www.cisco.com.

The browser will display the Cisco website.

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 9000.

The Cisco Nexus 9000 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 9000 Series switch from the list under Data Center Switches > Cisco Nexus 9000 Series Switches.

The Log In page opens.

Step 7 Log in as follows:

- If you are an existing user, enter your username and password.
- 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 and password.

The Downloads page lists the software types that can be downloaded for the switch that you specified.

Step 8 Click NX-OS EPLD Updates.

The Downloads page lists software releases that you can download.

Step 9 Choose **Latest Releases > 7.0(3)I4(8z).**

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.

The Tar file saves to the location that you specified.

What to Do Next

You are ready to prepare the EPLD images for Installation.

Installation Guidelines

You can upgrade EPLDs using CLI commands on the Cisco Nexus 9000 Series switch. Follow these guidelines when you upgrade 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 images and be sure that you have an EPLD image file.
- You can execute an upgrade from the active supervisor module only. This upgrade is for one or all of the modules as follows:
- You can upgrade a module individually.
  - You can upgrade all modules sequentially.
  - You can update e the images for online modules only.
- On a Cisco Nexus 9500 switch that has two supervisor modules, upgrade the EPLDs for the standby supervisor and then switch the active supervisor to the standby mode to upgrade its EPLDs (the supervisor switchover is not disruptive to traffic on Cisco Nexus 9500 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.

Upgrading the EPLD Images

If you have a Cisco Nexus 9000 Series switch that is running Cisco NX-OS Release 7.0(3)I4(2) build or later build, follow the special upgrade steps presented here.

Procedure

Step 1 Copy the binary and EPLD image files to bootflash.

Step 2 To determine if you need to upgrade the BIOS for the image, use the **show install all impact** command and see the Upgrade Required (Upg-Required) field for the BIOS row in the command output.

Step 3 If you do not need to upgrade the BIOS, set the boot variable using the **boot nxos boot flash:n9000-dk9.7.0.3.I4.8.bin** command.

Step 4 Enter the **copy running-config startup-config** command to set the startup boot variables to the NX-OS image.

Step 5 If you need to upgrade the BIOS, enter the **install all nxos bootflash:n9000-dk9.7.0.3.I4.8.bin** command.

Step 6 Enter the **install epld bootflash:n9000-epld.7.0.3.I4.8.img module all** command.

The switch automatically reboots.

Verifying the EPLD Upgrades

To verify the EPLD upgrades for a switch or its modules, use the **show version module *slot_number* epld** command as follows:

- To verify updates for a module on a modular switch (Cisco Nexus 9500 switches), indicate the chassis slot number for *slot_number.*
  ```
  switch# show version module 22 epld
  ```
- To verify updates for a switch (Cisco Nexus 3000, 92000, or 93000), use 1 for slot_number.
  ```
  switch# show version module 1 epld
  ```

Displaying the Status of EPLD Upgrades

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

Limitations

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

- If a module is not online, you cannot upgrade its EPLD images.
- If there are two supervisors installed in the switch (Cisco Nexus 9504, 9508, and 9516 only), you can either upgrade only the standby supervisor from the active supervisor or upgrade all modules (including both supervisor modules) by using the following commands:
  - **install epld bootflash:** *image module standby_supervisor_slot_number* (upgrades only the standby supervisor module)

NOTE: After you use this command, you can switchover the active and standby supervisor modules and then upgrade the other supervisor.

- **install epld bootflash:** *image module* **all** (upgrades all of the modules)

- If there is only one supervisor installed in the switch, your upgrading or downgrading of EPLD images is disruptive.

Related Documentation

The entire Cisco NX-OS 9000 Series documentation set is available at the following URL:
http://www.cisco.com/c/en/us/support/switches/nexus-9000-series-switches/tsd-products-support-series-home.html

The entire Cisco NX-OS 3000 Series documentation set is available at the following URL:
http://www.cisco.com/c/en/us/support/switches/nexus-3000-series-switches/tsd-products-support-series-home.html

Release Notes

The release notes are available at the following URL:
http://www.cisco.com/en/US/products/ps13386/prod_release_notes_list.html

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