Upgrade Nexus 3048 NX-OS Software

Contents

Introduction

This document describes disruptive NX-OS software upgrade processes for Cisco Nexus 3524 and 3548 Series switches between major software releases.

Prerequisites

Requirements

Cisco recommends that you understand the basics of copying files in Cisco NX-OS. For more information about this feature, refer to one of these applicable documents:

- Cisco Nexus 3000 Series NX-OS Fundamentals Configuration Guide, Release 9.3(x)
- Cisco Nexus 3000 Series NX-OS Fundamentals Configuration Guide, Release 9.2(x)
- Cisco Nexus 3000 Series NX-OS Fundamentals Configuration Guide, Release 7.x

Cisco recommends that you understand the basics of upgrading NX-OS software on Cisco Nexus 3000 switches. For more information about this procedure, refer to one of these applicable documents:

- Cisco Nexus 3000 Series NX-OS Software Upgrade and Downgrade Guide, Release 9.3(x)
- Cisco Nexus 3000 Series NX-OS Software Upgrade and Downgrade Guide, Release 9.2(x)
- Cisco Nexus 3000 Series NX-OS Software Upgrade and Downgrade Guide, Release 7.x
- Cisco Nexus 3000 Series NX-OS Software Upgrade and Downgrade Guide, Release 6.x

Components Used

The information in this document is based on the Cisco Nexus 3048 Series switches listed in the Applicable Hardware section of this document. The device output in this document was taken from a Nexus 3048TP-1GE (model number N3K-C3048TP-1GE) running various NX-OS software releases.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Background Information

This document describes how to disruptively upgrade the NX-OS software of a Cisco Nexus 3048 switch from a variety of major software releases to other major software releases. This document also describes specific NX-OS software upgrade paths that must be followed in some scenarios, as well as describes common pitfalls that you can encounter when attempting to upgrade NX-OS software on a Nexus 3048 switch. The intent behind this document is to provide step-by-step instructions to perform supported NX-OS software upgrades between common major and minor NX-OS software releases.

This document does not describe steps used to perform any non-disruptive upgrade for Cisco NX-OS software on Cisco Nexus 3048 Series switches. ISSU software upgrades are outside the scope of this document.

NX-OS Software Release Version Taxonomy

Cisco NX-OS software release names contain a number of components that are regularly referenced in this

document. The names of these components are clearly defined in the [Cisco NX-OS Software Release Naming section of the Cisco IOS and Cisco NX-OS Software Release Reference Guide](#). Specifically, you can be aware of these terms:

- Major release number
- Minor release number
- Maintenance release number
- Platform designator
- Platform minor release number
- Platform maintenance release number
- Platform rebuild identifier

For example, NX-OS software release 7.0(3)I7(5a) has these components:

Component Name	Component Value
Major release number	7
Minor release number	0
Maintenance release number	3
Platform Designator	I
Platform minor release number	7
Platform maintenance release number	5
Platform rebuild identifier	a

As another example, NX-OS software release 9.3(5) has these components:

Component Name	Component Value
Major release number	9
Minor release number	3
Maintenance release number	5

Note: The NX-OS 9 major release (sometimes referred to as 9.x in the documentation) adopts a new, unified version-numbering convention that does not include platform designator, platform minor release number, platform maintenance release number, or platform rebuilds identifier components.

Cisco Nexus configuration guides are typically grouped by NX-OS major release numbers. Within the title of these configuration guides, NX-OS major release numbers are typically displayed such that the major release number has a variable x appended referring to the minor release (such as 6.x, 7.x, and so on). For example, the [Cisco Nexus 9000 Series NX-OS Fundamentals Configuration Guide, Release 7.x](#) is applicable to all NX-OS 7 major releases (although specific caveats, limitations, and configuration examples are specific to certain minor or maintenance release numbers).

The exception to this rule is the NX-OS 9 major release. For the NX-OS 9 major release, Cisco Nexus configuration guides are grouped by the NX-OS major and minor release numbers, with a variable x, appended referring to the maintenance release (such as 9.2(x) and 9.3(x)).

This document uses the formatting used by the titles of Cisco Nexus configuration guides (6.x, 7.x, 9.2(x), 9.3(x), and so on) to describe standard disruptive NX-OS software upgrades between two NX-OS software releases.

NX-OS Software Upgrade Terminology

Source Releases, Target Releases, and Intermediate Releases

An NX-OS software upgrade is typically performed between two releases - a source release (which is the NX-OS software release you are upgrading from) and a target release (which is the NX-OS software release you upgrade to). For example, if you upgrade a Nexus 3048TP-1GE device from NX-OS software release 7.0(3)I7(8) to NX-OS software release 9.3(5), 7.0(3)I7(8) is your source release while 9.3(5) is your target release.

In order to upgrade from a specific source release to a specific target release, your upgrade path can require an upgrade to one or more intermediate releases. For example, if you upgrade a Nexus 3048TP-1GE device from NX-OS software release 7.0(3)I7(5a) to NX-OS software release 9.3(5), you need an upgrade to an intermediate release of 7.0(3)I7(8) or 9.2(4) before you can successfully upgrade to NX-OS software release 9.3(5).

Types of NX-OS Software Upgrades

NX-OS software upgrades can be divided into two categories:

- Disruptive Upgrades - A disruptive upgrade between a source release and a target release where the Nexus switch reloads at the end of the upgrade process. The reload causes the data plane, control plane, and management plane of the Nexus switch to go offline for a short period of time.
- In-Service Software Upgrade (ISSU) - A non-disruptive upgrade between a source release and a target release where the data plane of the Nexus switch remains online and forwards traffic as a result of Non-Stop Forwarding (NSF).

The procedure for non-disruptive ISSU NX-OS software upgrades is outside the scope of this document. This document only covers standard disruptive NX-OS software upgrades.

Applicable Hardware

The procedure covered in this document is applicable to this hardware only:

- N3K-C3048TP-1GE

NX-OS Software Upgrade Procedures

This section of the document provides step-by-step instructions to perform standard disruptive NX-OS software upgrades from a variety of source releases to a variety of target releases.

Upgrade From NX-OS 6.x to NX-OS 6.0(2)U6(2a) or Earlier

This section of the document describes how to perform a standard disruptive NX-OS software upgrade from a source release in the NX-OS 6.x major release to a target release in the NX-OS 6.x major release where both the source and target releases are NX-OS 6.0(2)U6(2a) or earlier.

An example standard disruptive NX-OS software upgrade is performed on a Cisco Nexus N3K-C3048TP-1GE switch from a source release of 6.0(2)U5(1) to a target release of 6.0(2)U6(1a):

```
<#root>

N3K-C3048TP-1GE#

show module
```

```
<snip>
Mod Ports Module-Type                          Model                  Status
--- ----- -------------------------------- ---------------------- ------------
1   52    48x1GE + 4x10G Supervisor        N3K-C3048TP-1GE-SUP    active *


Mod  Sw             Hw      World-Wide-Name(s) (WWN)
---  -------------- ------  ---------------------------------------------------
1    6.0(2)U5(1)    1.6     --
```

Step 1. Download Target Release from Cisco Software Download

NX-OS 6.x software requires a total of two NX-OS binary image files: a system image, and a kickstart image. You can download these images from Cisco's Software Download website to your local computer. The specific steps you need to take to download software from Cisco's Software Download website are outside the scope of this document.

Step 2. Copy Target Release to Cisco Nexus Switch

Copy the NX-OS 6.x kickstart and system binary image files to the Nexus 3048TP-1GE switch you would like to disruptively upgrade using your file transfer protocol of choice. This example demonstrates how to copy the kickstart and system binary image files for the NX-OS 6.0(2)U6(1a) software release via File Transfer Protocol (FTP) from an FTP server 192.0.2.100 reachable via the management VRF.

```
<#root>

N3K-C3048TP-1GE#

dir | include bin

   37734400    Aug 19 15:39:08 2020  n3000-uk9-kickstart.6.0.2.U5.1.bin
  189984434    Aug 19 15:40:20 2020  n3000-uk9.6.0.2.U5.1.bin
N3K-C3048TP-1GE#

copy ftp://username@192.0.2.100/n3000-uk9-kickstart.6.0.2.U6.1a.bin bootflash: vrf management

Password:
Copy complete, now saving to disk (please wait)...
N3K-C3048TP-1GE#

copy ftp://username@192.0.2.100/n3000-uk9.6.0.2.U6.1a.bin bootflash: vrf management

Password:
Copy complete, now saving to disk (please wait)...
N3K-C3048TP-1GE#

dir | include bin

   37734400    Aug 19 15:39:08 2020  n3000-uk9-kickstart.6.0.2.U5.1.bin
   37844992    Aug 18 23:08:20 2020  n3000-uk9-kickstart.6.0.2.U6.1a.bin
  189984434    Aug 19 15:40:20 2020  n3000-uk9.6.0.2.U5.1.bin
  193468402    Aug 18 23:09:33 2020  n3000-uk9.6.0.2.U6.1a.bin
```

Step 3. Verify MD5 or SHA512 Checksum of Target Release

After you copy the NX-OS 6.x kickstart and system binary image files to the Nexus 3048TP-1GE switch,

you would like to disruptively upgrade with the use of your file transfer protocol of choice, in order to verify the binary image files were not corrupted in transport, ensure that their MD5 or SHA512 checksums match with what is published on Cisco's Software Download Website.

Hover your cursor over the image on the website in order to identify the MD5 and SHA512 checksum of NX-OS binary image files through Cisco's Software Download website. An example of this is shown here.

This example demonstrates how to verify the MD5 checksum of the kickstart and system binary image files for the NX-OS 6.0(2)U6(1a) software release through the **show file bootflash:{filename} md5sum** command. The expected MD5 checksum for the NX-OS 6.0(2)U6(1a) kickstart binary image file is 72af9c1090b8f5940fe2d15a6e5bbbca, while the expected MD5 checksum for the NX-OS 6.0(2)U6(1a) system binary image file is 678a2dd054f98ac1b01c280c08255b2d.

```
<#root>

N3K-C3048TP-1GE#

show file bootflash:n3000-uk9-kickstart.6.0.2.U6.1a.bin md5sum


72af9c1090b8f5940fe2d15a6e5bbbca
N3K-C3048TP-1GE#

show file bootflash:n3000-uk9.6.0.2.U6.1a.bin md5sum

678a2dd054f98ac1b01c280c08255b2d
```

Step 4. Upgrade NX-OS Software via Install All Command

Begin a standard disruptive NX-OS software upgrade through the **install all** command. This command requires both the kickstart and system parameters to be passed in with the absolute filepath of the NX-OS kickstart and system binary image files corresponding with the target release.

This example shows the **install all** command where the kickstart parameter points to the absolute filepath of the NX-OS kickstart binary image file (bootflash:n3000-kickstart-uk9.6.0.2.U6.1a.bin) and the system parameter points to the absolute filepath of the NX-OS system binary image file (bootflash:n3000-uk9.6.0.2.U6.1a.bin).

```
<#root>

N3K-C3048TP-1GE#

install all kickstart bootflash:n3000-uk9-kickstart.6.0.2.U6.1a.bin system bootflash:n3000-uk9.6.0.2.U6.

Installer is forced disruptive

Verifying image bootflash:/n3000-uk9-kickstart.6.0.2.U6.1a.bin for boot variable "kickstart".
[####################################] 100% -- SUCCESS

Verifying image bootflash:/n3000-uk9.6.0.2.U6.1a.bin for boot variable "system".
[####################################] 100% -- SUCCESS

Verifying image type.
[####################################] 100% -- SUCCESS

Extracting "system" version from image bootflash:/n3000-uk9.6.0.2.U6.1a.bin.
[####################################] 100% -- SUCCESS

Extracting "kickstart" version from image bootflash:/n3000-uk9-kickstart.6.0.2.U6.1a.bin.
[####################################] 100% -- SUCCESS

Extracting "bios" version from image bootflash:/n3000-uk9.6.0.2.U6.1a.bin.
[####################################] 100% -- SUCCESS

Performing module support checks.
[####################################] 100% -- SUCCESS

Notifying services about system upgrade.
[####################################] 100% -- SUCCESS


Compatibility check is done:
Module  bootable          Impact  Install-type  Reason
------  --------  --------------  ------------  ------
     1       yes      disruptive         reset  Forced by the user


Images is performed be upgraded according to following table:
Module          Image         Running-Version               New-Version  Upg-Required
------  ---------------  --------------------  --------------------  ------------
     1           system              6.0(2)U5(1)           6.0(2)U6(1a)           yes
     1        kickstart              6.0(2)U5(1)           6.0(2)U6(1a)           yes
     1             bios     v4.5.0(11/09/2017)    v1.2.0(08/25/2011)            no


Switch will be reloaded for disruptive upgrade.
Do you want to continue with the installation (y/n)?  [n]

y

Time Stamp: Tue Aug 18 23:20:16 2020
```

```
Install is in progress, please wait.

Performing runtime checks.
[####################################] 100% -- SUCCESS

Setting boot variables.
[####################################] 100% -- SUCCESS

Performing configuration copy.
[####################################] 100% -- SUCCESS
Time Stamp: Tue Aug 18 23:21:05 2020


Finishing the upgrade, switch is performed reboot in 10 seconds.
```

Step 5. Verify Successful NX-OS Software Upgrade

After the Nexus 3048TP-1GE switch has reloaded, verify that the upgrade was successful through the **show module** command. The output of this command can show the desired target release. An example of this is shown here, where the switch was successfully upgraded to NX-OS software release 6.0(2)U6(1a).

```
<#root>

N3K-C3048TP-1GE#

show module

<snip>
Mod Ports Module-Type                         Model                  Status
--- ----- ----------------------------------- ---------------------- ------------
1   52    48x1GE + 4x10G Supervisor           N3K-C3048TP-1GE-SUP    active *

Mod Sw             Hw      World-Wide-Name(s) (WWN)
--- -------------- ------  -------------------------------------------------
1   6.0(2)U6(1a)   1.6     --
```

Step 6. Delete Source Release Binary Image Files from Cisco Nexus Switch

After you verify that the NX-OS software upgrade from the source release to the target release is successful, preserve free space on the switch's bootflash by deleting the source release's kickstart and system binary image files from the bootflash of the device. This can be done with the **delete bootflash:{filename}** command. An example of this is shown here, where the NX-OS 6.0(2)U5(1) kickstart and system binary image files are deleted from the switch's bootflash.

```
<#root>

N3K-C3048TP-1GE#

dir | include bin

   37734400     Aug 19 15:39:08 2020  n3000-uk9-kickstart.6.0.2.U5.1.bin
   37844992     Aug 18 23:08:20 2020  n3000-uk9-kickstart.6.0.2.U6.1a.bin
  189984434     Aug 19 15:40:20 2020  n3000-uk9.6.0.2.U5.1.bin
  193468402     Aug 18 23:09:33 2020  n3000-uk9.6.0.2.U6.1a.bin
```

```
N3K-C3048TP-1GE#
```

delete bootflash:n3000-uk9-kickstart.6.0.2.U5.1.bin

```
N3K-C3048TP-1GE#
```

delete bootflash:n3000-uk9.6.0.2.U5.1.bin

```
N3K-C3048TP-1GE#
```

dir | include bin

```
   37844992    Aug 18 23:08:20 2020   n3000-uk9-kickstart.6.0.2.U6.1a.bin
  193468402    Aug 18 23:09:33 2020   n3000-uk9.6.0.2.U6.1a.bin
```

Upgrade From NX-OS 6.x to NX-OS 6.0(2)U6(3a) or Later

This section of the document provides step-by-step instructions to perform a standard disruptive NX-OS software upgrade from a source release in the NX-OS 6.x major release to a target release in the NX-OS 6.x major release where the target release is 6.0(2)U6(3a) or later.

