Downloading an Image

Download the image to the same partition of the bootflash where the base image exists. For information on downloading images see, Loading and Managing System Images Configuration Guide, Cisco IOS XE Release 3S.

> **Note** Ensure that you have chosen an upgrade image that is supported by your current software version.

Bootflash Space Requirements

The dual-rate functionality requires a minimum of 10 MB available space in bootflash memory on Cisco ASR 920 Series Router (ASR-920-12CZ-A, ASR-920