✎ **Note**: An NX-OS software upgrade to a target release that is 6.0(2)U6(3a) or later from a source release that is 6.0(2)U6(2a) or earlier requires a mandatory intermediate upgrade to 6.0(2)U6(2a) before upgrading to the desired target release.

An example standard disruptive NX-OS software upgrade is performed on a Cisco Nexus N3K-C3048TP-1GE switch from a source release of 6.0(2)U6(1a) to a target release of 6.0(2)U6(10) with the mandatory intermediate upgrade to 6.0(2)U6(2a).

```
<#root>

N3K-C3048TP-1GE#
```

show module

```
<snip>
Mod Ports Module-Type                           Model                   Status
--- ----- ----------------------------------- ---------------------- ------------
1   52    48x1GE + 4x10G Supervisor             N3K-C3048TP-1GE-SUP     active *

Mod  Sw             Hw      World-Wide-Name(s) (WWN)
---  -------------  ------  -------------------------------------------------
1    6.0(2)U6(1a)   1.6     --
```

Step 1. Upgrade From NX-OS 6.x to 6.0(2)U6(2a) or Earlier

Follow the Upgrade From NX-OS 6.x to 6.0(2)U6(2a) or Earlier section of this document to perform a series of standard disruptive NX-OS software upgrades from your source release to NX-OS software release 6.0(2)U6(2a). This is required in order for an upgrade to a target release of 6.0(2)U6(3a) or later to be successful.

Step 2. Download Target Release from Cisco Software Download

NX-OS 6.x software requires a total of two NX-OS binary image files: a system image, and a kickstart image. You need to download these images from Cisco's Software Download website to your local computer. The specific steps you need to take to download software from Cisco's Software Download website are outside the scope of this document.

Step 3. Copy Target Release to Cisco Nexus Switch

Copy the NX-OS 6.x kickstart and system binary image files for the target release to the Nexus 3048TP-1GE switch you would like to disruptively upgrade using your file transfer protocol of choice. This example demonstrates how to copy the kickstart and system binary image files for the NX-OS 6.0(2)U6(10) software release via File Transfer Protocol (FTP) from an FTP server 192.0.2.100 reachable via the management VRF.

```
<#root>

N3K-C3048TP-1GE#

dir | include bin

   37853184    Aug 19 00:28:34 2020  n3000-uk9-kickstart.6.0.2.U6.2a.bin
  206765681    Aug 19 00:29:55 2020  n3000-uk9.6.0.2.U6.2a.bin
N3K-C3048TP-1GE#

copy ftp://username@192.0.2.100/n3000-uk9-kickstart.6.0.2.U6.10.bin bootflash: vrf management

Password:
Copy complete, now saving to disk (please wait)...
N3K-C3048TP-1GE#

copy ftp://username@192.0.2.100/n3000-uk9.6.0.2.U6.10.bin bootflash: vrf management

Password:
Copy complete, now saving to disk (please wait)...
N3K-C3048TP-1GE#

dir | include bin

   37881856    Aug 19 15:48:58 2020  n3000-uk9-kickstart.6.0.2.U6.10.bin
   37853184    Aug 19 00:28:34 2020  n3000-uk9-kickstart.6.0.2.U6.2a.bin
  206130057    Aug 19 15:50:07 2020  n3000-uk9.6.0.2.U6.10.bin
  206765681    Aug 19 00:29:55 2020  n3000-uk9.6.0.2.U6.2a.bin
```

Step 4. Verify MD5 or SHA512 Checksum of Target Release

After you copy the NX-OS 6.x kickstart and system binary image files to the Nexus 3048TP-1GE switch, you would like to disruptively upgrade using your file transfer protocol of choice, verify that the binary image files were not corrupted in transport by ensuring their MD5 or SHA512 checksums match what is published on Cisco's Software Download Website.

You can identify the MD5 and SHA512 checksum of NX-OS binary image files through Cisco's Software Download Website by hovering your cursor over the image on the website. An example of this is shown here.

Software Download

Downloads Home / Switches / Data Center Switches / Nexus 3000 Series Switches / Nexus 3048 Switch
/ NX-OS System Software- 7.0(3)I7(8)

Details ✕

Description :	Cisco Nexus 9000/3000 Standalone Switch
Release :	7.0(3)I7(8)
Release Date :	04-Mar-2020
FileName :	nxos.7.0.3.I7.8.bin
Min Memory :	DRAM 0 Flash 0
Size :	937.16 MB (982681088 bytes)
MD5 Checksum :	4568b131a87aa8be71f6ec190e30d597 📋
SHA512 Checksum :	77c6f20116f51e09035078d57209de21 ... 📋

Release Notes for 7.0(3)I7(8) N3K   Release Notes for 7.0(3)I7(8) N9K

Related Links and Documentation
Release Notes for 7.0(3)I7(8) N9K
Release Notes for 7.0(3)I7(8) N3K

	Release Date	Size
witch	04-Mar-2020	937.16 MB

nxos.7.0.3.I7.8.bin

This example demonstrates how to verify the MD5 checksum of the kickstart and system binary image files for the NX-OS 6.0(2)U6(10) software release through the **show file bootflash:{filename} md5sum** command. The expected MD5 checksum for the NX-OS 6.0(2)U6(10) kickstart binary image file is f07cbe12d2e489ce02b9577b59753335, while the expected MD5 checksum for the NX-OS 6.0(2)U6(10) system binary image file is 98b1ba8106afbc85b83c0f985a66cd30.

<#root>

```
N3K-C3048TP-1GE#

show file bootflash:n3000-uk9-kickstart.6.0.2.U6.10.bin md5sum

f07cbe12d2e489ce02b9577b59753335
N3K-C3048TP-1GE#

show file bootflash:n3000-uk9.6.0.2.U6.10.bin md5sum

98b1ba8106afbc85b83c0f985a66cd30
```

Step 5. Upgrade NX-OS Software to Target Release via Install All Command

Begin a standard disruptive NX-OS software upgrade through the **install all** command. This command requires both the kickstart and system parameters to be passed in with the absolute filepath of the NX-OS kickstart and system binary image files corresponding with the target release.

This example shows the **install all** command where the kickstart parameter points to the absolute filepath of the NX-OS kickstart binary image file (bootflash:n3000-kickstart-uk9.6.0.2.U6.10.bin) and the system parameter points to the absolute filepath of the NX-OS system binary image file (bootflash:n3000-uk9.6.0.2.U6.10.bin).

<#root>

```
N3K-C3048TP-1GE#

install all kickstart bootflash:n3000-uk9-kickstart.6.0.2.U6.10.bin system bootflash:n3000-uk9.6.0.2.U6.

Installer is forced disruptive

Verifying image bootflash:/n3000-uk9-kickstart.6.0.2.U6.10.bin for boot variable "kickstart".
[####################################] 100% -- SUCCESS

Verifying image bootflash:/n3000-uk9.6.0.2.U6.10.bin for boot variable "system".
[####################################] 100% -- SUCCESS

Verifying image type.
[####################################] 100% -- SUCCESS

Extracting "system" version from image bootflash:/n3000-uk9.6.0.2.U6.10.bin.
[####################################] 100% -- SUCCESS

Extracting "kickstart" version from image bootflash:/n3000-uk9-kickstart.6.0.2.U6.10.bin.
[####################################] 100% -- SUCCESS

Extracting "bios" version from image bootflash:/n3000-uk9.6.0.2.U6.10.bin.
[####################################] 100% -- SUCCESS

Collecting "running" plugin(s) information.
[####################################] 100% -- SUCCESS

Collecting plugin(s) information from "new" image.
[####################################] 100% -- SUCCESS

Performing runtime checks.
[####################################] 100% -- SUCCESS

Performing module support checks.
[####################################] 100% -- SUCCESS

Notifying services about system upgrade.
[####################################] 100% -- SUCCESS


Compatibility check is done:
Module  bootable          Impact  Install-type  Reason
------  --------  --------------  ------------  ------
     1       yes       disruptive          reset  Forced by the user


Images is performed be upgraded according to following table:
Module           Image         Running-Version                 New-Version  Upg-Required
------  ----------------  ----------------------  ----------------------  ------------
     1            system         6.0(2)U6(2a)            6.0(2)U6(10)           yes
     1         kickstart         6.0(2)U6(2a)            6.0(2)U6(10)           yes
     1              bios  v4.5.0(11/09/2017)      v1.4.0(12/09/2013)            no


Switch will be reloaded for disruptive upgrade.
Do you want to continue with the installation (y/n)?  [n]

y


Time Stamp: Wed Aug 19 15:56:38 2020
```

```
Install is in progress, please wait.

Performing runtime checks.
[####################################] 100% -- SUCCESS

Setting boot variables.
[####################################] 100% -- SUCCESS

Performing configuration copy.
[####################################] 100% -- SUCCESS

Time Stamp: Wed Aug 19 15:57:32 2020


Finishing the upgrade, switch is performed reboot in 10 seconds.
```

Step 6. Verify Successful Target NX-OS Software Upgrade

After the Nexus 3048TP-1GE switch has reloaded, verify that the upgrade was successful through the **show module** command. The output of this command can show the desired target release. An example of this is shown here, where the switch was successfully upgraded to NX-OS software release 6.0(2)U6(10).

<#root>

N3K-C3048TP-1GE#

show module

```
<snip>
Mod Ports Module-Type                        Model                  Status
--- ----- ---------------------------------- ---------------------- ------------
1   52    48x1GE + 4x10G Supervisor          N3K-C3048TP-1GE-SUP    active *

Mod  Sw             Hw      World-Wide-Name(s) (WWN)
---  -------------- ------  --------------------------------------------------
1    6.0(2)U6(10)   1.6     --
```

Step 7. Delete Intermediate Release Binary Image Files from Cisco Nexus Switch

After the NX-OS software upgrade is verified from the intermediate release to the target release was successful, delete the intermediate release's kickstart and system binary image files from the bootflash of the device to preserve free space on the switch's bootflash. This can be done with the **delete bootflash:{filename}** command. An example of this is shown here, where the NX-OS 6.0(2)U6(2a) kickstart and system binary image files are deleted from the switch's bootflash.

<#root>

N3K-C3048TP-1GE#

dir | include bin

```
   37881856    Aug 19 15:48:58 2020  n3000-uk9-kickstart.6.0.2.U6.10.bin
   37853184    Aug 19 00:28:34 2020  n3000-uk9-kickstart.6.0.2.U6.2a.bin
```

```
   206130057    Aug 19 15:50:07 2020   n3000-uk9.6.0.2.U6.10.bin
   206765681    Aug 19 00:29:55 2020   n3000-uk9.6.0.2.U6.2a.bin
N3K-C3048TP-1GE#
```

delete bootflash:n3000-uk9-kickstart.6.0.2.U6.2a.bin

```
N3K-C3048TP-1GE#
```

delete bootflash:n3000-uk9.6.0.2.U6.2a.bin

```
N3K-C3048TP-1GE#
```

dir | include bin

```
    37881856    Aug 19 15:48:58 2020   n3000-uk9-kickstart.6.0.2.U6.10.bin
   206130057    Aug 19 15:50:07 2020   n3000-uk9.6.0.2.U6.10.bi
```

Upgrade From NX-OS 6.0(2)U6(2a) or Earlier to NX-OS 7.x

This section of the document provides step-by-step instructions to perform a standard disruptive NX-OS software upgrade from a source release in the NX-OS 6.x major release to a target release in the NX-OS 7.x major release where the source release is NX-OS 6.0(2)U6(2a) or earlier.

✎ **Note**: An NX-OS software upgrade to a target release in the NX-OS 7.x major release from a source release that is 6.0(2)U6(2a) or earlier requires two mandatory intermediate upgrades. The first intermediate upgrade is to NX-OS 6.0(2)U6(2a), while the second intermediate upgrade is to NX-OS 6.0(2)U6(10). After the second intermediate upgrade to NX-OS 6.0(2)U6(10), you can upgrade to the desired target release in the NX-OS 7.x major release.

✎ **Note**: A mandatory manual BIOS upgrade can to be performed if you are upgrading to a target release of 7.0(3)I2(2a), 7.0(3)I2(2b), 7.0(3)I2(2c), 7.0(3)I2(2d), 7.0(3)I2(2e), 7.0(3)I2(3), 7.0(3)I2(4), 7.0(3)I3(1), 7.0(3)I4(1), 7.0(3)I4(2), 7.0(3)I4(3), 7.0(3)I4(4), or 7.0(3)I5(1). Please review Field Notice 62433 and Cisco bug ID CSCvb64127 for more details.

An example standard disruptive NX-OS software upgrade is performed on a Cisco Nexus N3K-C3048TP-1GE switch from a source release of 6.0(2)U6(1a) to a target release of 7.0(3)I7(8) with mandatory intermediate upgrades to 6.0(2)U6(2a) and 6.0(2)U6(10).

<#root>

```
N3K-C3048TP-1GE#
```

show module

```
<snip>
Mod Ports Module-Type                          Model                   Status
--- ----- ------------------------------------ ----------------------- ------------
1   52    48x1GE + 4x10G Supervisor            N3K-C3048TP-1GE-SUP     active *

Mod  Sw             Hw      World-Wide-Name(s) (WWN)
---  -------------- ------  --------------------------------------------------
1    6.0(2)U6(1a)   1.6     --
```

Step 1. Upgrade From NX-OS 6.x to NX-OS 6.0(2)U6(3a) or Later

Follow the [Upgrade From NX-OS 6.x to NX-OS 6.0(2)U6(3a) or Later](#) section of this document to perform a series of standard disruptive NX-OS software upgrades from your source release to NX-OS software release 6.0(2)U6(10) through an intermediate release of 6.0(2)U6(2a). This is required in order for an upgrade to a target release in the NX-OS 7.x major release to be successful.

Step 2. Upgrade From NX-OS 6.0(2)U6(3a) or Later to NX-OS 7.x

Follow the [Upgrade From NX-OS 6.0(2)U6(3a) or Later to NX-OS 7.x](#) section of this document to perform a standard disruptive NX-OS software upgrade from NX-OS software release 6.0(2)U6(10) to your desired target release in the NX-OS 7.x major release.

Upgrade From NX-OS 6.0(2)U6(3a) or later to NX-OS 7.x

This section of the document describes how to perform a standard disruptive NX-OS software upgrade from a source release in the NX-OS 6.x major release to a target release in the NX-OS 7.x major release where the source release is NX-OS 6.0(2)U6(3a) or later.

An example standard disruptive NX-OS software upgrade is performed on a Cisco Nexus N3K-C3048TP-1GE switch from a source release of 6.0(2)U6(10) to a target release of 7.0(3)I7(8).

```
<#root>

N3K-C3048TP-1GE#

show module

<snip>
Mod Ports Module-Type                         Model                   Status
--- ----- ----------------------------------- ----------------------- ------------
1   52    48x1GE + 4x10G Supervisor           N3K-C3048TP-1GE-SUP     active *

Mod Sw             Hw      World-Wide-Name(s) (WWN)
--- -------------- ------  -------------------------------------------------
1   6.0(2)U6(10)   1.6     --
```

Step 1. Download Target Release from Cisco Software Download

NX-OS 7.x software uses a single NX-OS binary image file (sometimes referred to as a unified image file). You is performed need to download this image from [Cisco's Software Download website](#) to your local computer. The specific steps you need to take to download software from [Cisco's Software Download website](#) are outside the scope of this document.

✎ **Note**: If you are upgrading to NX-OS software release 7.0(3)I7(8) or 7.0(3)I7(9), you can download the compact NX-OS software image from [Cisco's Software Download Website](#). When browsing the website, select the model of Nexus switch that you are attempting to upgrade and navigate to the desired target NX-OS software release. Then, locate the software image with "Compact Image" in its description and the word "compact" in its filename. For more information, refer to the [Compact NX-OS Software Images on Cisco's Software Download Website section of the Cisco Nexus 3000 Series NX-OS Software Upgrade and Downgrade Guide, Release 7.x document.](#)

Step 2. Copy Target Release to Cisco Nexus Switch

Copy the target release unified binary image files to the Nexus 3048TP-1GE switch you would like to disruptively upgrade using your file transfer protocol of choice. This example demonstrates how to copy the NX-OS 7.0(3)I7(8) software release kickstart and system binary image files via File Transfer Protocol from an FTP server 192.0.2.100 reachable via the management VRF.

```
<#root>

N3K-C3048TP-1GE#

dir | include bin

   37881856    Aug 19 15:48:58 2020  n3000-uk9-kickstart.6.0.2.U6.10.bin
  206130057    Aug 19 15:50:07 2020  n3000-uk9.6.0.2.U6.10.bin
N3K-C3048TP-1GE#

copy ftp://username@192.0.2.100/nxos.7.0.3.I7.8.bin bootflash: vrf management

Password:
Copy complete, now saving to disk (please wait)...
N3K-C3048TP-1GE#

dir | include bin

   37881856    Aug 19 15:48:58 2020  n3000-uk9-kickstart.6.0.2.U6.10.bin
  206130057    Aug 19 15:50:07 2020  n3000-uk9.6.0.2.U6.10.bin
  982681088    Aug 20 21:05:12 2020  nxos.7.0.3.I7.8.bin
```

Step 3. Verify MD5 or SHA512 Checksum of Target Release

After the target release unified binary image files are copied to the Nexus 3048TP-1GE switch, you would like to disruptively upgrade using your file transfer protocol of choice, verify that the binary image file was not corrupted in transport by ensuring its MD5 or SHA512 checksum matches what is published on Cisco's Software Download Website.

You can identify the MD5 and SHA512 checksum of NX-OS binary image files through Cisco's Software Download Website by hovering your cursor over the image on the website. An example of this is shown below.

Software Download

Details ✕

Description :	Cisco Nexus 9000/3000 Standalone Switch
Release :	7.0(3)I7(8)
Release Date :	04-Mar-2020
FileName :	nxos.7.0.3.I7.8.bin
Min Memory :	DRAM 0 Flash 0
Size :	937.16 MB (982681088 bytes)
MD5 Checksum :	4568b131a87aa8be71f6ec190e30d597
SHA512 Checksum :	77c6f20116f51e09035078d57209de21 ...

Release Notes for 7.0(3)I7(8) N3K   Release Notes for 7.0(3)I7(8) N9K

Related Links and Documentation
Release Notes for 7.0(3)I7(8) N9K
Release Notes for 7.0(3)I7(8) N3K

Release Date   Size

witch   04-Mar-2020   937.16 MB

nxos.7.0.3.I7.8.bin

This example demonstrates how to verify the MD5 checksum of the unified binary image file for the NX-OS 7.0(3)I7(8) software release through the **show file bootflash:{filename} md5sum** command. The expected MD5 checksum for the NX-OS 7.0(3)I7(8) unified binary image file is 4568b131a87aa8be71f6ec190e30d597.

```
<#root>

N3K-C3048TP-1GE#

show file bootflash:nxos.7.0.3.I7.8.bin md5sum

4568b131a87aa8be71f6ec190e30d597
```

Step 4. Upgrade NX-OS Software to Target Release via Install All Command

✎ **Note**: A mandatory manual BIOS upgrade can need to be performed if you are upgrading to a target release of 7.0(3)I2(2a), 7.0(3)I2(2b), 7.0(3)I2(2c), 7.0(3)I2(2d), 7.0(3)I2(2e), 7.0(3)I2(3), 7.0(3)I2(4), 7.0(3)I3(1), 7.0(3)I4(1), 7.0(3)I4(2), 7.0(3)I4(3), 7.0(3)I4(4), or 7.0(3)I5(1). Please review Field Notice 62433 and Cisco bug ID CSCvb64127 for more details.

Begin a standard disruptive NX-OS software upgrade through the **install all** command. This command requires the nxos parameter to be passed in with the absolute filepath of the NX-OS unified binary image files corresponding with the target release.

This example shows the **install all** command where the nxos parameter points to the absolute filepath of the NX-OS 7.0(3)I7(8) unified binary image file (bootflash:nxos.7.0.3.I7.8.bin).

✎ **Note**: The compatibility check results displayed during a disruptive NX-OS software upgrade can show a reason of Unsupported in new image, module needs to be powered off. This is expected behavior and is not indicative of an issue with the disruptive NX-OS software upgrade process. This

✎ message indicates that a non-disruptive ISSU to the target NX-OS software release is not supported, as the switch needs to reload in order for the NX-OS software upgrade to be successful. The example here shows this message and demonstrates that the NX-OS software upgrade process is successful regardless of this message.

```
<#root>

N3K-C3048TP-1GE#

install all nxos bootflash:nxos.7.0.3.I7.8.bin

Installer is forced disruptive

Verifying image bootflash:/nxos.7.0.3.I7.8.bin for boot variable "nxos".
[####################################] 100% -- SUCCESS

Verifying image type.
[####################################] 100% -- SUCCESS

Extracting "nxos" version from image bootflash:/nxos.7.0.3.I7.8.bin.
[####################################] 100% -- SUCCESS

Extracting "bios" version from image bootflash:/nxos.7.0.3.I7.8.bin.
[####################################] 100% -- SUCCESS

Performing runtime checks.
[####################################] 100% -- SUCCESS

Performing module support checks.
[####################################] 100% -- SUCCESS

Notifying services about system upgrade.
[####################################] 100% -- SUCCESS




Compatibility check is done:
Module  bootable          Impact  Install-type  Reason
------  --------  --------------  ------------  ------
     1       yes      disruptive         reset  Unsupported in new image, module needs to be powered of




Images are upgraded according to this table:
Module           Image         Running-Version                   New-Version  Upg-Required
------  ----------------  ----------------------  ----------------------  ------------
     1          kickstart           6.0(2)U6(10)                7.0(3)I7(8)           yes
     1               bios     v4.5.0(11/09/2017)      v4.5.0(11/09/2017)            no


Switch is reloaded for disruptive upgrade.
Do you want to continue with the installation (y/n)?  [n]

y


Time Stamp: Thu Aug 20 21:12:02 2020


Install is in progress, please wait.
```

```
Performing runtime checks.
[#####################################] 100% -- SUCCESS

Setting boot variables.
[#####################################] 100% -- SUCCESS

Performing configuration copy.
[#####################################] 100% -- SUCCESS

Time Stamp: Thu Aug 20 21:13:23 2020


Finishing the upgrade, switch is performed reboot in 10 seconds.
```

Step 5. Verify Successful Target NX-OS Software Upgrade

After the Nexus 3048TP-1GE switch has reloaded, verify that the upgrade was successful through the **show module** command. The output of this command can show the desired target release. An example of this is shown here, where the switch was successfully upgraded to NX-OS software release 7.0(3)I7(8).

```
<#root>

N3K-C3048TP-1GE#

show module

<snip>
Mod Ports            Module-Type                    Model               Status
--- ----- --------------------------------- --------------------- ---------
1   52    48x1GE + 4x10G Supervisor         N3K-C3048TP-1GE       active *

Mod Sw              Hw     Slot
--- --------------- ------ ----
1   7.0(3)I7(8)     1.6    NA
```

Step 6. Delete Intermediate Release Binary Image Files from Cisco Nexus Switch

After verifying that the NX-OS software upgrade from the intermediate release to the target release was successful, preserve free space on the switch's bootflash by deleting the intermediate release's kickstart and system binary image files from the bootflash of the device. This can be done with the **delete bootflash:{filename}** command. An example of this is shown here, where the NX-OS 6.0(2)U6(10) kickstart and system binary image files are deleted from the switch's bootflash.

```
<#root>

N3K-C3048TP-1GE#

dir | include bin

    37881856    Aug 19 15:48:58 2020  n3000-uk9-kickstart.6.0.2.U6.10.bin
   206130057    Aug 19 15:50:07 2020  n3000-uk9.6.0.2.U6.10.bin
   982681088    Aug 20 21:05:12 2020  nxos.7.0.3.I7.8.bin
N3K-C3048TP-1GE#

delete bootflash:n3000-uk9-kickstart.6.0.2.U6.10.bin
```

```
Do you want to delete "/n3000-uk9-kickstart.6.0.2.U6.10.bin" ? (yes/no/abort)   [y] y
N3K-C3048TP-1GE#
```

delete bootflash:n3000-uk9.6.0.2.U6.10.bin

```
Do you want to delete "/n3000-uk9.6.0.2.U6.10.bin" ? (yes/no/abort)   [y] y
N3K-C3048TP-1GE#
```

dir | include bin

```
  982681088    Aug 20 21:05:12 2020  nxos.7.0.3.I7.8.bin
```

Step 7. Execute NX-OS Compact Image Procedure on Target Release

> **Note**: You can skip this step if you upgrade using a compact NX-OS software image downloaded directly from Cisco's Software Download Website. For more information, refer to the Compact NX-OS Software Images on Cisco's Software Download Website section of the Cisco Nexus 3000 Series NX-OS Software Upgrade and Downgrade Guide, Release 7.x document.

Execute the NX-OS Compact Image Procedure on the NX-OS 7.0(3)I7(8) binary image file stored on the bootflash of the device with the **install all nxos bootflash:{nxos-binary-image-file.bin} compact** command. This is performed reduce the file size of the NX-OS 7.0(3)I7(8) binary image file, which increases the amount of free space on the bootflash. This is a requirement for future NX-OS software upgrades to be performed, as the total size of the bootflash on the Nexus 3048TP-1GE switch is not large enough to store two NX-OS binary image files in the 7.x or 9.x major releases at the same time. For more information about the NX-OS Compact Image Procedure, refer to the Nexus 3000, 3100, and 3500 NX-OS Compact Image Procedure document.

An example of the NX-OS Compact Image Procedure executed against the NX-OS 7.0(3)I7(8) binary image file stored on the bootflash of a Nexus switch is shown here:

```
<#root>

N3K-C3048TP-1GE#
```

dir | include bin

```
  982681088    Aug 20 21:05:12 2020  nxos.7.0.3.I7.8.bin
N3K-C3048TP-1GE#
```

install all nxos bootflash:nxos.7.0.3.I7.8.bin compact

```
Installer is performed perform compatibility check first. Please wait.
Compacting currently loaded image bootflash:/nxos.7.0.3.I7.8.bin
.....................................
Compact bootflash:/nxos.7.0.3.I7.8.bin done
N3K-C3048TP-1GE#
```

dir | include bin

```
  471871960    Aug 20 22:05:03 2020  nxos.7.0.3.I7.8.bin
```

Upgrade From NX-OS 6.0(2)U6(2a) or earlier to NX-OS 9.2(x)

This section of the document describes how to perform a standard disruptive NX-OS software upgrade from

a source release in the NX-OS 6.x major release to a target release in the NX-OS 9.2(x) minor release where the source release is NX-OS 6.0(2)U6(2a) or earlier.

✎ **Note**: An NX-OS software upgrade to a target release in the NX-OS 9.2(x) major release from a source release that is 6.0(2)U6(2a) or earlier requires three mandatory intermediate upgrades. The first intermediate upgrade is to NX-OS 6.0(2)U6(2a). The second intermediate upgrade is to NX-OS 6.0(2)U6(10). The third intermediate upgrade is to NX-OS 7.0(3)I7(8). After the third intermediate upgrade to 7.0(3)I7(8), you can upgrade to the desired target release in the NX-OS 9.2(x) minor release.

An example standard disruptive NX-OS software upgrade is performed on a Cisco Nexus N3K-C3048TP-1GE switch from a source release of 6.0(2)U6(1a) to a target release of 9.2(4) with mandatory intermediate upgrades to 6.0(2)U6(2a), 6.0(2)U6(10), and 7.0(3)I7(8).

```
<#root>

N3K-C3048TP-1GE#

show module

<snip>
Mod Ports Module-Type                            Model                 Status
--- ----- -------------------------------- --------------------- ------------
1   52    48x1GE + 4x10G Supervisor              N3K-C3048TP-1GE-SUP   active *


Mod Sw             Hw     World-Wide-Name(s) (WWN)
--- -------------- ------ --------------------------------------------------
1   6.0(2)U6(1a)   1.6    --
```

Step 1. Upgrade From NX-OS 6.x to NX-OS 6.0(2)U6(3a) or Later

Follow the [Upgrade From NX-OS 6.x to NX-OS 6.0(2)U6(3a) or Later](#) section of this document to perform a series of standard disruptive NX-OS software upgrades from your source release to NX-OS software release 6.0(2)U6(10) through an intermediate release of 6.0(2)U6(2a). This process covers the first and second intermediate upgrades and is required for the third intermediate upgrade from 6.0(2)U6(10) to 7.0(3)I7(8) to be successful, which is required for an upgrade to a target release in the NX-OS 9.2(x) minor release to be successful.

Step 2. Upgrade From NX-OS 6.0(2)U6(3a) or Later to NX-OS 7.x

Follow the [Upgrade From NX-OS 6.0(2)U6(3a) or Later to NX-OS 7.x](#) section of this document to perform a standard disruptive NX-OS software upgrade from NX-OS software release 6.0(2)U6(10) to the intermediate release 7.0(3)I7(8). This is required for an upgrade to a target release in the NX-OS 9.2(x) minor release to be successful.

Step 3. Upgrade From NX-OS 7.x to NX-OS 9.2(x)

Follow the [Upgrade From NX-OS 7.x to NX-OS 9.2(x)](#) section of this document to perform a standard disruptive NX-OS software upgrade from NX-OS software release 7.0(3)I7(8) to your desired target release in the NX-OS 9.2(x) minor release.

Upgrade From NX-OS 6.0(2)U6(3a) or later to NX-OS 9.2(x)

This section of the document describes how to perform a standard disruptive NX-OS software upgrade from a source release in the NX-OS 6.x major release to a target release in the NX-OS 9.2(x) minor release where the source release is NX-OS 6.0(2)U6(3a) or later.

✎ **Note**: An NX-OS software upgrade to a target release in the NX-OS 9.2(x) minor release from a source release that is 6.0(2)U6(3a) or later requires a mandatory intermediate upgrade to NX-OS 7.0(3)I7(8) before upgrading to the desired target release.

An example standard disruptive NX-OS software upgrade is performed on a Cisco Nexus N3K-C3048TP-1GE switch from a source release of 6.0(2)U6(10) to a target release of 9.2(4) with a mandatory intermediate upgrade to 7.0(3)I7(8).

```
<#root>

N3K-C3048TP-1GE#

show module

<snip>
Mod Ports Module-Type                            Model                  Status
--- ----- -------------------------------- ---------------------- ------------
1   52    48x1GE + 4x10G Supervisor             N3K-C3048TP-1GE-SUP    active *

Mod  Sw             Hw      World-Wide-Name(s) (WWN)
---  -------------- ------  --------------------------------------------------
1    6.0(2)U6(10)   1.6     --
```

Step 1. Upgrade From NX-OS 6.0(2)U6(3a) or Later to NX-OS 7.x

Follow the [Upgrade From NX-OS 6.0(2)U6(3a) or Later to NX-OS 7.x](#) section of this document to perform a standard disruptive NX-OS software upgrade from NX-OS software release 6.0(2)U6(10) to the intermediate release 7.0(3)I7(8). This is required for an upgrade to a target release in the NX-OS 9.2(x) minor release to be successful.

Step 2. Upgrade From NX-OS 7.x to NX-OS 9.2(x)

Follow the [Upgrade From NX-OS 7.x to NX-OS 9.2(x)](#) section of this document to perform a standard disruptive NX-OS software upgrade from NX-OS software release 7.0(3)I7(8) to your desired target release in the NX-OS 9.2(x) minor release.

Upgrade From NX-OS 6.0(2)U6(2a) or earlier to NX-OS 9.3(x)

This section of the document describes how to perform a standard disruptive NX-OS software upgrade from a source release in the NX-OS 6.x major release to a target release in the NX-OS 9.3(x) minor release where the source release is NX-OS 6.0(2)U6(2a) or earlier.

✎ **Note**: An NX-OS software upgrade to a target release in the NX-OS 9.3(x) minor release from a source release that is 6.0(2)U6(2a) or earlier requires three mandatory intermediate upgrades. The first intermediate upgrade is to NX-OS 6.0(2)U6(2a). The second intermediate upgrade is to NX-OS

✎ 6.0(2)U6(10). The third intermediate upgrade is to NX-OS 7.0(3)I7(8). After the third intermediate upgrade to 7.0(3)I7(8), you can upgrade to the desired target release in the NX-OS 9.3(x) minor release.

An example standard disruptive NX-OS software upgrade is performed on a Cisco Nexus N3K-C3048TP-1GE switch from a source release of 6.0(2)U6(1a) to a target release of 9.3(5) with mandatory intermediate upgrades to 6.0(2)U6(2a), 6.0(2)U6(10), and 7.0(3)I7(8).

```
<#root>

N3K-C3048TP-1GE#

show module

<snip>
Mod Ports Module-Type                         Model                  Status
--- ----- ----------------------------------- ---------------------- ------------
1   52    48x1GE + 4x10G Supervisor           N3K-C3048TP-1GE-SUP    active *

Mod  Sw            Hw      World-Wide-Name(s) (WWN)
---  ------------- ------  -------------------------------------------------------
1    6.0(2)U6(1a)  1.6     --
```

Step 1. Upgrade From NX-OS 6.x to NX-OS 6.0(2)U6(3a) or Later

Follow the Upgrade From NX-OS 6.x to NX-OS 6.0(2)U6(3a) or Later section of this document to perform a series of standard disruptive NX-OS software upgrades from your source release to NX-OS software release 6.0(2)U6(10) through an intermediate release of 6.0(2)U6(2a). This process covers the first and second intermediate upgrades and is required for the third intermediate upgrade from 6.0(2)U6(10) to 7.0(3)I7(8) to be successful, which is required for an upgrade to a target release in the NX-OS 9.3(x) minor release to be successful.

Step 2. Upgrade From NX-OS 6.0(2)U6(3a) or Later to NX-OS 7.x

Follow the Upgrade From NX-OS 6.0(2)U6(3a) or Later to NX-OS 7.x section of this document to perform a standard disruptive NX-OS software upgrade from NX-OS software release 6.0(2)U6(10) to the intermediate release 7.0(3)I7(8). This is required for an upgrade to a target release in the NX-OS 9.3(x) minor release to be successful.

Step 3. Upgrade From NX-OS 7.x to NX-OS 9.3(x)

Follow the Upgrade From NX-OS 7.x to NX-OS 9.3(x) section of this document to perform a standard disruptive NX-OS software upgrade from NX-OS software release 7.0(3)I7(8) to your desired target release in the NX-OS 9.3(x) minor release.

Upgrade From NX-OS 6.0(2)U6(3a) or Later to NX-OS 9.3(x)

This section of the document is performed describe step-by-step instructions to perform a standard disruptive NX-OS software upgrade from a source release in the NX-OS 6.x major release to a target release in the NX-OS 9.3(x) minor release where the source release is NX-OS 6.0(2)U6(3a) or later.

> ✎ **Note**: An NX-OS software upgrade to a target release in the NX-OS 9.3(x) minor release from a source release that is 6.0(2)U6(3a) or later requires a mandatory intermediate upgrade to NX-OS 7.0(3)I7(8) before upgrading to the desired target release.

An example standard disruptive NX-OS software upgrade is performed on a Cisco Nexus N3K-C3048TP-1GE switch from a source release of 6.0(2)U6(10) to a target release of 9.3(5) with a mandatory intermediate upgrade to 7.0(3)I7(8).

```
<#root>

N3K-C3048TP-1GE#

show module

<snip>
Mod Ports Module-Type                        Model                  Status
--- ----- ---------------------------------- ---------------------- ------------
1   52    48x1GE + 4x10G Supervisor          N3K-C3048TP-1GE-SUP    active *

Mod  Sw             Hw      World-Wide-Name(s) (WWN)
---  -------------- ------  ------------------------------------------------------
1    6.0(2)U6(10)   1.6     --
```

Step 1. Upgrade From NX-OS 6.0(2)U6(3a) or Later to NX-OS 7.x

Follow the [Upgrade From NX-OS 6.0(2)U6(3a) or Later to NX-OS 7.x](#) section of this document to perform a standard disruptive NX-OS software upgrade from NX-OS software release 6.0(2)U6(10) to the intermediate release 7.0(3)I7(8). This is required for an upgrade to a target release in the NX-OS 9.3(x) minor release to be successful.

Step 2. Upgrade From NX-OS 7.x to NX-OS 9.3(x)

Follow the [Upgrade From NX-OS 7.x to NX-OS 9.3(x)](#) section of this document to perform a standard disruptive NX-OS software upgrade from NX-OS software release 7.0(3)I7(8) to your desired target release in the NX-OS 9.3(x) minor release.

Upgrade From NX-OS 7.x to NX-OS 7.x

This section of the document describes how to perform a standard disruptive NX-OS software upgrade from a source release in the NX-OS 7.x major release to a target release later in the NX-OS 7.x major release.

> ✎ **Note**: An NX-OS software upgrade from a source release of 7.0(3)I7(5) or 7.0(3)I7(5a) to a later NX-OS software release can fail with a "Digital signature verification failed" or "Image verification failed" error message. The root cause of this issue is Cisco bug ID [CSCvm11656](#). Disabling NX-OS image verification for this upgrade with the **no feature signature-verification** configuration command is performed work around this issue.

An example standard disruptive NX-OS software upgrade is performed on a Cisco Nexus N3K-C3048TP-1GE switch from a source release of 7.0(3)I2(2a) to a target release of 7.0(3)I7(8).

```
<#root>
```

```
N3K-C3048TP-1GE#

show module

<snip>
Mod  Ports  Module-Type                         Model              Status
---  -----  ----------------------------------- ------------------ ----------
1    52     48x1GE + 4x10G Supervisor           N3K-C3048TP-1GE    active *

Mod  Sw               Hw     Slot
---  ---------------- ------ ----
1    7.0(3)I2(2a)     1.6    NA
```

Step 1. Download Target Release from Cisco Software Download

NX-OS 7.x software uses a single NX-OS binary image file (sometimes referred to as a unified image file). You need to download this image from Cisco's Software Download Website to your local computer. The specific steps you need to take to download software from Cisco's Software Download Website are outside the scope of this document.

Note: If you are upgrading to NX-OS software release 7.0(3)I7(8) or 7.0(3)I7(9), you can download the compact NX-OS software image from Cisco's Software Download Website. When browsing the website, select the model of Nexus switch that you are attempting to upgrade and navigate to the desired target NX-OS software release. Then, locate the software image with Compact Image in its description and the word compact in its filename. For more information, refer to the Compact NX-OS Software Images on Cisco's Software Download Website section of the Cisco Nexus 3000 Series NX-OS Software Upgrade and Downgrade Guide, Release 7.x document.

Step 2. Copy Target Release to Cisco Nexus Switch

Copy the target release unified binary image files to the Nexus 3048TP-1GE switch you would like to disruptively upgrade using your file transfer protocol of choice. This example demonstrates how to copy the NX-OS 7.0(3)I7(8) software release kickstart and system binary image files via File Transfer Protocol from an FTP server **1**92.0.2.100 reachable via the management VRF.

```
<#root>

N3K-C3048TP-1GE#

dir | include bin

  537972736    Sep 02 17:51:02 2020  nxos.7.0.3.I2.2a.bin
N3K-C3048TP-1GE#

copy ftp://username@192.0.2.100/nxos.7.0.3.I7.8.bin bootflash: vrf management

Password:
***** Transfer of file Completed Successfully *****
Copy complete, now saving to disk (please wait)...
N3K-C3048TP-1GE#

dir | include bin

  537972736    Sep 02 17:51:02 2020  nxos.7.0.3.I2.2a.bin
  982681088    Sep 02 19:05:14 2020  nxos.7.0.3.I7.8.bin
```

✎ **Note**: Starting with NX-OS software release 7.0(3)I5(2) and later, you need to copy the target release unified binary image file via SCP by executing the NX-OS Compact Image Procedure via SCP. For more information on this procedure, refer to the [Nexus 3000, 3100, and 3500 NX-OS Compact Image Procedure document](link).

✎ **Note**: In order to execute the NX-OS Compact Image Procedure and reduce the file size of the NX-OS unified binary image file, the MD5 and SHA512 checksum of the NX-OS unified binary image file changes and is different from the MD5/SHA512 checksum published on [Cisco's Software Download Website](link). This is expected behavior and is not indicative of an issue - skip Step 3 and Step 4 in this procedure and continue with an NX-OS software upgrade in this scenario.

Step 3. Verify MD5 or SHA512 Checksum of Target Release

✎ **Note**: This step is only required if you did not copy the target release unified binary image via SCP by executing the NX-OS Compact Image Procedure via SCP in Step 2.

Verify that the binary image file was not corrupted in transport by ensuring its MD5 or SHA512 checksum matches what is published on [Cisco's Software Download Website](link).

You can identify the MD5 and SHA512 checksum of NX-OS binary image files through [Cisco's Software Download Website](link) by hovering your cursor over the image on the website. An example of this is shown below.

Software Download

Downloads Home / Switches / Data Center Switches / Nexus 3000 Series Switches / Nexus 3048 Switch / NX-OS System Software- 7.0(3)I7(8)

Details   ✕

Description :	Cisco Nexus 9000/3000 Standalone Switch
Release :	7.0(3)I7(8)
Release Date :	04-Mar-2020
FileName :	nxos.7.0.3.I7.8.bin
Min Memory :	DRAM 0 Flash 0
Size :	937.16 MB (982681088 bytes)
MD5 Checksum :	4568b131a87aa8be71f6ec190e30d597 📋
SHA512 Checksum :	77c6f20116f51e09035078d57209de21 ... 📋

Release Notes for 7.0(3)I7(8) N3K   Release Notes for 7.0(3)I7(8) N9K

Related Links and Documentation
Release Notes for 7.0(3)I7(8) N9K
Release Notes for 7.0(3)I7(8) N3K

| | Release Date | Size |
| switch | 04-Mar-2020 | 937.16 MB | ↓ 🛒 📄 |

nxos.7.0.3.I7.8.bin

9.3(5)

This example demonstrates how to verify the MD5 checksum of the unified binary image file for the NX-OS 7.0(3)I7(8) software release through the **show file bootflash:{filename} md5sum** command. The expected MD5 checksum for the NX-OS 7.0(3)I7(8) unified binary image file is 4568b131a87aa8be71f6ec190e30d597.

<#root>

```
N3K-C3048TP-1GE#
```

show file bootflash:nxos.7.0.3.I7.8.bin md5sum

```
4568b131a87aa8be71f6ec190e30d597
```

Step 4. Execute NX-OS Compact Image Procedure on Target Release

✎ **Note**: You can skip this step if you upgrade using a compact NX-OS software image downloaded directly from Cisco's Software Download Website. For more information, refer to the Compact NX-OS Software Images on Cisco's Software Download Website section of the Cisco Nexus 3000 Series NX-OS Software Upgrade and Downgrade Guide, Release 7.x document.
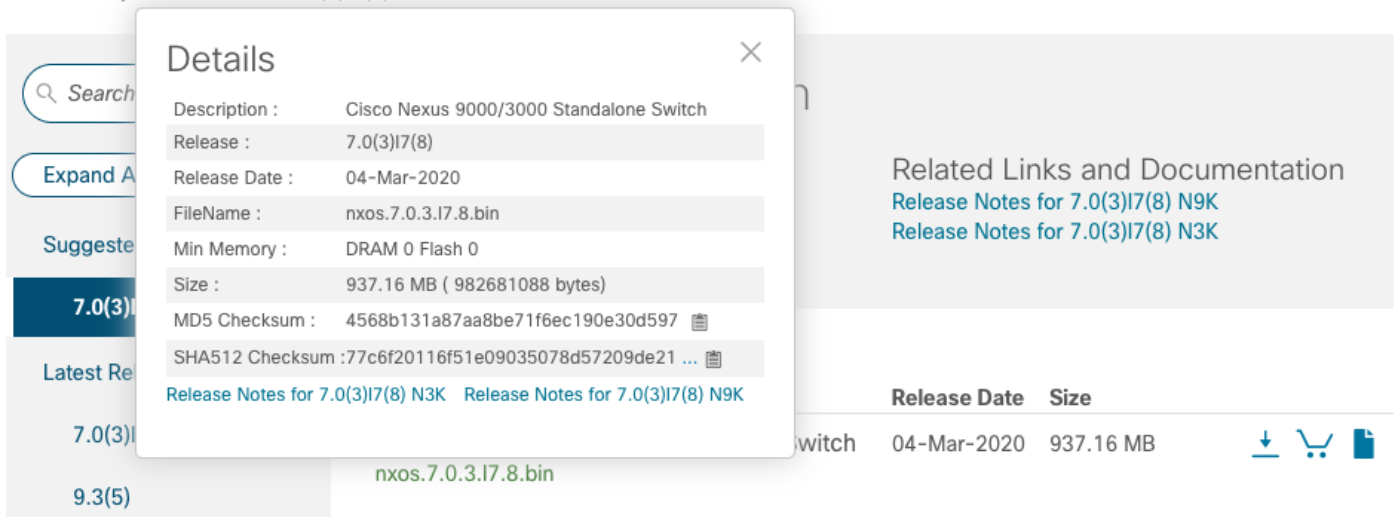
✎ **Note**: This step is only required if you did not copy the target release unified binary image via SCP by executing the NX-OS Compact Image Procedure via SCP in Step 2.

Execute the NX-OS Compact Image Procedure on the NX-OS 7.0(3)I7(8) binary image file stored on the bootflash of the device with the **install all nxos bootflash:{nxos-binary-image-file.bin} compact** command. This reduces the file size of the NX-OS 7.0(3)I7(8) binary image file, which increases the amount of free space on the bootflash. This is a requirement for future NX-OS software upgrades to be performed, as the total size of the bootflash on the Nexus 3048TP-1GE switch is not large enough to store two NX-OS binary image files in the 7.x or 9.x major releases at the same time. For more information about the NX-OS Compact Image Procedure, refer to the Nexus 3000, 3100, and 3500 NX-OS Compact Image Procedure document.

An example of the NX-OS Compact Image Procedure executed against the NX-OS 7.0(3)I7(8) binary image file stored on the bootflash of a Nexus switch is shown here:

```
<#root>
```

```
N3K-C3048TP-1GE#
```

dir | include bin

```
  537972736    Sep 02 17:51:02 2020  nxos.7.0.3.I2.2a.bin
  982681088    Aug 20 21:05:12 2020  nxos.7.0.3.I7.8.bin
N3K-C3048TP-1GE#
```

install all nxos bootflash:nxos.7.0.3.I7.8.bin compact

```
Installer is performed perform compatibility check first. Please wait.
Compacting currently loaded image bootflash:/nxos.7.0.3.I7.8.bin
........................................
Compact bootflash:/nxos.7.0.3.I7.8.bin done
N3K-C3048TP-1GE#
```

dir | include bin

```
  537972736    Sep 02 17:51:02 2020  nxos.7.0.3.I2.2a.bin
  471871960    Aug 20 22:05:03 2020  nxos.7.0.3.I7.8.bin
```

Step 5. Upgrade NX-OS Software to Target Release via Install All Command.

Begin a standard disruptive NX-OS software upgrade through the **install all** command. This command requires the nxos parameter to be passed in with the absolute filepath of the NX-OS unified binary image files corresponding with the target release.

This example shows the **install all** command where the nxos parameter points to the absolute filepath of the NX-OS 7.0(3)I7(8) unified binary image file (bootflash:nxos.7.0.3.I7.8.bin).

✎ **Note**: When upgrading from a source release of 7.0(3)I2(2), 7.0(3)I2(2a), 7.0(3)I2(2b), 7.0(3)I2(2c), 7.0(3)I2(2d), 7.0(3)I2(2e), or 7.0(3)I2(3) to any target release that is 7.0(3)I3(1) or later, you can see this message:

Running-config contains configuration that is incompatible with the new image (strict incompatibility).
Please run **show incompatibility-all nxos <image>** command to find out which feature needs to be disabled.

This is a false positive as a result of Cisco bug ID CSCuz23930 and can be safely ignored if the **show incompatiblity-all nxos** command does not show any incompatible configuration. The example here shows this message and demonstrates that the NX-OS software upgrade process is successful regardless of this message.

```
<#root>

N3K-C3048TP-1GE#

install all nxos bootflash:nxos.7.0.3.I7.8.bin

Installer is performed perform compatibility check first. Please wait.
Installer is forced disruptive

Verifying image bootflash:/nxos.7.0.3.I7.8.bin for boot variable "nxos".
[###################] 100% -- SUCCESS

Verifying image type.
[###################] 100% -- SUCCESS
[##                 ]   5% -- SUCCESS

Preparing "nxos" version info using image bootflash:/nxos.7.0.3.I7.8.bin.
[###################] 100% -- SUCCESS

Preparing "bios" version info using image bootflash:/nxos.7.0.3.I7.8.bin.
[###################] 100% -- SUCCESS

Collecting "running" plugin(s) information.
[#                  ]   0%
Collecting plugin(s) information from "new" image.
[#                  ]   0%
Performing runtime checks.
[##                 ]   5%

"Running-config contains configuration that is incompatible with the new image (strict incompatibility)
 Please run 'show incompatibility-all nxos <image>' command to find out which feature needs to be disabl

Performing module support checks.
[###################] 100% -- SUCCESS

Notifying services about system upgrade.
[###################] 100% -- SUCCESS
```

```
Compatibility check is done:
Module  bootable          Impact  Install-type  Reason
------  --------  --------------  ------------  ------
     1       yes      disruptive         reset  Incompatible image


Images is performed be upgraded according to following table:
Module      Image             Running-Version(pri:alt)         New-Version  Upg-Required
------  ----------  ----------------------------------------  -------------------  ------------
     1        nxos                         7.0(3)I2(2a)            7.0(3)I7(8)           yes
     1        bios               v4.5.0(11/09/2017)      v4.5.0(11/09/2017)            no


Switch will be reloaded for disruptive upgrade.
Do you want to continue with the installation (y/n)?  [n]

y



Install is in progress, please wait.

Performing runtime checks.
[##################] 100% -- SUCCESS

Setting boot variables.
[##################] 100% -- SUCCESS

Performing configuration copy.
[##################] 100% -- SUCCESS

Module 1: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[##################] 100% -- SUCCESS


Finishing the upgrade, switch is performed reboot in 10 seconds.
```

Step 6. Verify Successful Target NX-OS Software Upgrade

After the Nexus 3048TP-1GE switch has reloaded, verify that the upgrade was successful through the **show module** command. The output of this command can show the desired target release. An example of this is shown here, where the switch was successfully upgraded to NX-OS software release 7.0(3)I7(8).

<#root>

N3K-C3048TP-1GE#

show module

```
<snip>
Mod Ports          Module-Type                     Model          Status
--- ----- ------------------------------------ --------------------- ---------
1   52    48x1GE + 4x10G Supervisor            N3K-C3048TP-1GE     active *
```

```
Mod  Sw              Hw     Slot
---  --------------- ------ ----
1    7.0(3)I7(8)     1.6    NA
```

Step 7. Delete Source Release Binary Image Files from Cisco Nexus Switch

After verifying that the NX-OS software upgrade from the source release to the target release was successful, preserve free space on the switch's bootflash by deleting the source release's unified binary image files from the bootflash of the device. This can be done with the **delete bootflash:{filename}** command. An example of this is shown here, where the NX-OS 7.0(3)I2(2a) unified binary image file is deleted from the switch's bootflash.

```
<#root>

N3K-C3048TP-1GE#

dir | include bin

  537972736    Sep 02 17:51:02 2020  nxos.7.0.3.I2.2a.bin
  471871960    Aug 20 22:05:03 2020  nxos.7.0.3.I7.8.bin
N3K-C3048TP-1GE#

delete bootflash:nxos.7.0.3.I2.2a.bin

Do you want to delete "/nxos.7.0.3.I2.2a.bin" ? (yes/no/abort)   [y]
N3K-C3048TP-1GE#

dir | include bin

  471871960    Aug 20 22:05:03 2020  nxos.7.0.3.I7.8.bin
```

Upgrade From NX-OS 7.x to NX-OS 9.2(x)

This section of the document is performed describe step-by-step instructions to perform a standard disruptive NX-OS software upgrade from a source release in the NX-OS 7.x major release to a target release in the NX-OS 9.2(x) minor release.

✎ **Note**: An NX-OS software upgrade to a target release in the NX-OS 9.2(x) minor release from a source release that is in the NX-OS 7.x major release requires a mandatory intermediate upgrade to NX-OS 7.0(3)I7(8) before upgrading to the desired target release.

An example standard disruptive NX-OS software upgrade is performed on a Cisco Nexus N3K-C3048TP-1GE switch from a source release of 7.0(3)I2(2a) to a target release of 9.2(4) with a mandatory intermediate upgrade to 7.0(3)I7(8).

```
<#root>

N3K-C3048TP-1GE#

show module

<snip>
Mod  Ports  Module-Type                              Model            Status
```

```
---  -----  ------------------------------------  ----------------  ----------
1    52     48x1GE + 4x10G Supervisor             N3K-C3048TP-1GE   active *

Mod  Sw               Hw     Slot
---  ---------------  ------ ----
1    7.0(3)I2(2a)     1.6    NA
```

Step 1. Upgrade From NX-OS 7.x to NX-OS 7.x

Follow the [Upgrade From NX-OS 7.x to NX-OS 7.x](#) section of this document to perform a standard disruptive NX-OS software upgrade from your source release to NX-OS software release 7.0(3)I7(8).

Step 2. Download Target Release from Cisco Software Download

NX-OS 9.2(x) software uses a single NX-OS binary image file (sometimes referred to as a unified image file). You is performed need to download this image from [Cisco's Software Download Website](#) to your local computer. The specific steps you need to take to download software from [Cisco's Software Download Website](#) are outside the scope of this document.

✎ **Note**: If you are upgrading to NX-OS software release 9.2(4), you can download the compact NX-OS software image from [Cisco's Software Download Website](#). When browsing the website, select the model of Nexus switch that you are attempting to upgrade and navigate to the desired target NX-OS software release. Then, locate the software image with Compact Image in its description and the word compact in its filename. For more information, refer to the [Compact NX-OS Software Images on Cisco's Software Download Website section of the Cisco Nexus 3000 Series NX-OS Software Upgrade and Downgrade Guide, Release 9.2(x) document.](#)

Step 3. Copy Target Release to Cisco Nexus Switch through NX-OS Compact Image Procedure via SCP

Copy the target release unified binary image files to the Nexus 3048TP-1GE switch by executing the NX-OS Compact Image Procedure via SCP. For more information on this procedure, please refer to the [Nexus 3000, 3100, and 3500 NX-OS Compact Image Procedure Document](#)

✎ **Note**: If a USB flash drive is attached to the Nexus 3048TP-1GE switch, you can also execute the NX-OS Compact Image Procedure on the NX-OS unified binary image file located on the USB flash drive, then copy the resulting unified binary image file to the bootflash of the switch.

✎ **Note**: As part of executing the NX-OS Compact Image Procedure and reducing the file size of the NX-OS unified binary image file, the MD5 and SHA512 checksum of the NX-OS unified binary image file is performed change and be different than the MD5/SHA512 checksum published on [Cisco's Software Download Website](#). This is expected behavior and is not indicative of an issue - proceed with an NX-OS software upgrade in this scenario.

This example demonstrates how to copy the NX-OS 9.2(4) software release unified binary image files through the NX-OS Compact Image Procedure via Secure Copy Protocol (SCP) from an SCP server 192.0.2.100 reachable via the management VRF.

<#root>

```
N3K-C3048TP-1GE#
```

dir | include bin

```
  471871960   Aug 20 22:05:03 2020  nxos.7.0.3.I7.8.bin
N3K-C3048TP-1GE#
```

copy scp://username@192.0.2.100/nxos.9.2.4.bin bootflash: compact vrf management

```
The authenticity of host '192.0.2.100 (192.0.2.100)' can't be established.
ECDSA key fingerprint is SHA256:3320762fa86de84cac0b3e487afecae38775592bfe756699ce65213034c850f3.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '192.0.2.100' (ECDSA) to the list of known hosts.
username@192.0.2.100's password:
nxos.9.2.4.bin                                            100% 1278MB   4.1MB/s   07
N3K-C3048TP-1GE#
```

dir | include bin

```
  471871960   Aug 20 22:05:03 2020  nxos.7.0.3.I7.8.bin
  544195757   Sep 03 17:48:23 2020  nxos.9.2.4.bin
```

Step 4. Upgrade NX-OS Software to Target Release via Install All Command

Begin a standard disruptive NX-OS software upgrade through the **install all** command. This command requires the nxos parameter to be passed in with the absolute filepath of the NX-OS unified binary image files corresponding with the target release.

This example shows the **install all** command where the nxos parameter points to the absolute filepath of the NX-OS 9.2(4) unified binary image file (bootflash:nxos.9.2.4.bin).

<#root>

```
N3K-C3048TP-1GE#
```

install all nxos bootflash:nxos.9.2.4.bin

```
Installer is performed perform compatibility check first. Please wait.
Installer is forced disruptive

Verifying image bootflash:/nxos.9.2.4.bin for boot variable "nxos".
[##################] 100% -- SUCCESS

Verifying image type.
[##################] 100% -- SUCCESS
[##                ]   5% -- SUCCESS

Preparing "nxos" version info using image bootflash:/nxos.9.2.4.bin.
[##################] 100% -- SUCCESS

Preparing "bios" version info using image bootflash:/nxos.9.2.4.bin.
[##################] 100% -- SUCCESS

Collecting "running" plugin(s) information.
[##################] 100% -- SUCCESS

Collecting plugin(s) information from "new" image.
[##################] 100% -- SUCCESS
[##################] 100% -- SUCCESS
```

```
Performing module support checks.
[#################] 100% -- SUCCESS

Notifying services about system upgrade.
[#################] 100% -- SUCCESS



Compatibility check is done:
Module  bootable         Impact  Install-type  Reason
------  --------  --------------  ------------  ------
     1       yes      disruptive         reset  default upgrade is not hitless



Images is performed be upgraded according to following table:
Module      Image            Running-Version(pri:alt)          New-Version  Upg-Required
------  ----------  ---------------------------------------  ------------------  ------------
     1        nxos                           7.0(3)I7(8)              9.2(4)           yes
     1        bios              v4.5.0(11/09/2017)  v5.0.0(06/06/2018)           yes
     1   power-seq                                   5.5                 5.5            no


Switch will be reloaded for disruptive upgrade.
Do you want to continue with the installation (y/n)?  [n]

y



Install is in progress, please wait.

Performing runtime checks.
[#################] 100% -- SUCCESS

Setting boot variables.
[#################] 100% -- SUCCESS

Performing configuration copy.
[#################] 100% -- SUCCESS

Module 1: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#################] 100% -- SUCCESS


Finishing the upgrade, switch is performed reboot in 10 seconds.
```

Step 5. Verify Successful Target NX-OS Software Upgrade

After the Nexus 3048TP-1GE switch has reloaded, verify that the upgrade was successful through the **show module** command. The output of this command can show the desired target release. An example of this is shown here, where the switch was successfully upgraded to NX-OS software release 9.2(4).

```
<#root>

N3K-C3048TP-1GE#

show module
```

```
<snip>
Mod Ports            Module-Type                    Model                  Status
--- ----- ------------------------------------ --------------------- ---------
1   52    48x1GE + 4x10G Supervisor            N3K-C3048TP-1GE        active *


Mod  Sw                     Hw     Slot
---  ---------------------- ------ ----
1    9.2(4)                 1.6    NA
```

Step 6: Delete Intermediate Release Binary Image Files from Cisco Nexus Switch

After you verify the NX-OS software upgrade from the intermediate release to the target release was successful, delete the intermediate release's unified binary image files from the bootflash of the device to preserve free space on the switch's bootflash. This can be done with the **delete bootflash:{filename}** command. An example of this is shown here, where the NX-OS 7.0(3)I7(8) unified binary image file is deleted from the switch's bootflash.

```
<#root>

N3K-C3048TP-1GE#

dir | include bin

  471871960     Aug 20 22:05:03 2020  nxos.7.0.3.I7.8.bin
  544195757     Sep 03 17:48:23 2020  nxos.9.2.4.bin
N3K-C3048TP-1GE#

delete bootflash:nxos.7.0.3.I7.8.bin

Do you want to delete "/nxos.7.0.3.I7.8.bin" ? (yes/no/abort)   [y]
N3K-C3048TP-1GE#

dir | include bin

  544195757     Sep 03 17:48:23 2020  nxos.9.2.4.bin
```

Upgrade From NX-OS 7.x to NX-OS 9.3(x)

This section of the document describes how to perform a standard disruptive NX-OS software upgrade from a source release in the NX-OS 7.x major release to a target release in the NX-OS 9.3(x) minor release.

Note: An NX-OS software upgrade to a target release in the NX-OS 9.3(x) minor release from a source release that is 7.0(3)I7(6) or earlier requires a mandatory intermediate upgrade to NX-OS 7.0(3)I7(8).

An example standard disruptive NX-OS software upgrade is performed on a Cisco Nexus N3K-C3048TP-1GE switch from a source release of 7.0(3)I5(2) to a target release of 9.3(5) with the mandatory intermediate upgrade to 7.0(3)I7(8).

```
<#root>

N3K-C3048TP-1GE#
```

```
show module

<snip>
Mod Ports            Module-Type                    Model                 Status
--- ----- ------------------------------------- --------------------- ---------
1   52    48x1GE + 4x10G Supervisor             N3K-C3048TP-1GE       active *

Mod Sw               Hw     Slot
--- ---------------- ------ ----
1   7.0(3)I5(2)      1.6    NA
```

Step 1. Upgrade From NX-OS 7.x to NX-OS 7.x

Follow the Upgrade From NX-OS 7.x to NX-OS 7.x section of this document to perform a standard disruptive NX-OS software upgrade from your source release to NX-OS software release 7.0(3)I7(8).

Step 2. Download Target Release from Cisco Software Download

NX-OS 9.3(x) software uses a single NX-OS binary image file (sometimes referred to as a unified image file). You need to download this image from Cisco's Software Download Website to your local computer. The specific steps you need to take to download software from Cisco's Software Download Website are outside the scope of this document.

Note: If you are upgrading to NX-OS software release 9.3(4) or later, you can download the compact NX-OS software image from Cisco's Software Download Website. When browsing the website, select the model of Nexus switch that you are attempting to upgrade and navigate to the desired target NX-OS software release. Then, locate the software image with Compact Image in its description and the word compact in its filename. For more information, refer to the Compact NX-OS Software Images on Cisco's Software Download Website section of the Cisco Nexus 3000 Series NX-OS Software Upgrade and Downgrade Guide, Release 9.3(x) document.

Step 3. Copy Target Release to Cisco Nexus Switch through NX-OS Compact Image Procedure via SCP

Copy the target release unified binary image files to the Nexus 3048TP-1GE switch by executing the NX-OS Compact Image Procedure via SCP. For more information on this procedure, please refer to the Nexus 3000, 3100, and 3500 NX-OS Compact Image Procedure Document

---

Note: If a USB flash drive is attached to the Nexus 3048TP-1GE switch, you can also execute the NX-OS Compact Image Procedure on the NX-OS unified binary image file located on the USB flash drive, then copy the resulting unified binary image file to the bootflash of the switch.

Note: In order to execute the NX-OS Compact Image Procedure and reduce the file size of the NX-OS unified binary image file, the MD5 and SHA512 checksum of the NX-OS unified binary image file changes and be different than the MD5/SHA512 checksum published on Cisco's Software Download Website. This is expected behavior and is not indicative of an issue - proceed with an NX-OS software upgrade in this scenario.

This example demonstrates how to copy the NX-OS 9.3(5) software release unified binary image files

through the NX-OS Compact Image Procedure via Secure Copy Protocol from an SCP server 192.0.2.100 reachable via the management VRF.

```
<#root>

N3K-C3048TP-1GE#

dir | include bin

  471871960    Sep 03 19:12:21 2020  nxos.7.0.3.I7.8.bin
N3K-C3048TP-1GE#

copy scp://username@192.0.2.100/nxos.9.3.5.bin bootflash: compact vrf management

The authenticity of host '192.0.2.100 (192.0.2.100)' can't be established.
ECDSA key fingerprint is SHA256:3320762fa86de84cac0b3e487afecae38775592bfe756699ce65213034c850f3.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '192.0.2.100' (ECDSA) to the list of known hosts.
username@192.0.2.100's password:
nxos.9.3.5.bin                                                    100% 1880MB   3.7MB/s   07
N3K-C3048TP-1GE#

dir | include bin

  471871960    Sep 03 19:12:21 2020  nxos.7.0.3.I7.8.bin
  669892021    Sep 03 19:26:17 2020  nxos.9.3.5.bin
```

Step 4. Upgrade NX-OS Software to Target Release via Install All Command

Begin a standard disruptive NX-OS software upgrade through the **install all** command. This command requires the nxos parameter to be passed in with the absolute filepath of the NX-OS unified binary image files corresponding with the target release.

This example shows the **install all** command where the nxos parameter points to the absolute filepath of the NX-OS 9.3(5) unified binary image file (bootflash:nxos.9.3.5.bin).

```
<#root>

N3K-C3048TP-1GE#

install all nxos bootflash:nxos.9.3.5.bin

Installer is performed perform compatibility check first. Please wait.
Installer is forced disruptive

Verifying image bootflash:/nxos.9.3.5.bin for boot variable "nxos".
[####################] 100% -- SUCCESS

Verifying image type.
[####################] 100% -- SUCCESS

Preparing "nxos" version info using image bootflash:/nxos.9.3.5.bin.
[####################] 100% -- SUCCESS

Preparing "bios" version info using image bootflash:/nxos.9.3.5.bin.
[####################] 100% -- SUCCESS

Collecting "running" plugin(s) information.
```

```
[#################] 100% -- SUCCESS

Collecting plugin(s) information from "new" image.
[#################] 100% -- SUCCESS
[#################] 100% -- SUCCESS

Performing module support checks.
[#################] 100% -- SUCCESS

Notifying services about system upgrade.
[#################] 100% -- SUCCESS




Compatibility check is done:
Module  bootable          Impact  Install-type  Reason
------  --------  --------------  ------------  ------
     1       yes       disruptive         reset  default upgrade is not hitless




Images is performed be upgraded according to following table:
Module       Image            Running-Version(pri:alt)         New-Version  Upg-Required
------  ----------  --------------------------------------  --------------------  ------------
     1        nxos                         7.0(3)I7(8)                9.3(5)           yes
     1        bios              v5.0.0(06/06/2018)  v5.0.0(06/06/2018)                no
     1   power-seq                                 5.5                   5.5                no


Switch will be reloaded for disruptive upgrade.
Do you want to continue with the installation (y/n)?  [n]

y



Install is in progress, please wait.

Performing runtime checks.
[#################] 100% -- SUCCESS

Setting boot variables.
[#################] 100% -- SUCCESS

Performing configuration copy.
[#################] 100% -- SUCCESS

Module 1: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[#################] 100% -- SUCCESS


Finishing the upgrade, switch is performed reboot in 10 seconds.
```

Step 5. Verify Successful Target NX-OS Software Upgrade

After the Nexus 3048TP-1GE switch has reloaded, verify that the upgrade was successful through the **show module** command. The output of this command can show the desired target release. An example of this is shown here, where the switch was successfully upgraded to NX-OS software release 9.3(5).

```
<#root>

N3K-C3048TP-1GE#
```

show module

```
<snip>
Mod Ports          Module-Type                    Model              Status
--- ----- ------------------------------------ ---------------------- ---------
1   52    48x1GE + 4x10G Supervisor            N3K-C3048TP-1GE        active *

Mod Sw                     Hw     Slot
--- ---------------------- ------ ----
1   9.3(5)                 1.6    NA
```

Step 6. Delete Intermediate Release Binary Image File from Cisco Nexus Switch

After you verify the NX-OS software upgrade from the intermediate release to the target release is successful, delete the intermediate release's unified binary image files from the bootflash of the device to preserve free space on the switch's bootflash. This can be done with the **delete bootflash:{filename}** command. An example of this is shown here, where the NX-OS 7.0(3)I7(8) unified binary image file is deleted from the switch's bootflash.

```
<#root>

N3K-C3048TP-1GE#
```

dir | include bin

```
  471871960    Sep 03 19:12:21 2020  nxos.7.0.3.I7.8.bin
  669892021    Sep 03 19:26:17 2020  nxos.9.3.5.bin
N3K-C3048TP-1GE#
```

delete bootflash:nxos.7.0.3.I7.8.bin

```
Do you want to delete "/nxos.7.0.3.I7.8.bin" ? (yes/no/abort)   [y]
N3K-C3048TP-1GE#
```

dir | include bin

```
  669892021    Sep 03 19:26:17 2020  nxos.9.3.5.bin
```

Upgrade From NX-OS 9.2(x) to NX-OS 9.2(x)

This section of the document describes how to perform a standard disruptive NX-OS software upgrade from a source release in the NX-OS 9.2(x) minor release to a target release in the NX-OS 9.2(x) minor release.

An example standard disruptive NX-OS software upgrade is performed on a Cisco Nexus N3K-C3048TP-1GE switch from a source release of 9.2(1) to a target release of 9.2(4):

```
<#root>

N3K-C3048TP-1GE#
```

show module

```
<snip>
Mod Ports              Module-Type                      Model                 Status
--- ----- ------------------------------------ --------------------- ---------
1   52    48x1GE + 4x10G Supervisor            N3K-C3048TP-1GE       active *

Mod Sw                     Hw     Slot
--- ---------------------- ------ ----
1   9.2(1)                 1.6    NA
```

Step 1. Download Target Release from Cisco Software Download

NX-OS 9.2(x) software uses a single NX-OS binary image file (sometimes referred to as a unified image file). You need to download this image from Cisco's Software Download Website to your local computer. The specific steps you need to take to download software from Cisco's Software Download Website are outside the scope of this document.

Note: If you are upgrading to NX-OS software release 9.2(4), you can download the compact NX-OS software image from Cisco's Software Download Website. When browsing the website, select the model of Nexus switch that you are attempting to upgrade and navigate to the desired target NX-OS software release. Then, locate the software image with Compact Image in its description and the word compact in its filename. For more information, refer to the Compact NX-OS Software Images on Cisco's Software Download Website section of the Cisco Nexus 3000 Series NX-OS Software Upgrade and Downgrade Guide, Release 9.2(x) document.

Step 2. Copy Target Release to Cisco Nexus Switch through the NX-OS Compact Image Procedure via SCP

Copy the target release unified binary image files to the Nexus 3048TP-1GE switch by executing the NX-OS Compact Image Procedure via SCP. For more information on this procedure, please refer to the Nexus 3000, 3100, and 3500 NX-OS Compact Image Procedure Document

---

Note: If a USB flash drive is attached to the Nexus 3048TP-1GE switch, you can also execute the NX-OS Compact Image Procedure on the NX-OS unified binary image file located on the USB flash drive, then copy the resulting unified binary image file to the bootflash of the switch.

Note: As part of executing the NX-OS Compact Image Procedure and reducing the file size of the NX-OS unified binary image file, the MD5 and SHA512 checksum of the NX-OS unified binary image file changes and be different than the MD5/SHA512 checksum published on Cisco's Software Download Website. This is expected behavior and is not indicative of an issue - proceed with an NX-OS software upgrade in this scenario.

This example demonstrates how to copy the NX-OS 9.2(4) software release unified binary image files through the NX-OS Compact Image Procedure via Secure Copy Protocol from an SCP server 192.0.2.100 reachable via the management VRF.

```
<#root>

N3K-C3048TP-1GE#

dir | include bin
```

```
  526038807    Sep 03 20:23:44 2020  nxos.9.2.1.bin
N3K-C3048TP-1GE#
```

copy scp://username@192.0.2.100/nxos.9.2.4.bin bootflash: compact vrf management

```
The authenticity of host '192.0.2.100 (192.0.2.100)' can't be established.
ECDSA key fingerprint is SHA256:3320762fa86de84cac0b3e487afecae38775592bfe756699ce65213034c850f3.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '192.0.2.100' (ECDSA) to the list of known hosts.
username@192.0.2.100's password:
nxos.9.2.4.bin                                                 100% 1278MB   4.1MB/s   07
N3K-C3048TP-1GE#
```

dir | include bin

```
  526038807    Sep 03 20:23:44 2020  nxos.9.2.1.bin
  544195757    Sep 03 20:51:00 2020  nxos.9.2.4.bin
```

Step 3. Upgrade NX-OS Software to Target Release via Install All Command

Begin a standard disruptive NX-OS software upgrade through the **install all** command. This command requires the nxos parameter to be passed in with the absolute filepath of the NX-OS unified binary image files corresponding with the target release.

This example shows the **install all** command where the nxos parameter points to the absolute filepath of the NX-OS 9.2(4) unified binary image file (bootflash:nxos.9.2.4.bin).

<#root>

```
N3K-C3048TP-1GE#
```

install all nxos bootflash:nxos.9.2.4.bin

```
Installer is performed perform compatibility check first. Please wait.
Installer is forced disruptive

Verifying image bootflash:/nxos.9.2.4.bin for boot variable "nxos".
[###################] 100% -- SUCCESS

Verifying image type.
[###################] 100% -- SUCCESS
[##                 ]   5% -- SUCCESS

Preparing "nxos" version info using image bootflash:/nxos.9.2.4.bin.
[###################] 100% -- SUCCESS

Preparing "bios" version info using image bootflash:/nxos.9.2.4.bin.
[###################] 100% -- SUCCESS

Collecting "running" plugin(s) information.
[###################] 100% -- SUCCESS

Collecting plugin(s) information from "new" image.
[###################] 100% -- SUCCESS
[###################] 100% -- SUCCESS

Performing module support checks.
[###################] 100% -- SUCCESS
```

```
Notifying services about system upgrade.
[##################] 100% -- SUCCESS


Compatibility check is done:
Module  bootable         Impact  Install-type  Reason
------  --------  --------------  ------------  ------
     1       yes       disruptive         reset  default upgrade is not hitless


Images is performed be upgraded according to following table:
Module       Image              Running-Version(pri:alt)           New-Version  Upg-Required
------  ----------  ----------------------------------------  --------------------  -----------
     1        nxos                                     9.2(1)                9.2(4)          yes
     1        bios                      v5.0.0(06/06/2018)    v5.0.0(06/06/2018)           no


Switch will be reloaded for disruptive upgrade.
Do you want to continue with the installation (y/n)?  [n]

y


Install is in progress, please wait.

Performing runtime checks.
[##################] 100% -- SUCCESS

Setting boot variables.
[##################] 100% -- SUCCESS

Performing configuration copy.
[##################] 100% -- SUCCESS

Module 1: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[##################] 100% -- SUCCESS


Finishing the upgrade, switch is performed reboot in 10 seconds.
```

Step 4. Verify Successful Target NX-OS Software Upgrade

After the Nexus 3048TP-1GE switch has reloaded, verify that the upgrade was successful through the **show module** command. The output of this command can show the desired target release. An example of this is shown here, where the switch was successfully upgraded to NX-OS software release 9.2(4).

```
<#root>

N3K-C3048TP-1GE#

show module


Mod Ports         Module-Type                          Model         Status
--- ----- ----------------------------------- -------------------- ---------
```

```
1    52   48x1GE + 4x10G Supervisor              N3K-C3048TP-1GE        active *

Mod  Sw                     Hw    Slot
---  ---------------------- ------ ----
1    9.2(4)                 1.6    NA
```

Step 5. Delete Source Release Binary Image File from Cisco Nexus Switch

After verifying that the NX-OS software upgrade from the source release to the target release was successful, preserve free space on the switch's bootflash by deleting the source release's unified binary image files from the bootflash of the device. This can be done with the **delete bootflash:{filename}** command. An example of this is shown here, where the NX-OS 9.2(1) unified binary image file is deleted from the switch's bootflash.

<#root>

N3K-C3048TP-1GE#

dir | include bin

```
   526038807    Sep 03 20:23:44 2020  nxos.9.2.1.bin
   544195757    Sep 03 20:51:00 2020  nxos.9.2.4.bin
N3K-C3048TP-1GE#
```

delete bootflash:nxos.9.2.1.bin

```
Do you want to delete "/nxos.9.2.1.bin" ? (yes/no/abort)   [y]
N3K-C3048TP-1GE#
```

dir | include bin

```
   544195757    Sep 03 20:51:00 2020  nxos.9.2.4.bin
```

Upgrade From NX-OS 9.2(x) to NX-OS 9.3(x)

This section of the document describes how to perform a standard disruptive NX-OS software upgrade from a source release in the NX-OS 9.2(x) minor release to a target release in the NX-OS 9.3(x) minor release.

✎ **Note**: An NX-OS software upgrade to a target release in the NX-OS 9.3(x) minor release from a source release that is 9.2(3) or earlier requires a mandatory intermediate upgrade to NX-OS 9.2(4).

An example standard disruptive NX-OS software upgrade is performed on a Cisco Nexus N3K-C3048TP-1GE switch from a source release of 9.2(1) to a target release of 9.3(5):

<#root>

N3K-C3048TP-1GE#

show module

```
<snip>
Mod Ports           Module-Type                      Model                  Status
--- ----- -------------------------------- ---------------------- ---------
1   52    48x1GE + 4x10G Supervisor              N3K-C3048TP-1GE        active *
```

```
Mod  Sw                     Hw     Slot
---  ---------------------- ------ ----
1    9.2(1)                 1.6    NA
```

Step 1. Upgrade From NX-OS 9.2(x) to NX-OS 9.2(x)

Follow the Upgrade From NX-OS 9.2(x) to NX-OS 9.2(x) section of this document to perform a standard disruptive NX-OS software upgrade from your source release to NX-OS software release 9.2(4).

Step 2. Download Target Release from Cisco Software Download

NX-OS 9.3(x) software uses a single NX-OS binary image file (sometimes referred to as a unified image file). You need to download this image from Cisco's Software Download Website to your local computer. The specific steps you need to take to download software from Cisco's Software Download Website are outside the scope of this document.

> **Note**: If you are upgrading to NX-OS software release 9.3(4) or later, you can download the compact NX-OS software image from Cisco's Software Download Website. When browsing the website, select the model of Nexus switch that you are attempting to upgrade and navigate to the desired target NX-OS software release. Then, locate the software image with Compact Image in its description and the word compact in its filename. For more information, refer to the Compact NX-OS Software Images on Cisco's Software Download Website section of the Cisco Nexus 3000 Series NX-OS Software Upgrade and Downgrade Guide, Release 9.3(x) Document.

Step 3. Copy Target Release to Cisco Nexus Switch through NX-OS Compact Image Procedure via SCP

Copy the target release unified binary image files to the Nexus 3048TP-1GE switch by executing the NX-OS Compact Image Procedure via SCP. For more information on this procedure, please refer to the Nexus 3000, 3100, and 3500 NX-OS Compact Image Procedure Document

> **Note**: If a USB flash drive is attached to the Nexus 3048TP-1GE switch, you can also execute the NX-OS Compact Image Procedure on the NX-OS unified binary image file located on the USB flash drive, then copy the resulting unified binary image file to the bootflash of the switch.

> **Note**: As part of executing the NX-OS Compact Image Procedure and reducing the file size of the NX-OS unified binary image file, the MD5 and SHA512 checksum of the NX-OS unified binary image file is performed change and be different than the MD5/SHA512 checksum published on Cisco's Software Download Website. This is expected behavior and is not indicative of an issue - proceed with an NX-OS software upgrade in this scenario.

This example demonstrates how to copy the NX-OS 9.3(5) software release unified binary image files through the NX-OS Compact Image Procedure via Secure Copy Protocol from an SCP server 192.0.2.100 reachable via the management VRF.

```
<#root>

N3K-C3048TP-1GE#
```

```
dir | include bin

  544195757    Sep 03 20:51:00 2020  nxos.9.2.4.bin
N3K-C3048TP-1GE#

copy scp://username@192.0.2.100/nxos.9.3.5.bin bootflash: compact vrf management

The authenticity of host '192.0.2.100 (192.0.2.100)' can't be established.
ECDSA key fingerprint is SHA256:3320762fa86de84cac0b3e487afecae38775592bfe756699ce65213034c850f3.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '192.0.2.100' (ECDSA) to the list of known hosts.
username@192.0.2.100's password:
nxos.9.3.5.bin                                                  100% 1880MB   3.7MB/s   07
N3K-C3048TP-1GE#

dir | include bin

  544195757    Sep 03 20:51:00 2020  nxos.9.2.4.bin
  669892021    Sep 03 22:04:22 2020  nxos.9.3.5.bin
```

Step 4. Upgrade NX-OS Software to Target Release via Install All Command

Begin a standard disruptive NX-OS software upgrade through the **install all** command. This command requires the nxos parameter to be passed in with the absolute filepath of the NX-OS unified binary image files corresponding with the target release.

This example shows the **install all** command where the nxos parameter points to the absolute filepath of the NX-OS 9.3(5) unified binary image file (bootflash:nxos.9.3.5.bin).

```
<#root>

N3K-C3048TP-1GE#

install all nxos bootflash:nxos.9.3.5.bin

Installer is performed perform compatibility check first. Please wait.
Installer is forced disruptive

Verifying image bootflash:/nxos.9.3.5.bin for boot variable "nxos".
[##################] 100% -- SUCCESS

Verifying image type.
[##################] 100% -- SUCCESS
[##                ]   5% -- SUCCESS

Preparing "nxos" version info using image bootflash:/nxos.9.3.5.bin.
[##################] 100% -- SUCCESS

Preparing "bios" version info using image bootflash:/nxos.9.3.5.bin.
[##################] 100% -- SUCCESS

Collecting "running" plugin(s) information.
[##################] 100% -- SUCCESS

Collecting plugin(s) information from "new" image.
[##################] 100% -- SUCCESS
[##################] 100% -- SUCCESS

Performing module support checks.
[##################] 100% -- SUCCESS
```

```
Notifying services about system upgrade.
[##################] 100% -- SUCCESS


Compatibility check is done:
Module  bootable        Impact  Install-type  Reason
------  --------  --------------  ------------  ------
     1       yes       disruptive         reset  default upgrade is not hitless



Images is performed be upgraded according to following table:
Module       Image             Running-Version(pri:alt)          New-Version  Upg-Required
------  ----------  ----------------------------------------  --------------------  ------------
     1        nxos                                     9.2(4)                9.3(5)           yes
     1        bios                 v5.0.0(06/06/2018)    v5.0.0(06/06/2018)            no
     1   power-seq                                        5.5                    5.5            no


Switch will be reloaded for disruptive upgrade.
Do you want to continue with the installation (y/n)?   [n]

y



Install is in progress, please wait.

Performing runtime checks.
[##################] 100% -- SUCCESS

Setting boot variables.
[##################] 100% -- SUCCESS

Performing configuration copy.
[##################] 100% -- SUCCESS

Module 1: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[##################] 100% -- SUCCESS


Finishing the upgrade, switch is performed reboot in 10 seconds.
```

Step 5. Verify Successful Target NX-OS Software Upgrade

After the Nexus 3048TP-1GE switch is reloaded, verify that the upgrade was successful through the **show module** command. The output of this command can show the desired target release. An example of this is shown here, where the switch was successfully upgraded to NX-OS software release 9.3(5).

```
<#root>

N3K-C3048TP-1GE#

show module

<snip>
```

```
Mod  Ports          Module-Type                    Model               Status
---  -----  -------------------------------  --------------------  ---------
1    52     48x1GE + 4x10G Supervisor              N3K-C3048TP-1GE       active *

Mod  Sw                     Hw     Slot
---  ---------------------  ------ ----
1    9.3(5)                 1.6    NA
```

Step 6. Delete Intermediate Release Binary Image File from Cisco Nexus Switch

After you verify that the NX-OS software upgrade from the intermediate release to the target release is successful, delete the intermediate release's unified binary image files from the bootflash of the device to preserve free space on the switch's bootflash. This can be done with the **delete bootflash:{filename}** command. An example of this is shown here, where the NX-OS 9.2(4) unified binary image file is deleted from the switch's bootflash.

```
<#root>

N3K-C3048TP-1GE#

dir | include bin

  544195757    Sep 03 20:51:00 2020  nxos.9.2.4.bin
  669892021    Sep 03 22:04:22 2020  nxos.9.3.5.bin
N3K-C3048TP-1GE#

delete bootflash:nxos.9.2.4.bin

Do you want to delete "/nxos.9.2.4.bin" ? (yes/no/abort)   [y]
N3K-C3048TP-1GE#

dir | include bin

  669892021    Sep 03 22:04:22 2020  nxos.9.3.5.bin
```

Upgrade From NX-OS 9.3(x) to NX-OS 9.3(x)

This section of the document describes how to perform a standard disruptive NX-OS software upgrade from a source release in the NX-OS 9.3(x) minor release to a target release in the NX-OS 9.3(x) minor release.

An example standard disruptive NX-OS software upgrade is performed on a Cisco Nexus N3K-C3048TP-1GE switch from a source release of 9.3(1) to a target release of 9.3(5):

```
<#root>

N3K-C3048TP-1GE#

show module

<snip>
Mod  Ports          Module-Type                    Model               Status
---  -----  -------------------------------  --------------------  ---------
1    52     48x1GE + 4x10G Supervisor              N3K-C3048TP-1GE       active *

Mod  Sw                     Hw     Slot
---  ---------------------  ------ ----
```

```
1    9.3(1)                    1.6    NA
```

Step 1. Download Target Release from Cisco Software Download

NX-OS 9.3(x) software uses a single NX-OS binary image file (sometimes referred to as a unified image file). You need to download this image from Cisco's Software Download Website to your local computer. The specific steps you need to take to download software from Cisco's Software Download Website are outside the scope of this document.

Note: If you are upgrading to NX-OS software release 9.3(4) or later, you can download the compact NX-OS software image from Cisco's Software Download Website. When browsing the website, select the model of Nexus switch that you are attempting to upgrade and navigate to the desired target NX-OS software release. Then, locate the software image with Compact Image in its description and the word compact in its filename. For more information, refer to the Compact NX-OS Software Images on Cisco's Software Download Website section of the Cisco Nexus 3000 Series NX-OS Software Upgrade and Downgrade Guide, Release 9.3(x) Document.

Step 2. Copy Target Release to Cisco Nexus Switch through the NX-OS Compact Image Procedure via SCP

Copy the target release unified binary image files to the Nexus 3048TP-1GE switch by executing the NX-OS Compact Image Procedure via SCP. For more information on this procedure, please refer to the Nexus 3000, 3100, and 3500 NX-OS Compact Image Procedure Document

---

Note: If a USB flash drive is attached to the Nexus 3048TP-1GE switch, you can also execute the NX-OS Compact Image Procedure on the NX-OS unified binary image file located on the USB flash drive, then copy the resulting unified binary image file to the bootflash of the switch.

Note: As part of executing the NX-OS Compact Image Procedure and reducing the file size of the NX-OS unified binary image file, the MD5 and SHA512 checksum of the NX-OS unified binary image file is performed change and be different than the MD5/SHA512 checksum published on Cisco's Software Download Website. This is expected behavior and is not indicative of an issue - proceed with an NX-OS software upgrade in this scenario.

This example demonstrates how to copy the NX-OS 9.3(5) software release unified binary image files through the NX-OS Compact Image Procedure via Secure Copy Protocol from an SCP server 192.0.2.100 reachable via the management VRF.

```
<#root>

N3K-C3048TP-1GE#

dir | include bin

  510885742    Sep 03 23:16:35 2020  nxos.9.3.1.bin
N3K-C3048TP-1GE#

copy scp://username@192.0.2.100/nxos.9.3.5.bin bootflash: compact vrf management

The authenticity of host '192.0.2.100 (192.0.2.100)' can't be established.
ECDSA key fingerprint is SHA256:3320762fa86de84cac0b3e487afecae38775592bfe756699ce65213034c850f3.
```

```
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '192.0.2.100' (ECDSA) to the list of known hosts.
username@192.0.2.100's password:
nxos.9.3.5.bin                                          100% 1880MB   3.7MB/s   07
N3K-C3048TP-1GE#
```

dir | include bin

```
  510885742     Sep 03 23:16:35 2020  nxos.9.3.1.bin
  669892021     Sep 03 22:04:22 2020  nxos.9.3.5.bin
```

Step 3. Upgrade NX-OS Software to Target Release via Install All Command

Begin a standard disruptive NX-OS software upgrade through the **install all** command. This command requires the nxos parameter to be passed in with the absolute filepath of the NX-OS unified binary image files corresponding with the target release.

This example shows the **install all** command where the nxos parameter points to the absolute filepath of the NX-OS 9.3(5) unified binary image file (bootflash:nxos.9.3.5.bin).

<#root>

N3K-C3048TP-1GE#

install all nxos bootflash:nxos.9.3.5.bin

```
Installer is performed perform compatibility check first. Please wait.
Installer is forced disruptive

Verifying image bootflash:/nxos.9.3.5.bin for boot variable "nxos".
[##################] 100% -- SUCCESS

Verifying image type.
[##################] 100% -- SUCCESS

Preparing "nxos" version info using image bootflash:/nxos.9.3.5.bin.
[##################] 100% -- SUCCESS

Preparing "bios" version info using image bootflash:/nxos.9.3.5.bin.
[##################] 100% -- SUCCESS

Collecting "running" plugin(s) information.
[##################] 100% -- SUCCESS

Collecting plugin(s) information from "new" image.
[##################] 100% -- SUCCESS
[##################] 100% -- SUCCESS

Performing module support checks.
[##################] 100% -- SUCCESS

Notifying services about system upgrade.
[##################] 100% -- SUCCESS




Compatibility check is done:
Module  bootable          Impact  Install-type  Reason
------  --------  --------------  ------------  ------
```

```
        1       yes     disruptive          reset  default upgrade is not hitless



Images is performed be upgraded according to following table:
Module        Image                    Running-Version(pri:alt)           New-Version Upg-Required
------  ----------  ----------------------------------------  --------------------  ------------
      1        nxos                                    9.3(1)                9.3(5)            yes
      1        bios                      v5.0.0(06/06/2018)    v5.0.0(06/06/2018)             no
      1   power-seq                                       5.5                   5.5             no



Switch will be reloaded for disruptive upgrade.
Do you want to continue with the installation (y/n)?   [n]

y



Install is in progress, please wait.

Performing runtime checks.
[##################] 100% -- SUCCESS

Setting boot variables.
[##################] 100% -- SUCCESS

Performing configuration copy.
[##################] 100% -- SUCCESS

Module 1: Refreshing compact flash and upgrading bios/loader/bootrom.
Warning: please do not remove or power off the module at this time.
[##################] 100% -- SUCCESS



Finishing the upgrade, switch is performed reboot in 10 seconds.
```

Step 4. Verify Successful Target NX-OS Software Upgrade

After the Nexus 3048TP-1GE switch has reloaded, verify that the upgrade was successful through the **show module** command. The output of this command can show the desired target release. An example of this is shown here, where the switch was successfully upgraded to NX-OS software release 9.3(5).

```
<#root>

N3K-C3048TP-1GE#

show module

<snip>
Mod Ports          Module-Type                      Model            Status
--- ----- ------------------------------------ --------------------- ---------
1   52    48x1GE + 4x10G Supervisor            N3K-C3048TP-1GE       active *

Mod  Sw                     Hw     Slot
---  ---------------------- ------ ----
1    9.3(5)                 1.6    NA
```

Step 5. Delete Source Release Binary Image File from Cisco Nexus Switch

After verifying that the NX-OS software upgrade from the intermediate release to the target release was successful, preserve free space on the switch's bootflash by deleting the intermediate release's unified binary image files from the bootflash of the device. This can be done with the **delete bootflash:{filename}** command. An example of this is shown here, where the NX-OS 7.0(3)I7(8) unified binary image file is deleted from the switch's bootflash.

<#root>

N3K-C3048TP-1GE#

dir | include bin

```
  510885742    Sep 03 23:16:35 2020  nxos.9.3.1.bin
  669892021    Sep 03 22:04:22 2020  nxos.9.3.5.bin
N3K-C3048TP-1GE#
```

delete bootflash:nxos.9.3.1.bin

```
Do you want to delete "/nxos.9.3.1.bin" ? (yes/no/abort)    [y]
N3K-C3048TP-1GE#
```

dir | include bin

```
  669892021    Sep 03 19:26:17 2020  nxos.9.3.5.bin
```

Related Information

- [YouTube - Documentation to Review Before an NX-OS Software Upgrade](#)
- [YouTube - NX-OS Software Upgrade from NX-OS 7.x to NX-OS 7.x Example](#)
- [YouTube - NX-OS Software Upgrade from NX-OS 6.x to NX-OS 7.x Example](#)
- [Cisco Nexus 3000 Series Switches Install and Upgrade Guides](#)
- [Cisco Nexus 3000 Series NX-OS Software Upgrade and Downgrade Guide, Release 9.3(x)](#)
- [Cisco Nexus 3000 Series NX-OS Software Upgrade and Downgrade Guide, Release 9.2(x)](#)
- [Cisco Nexus 3000 Series NX-OS Software Upgrade and Downgrade Guide, Release 7.x](#)
- [Cisco Nexus 3000 Series Switches Release Notes](#)
- [Nexus 3000, 3100, and 3500 NX-OS Compact Image Procedure](#)
- [Technical Support & Documentation - Cisco Systems](#)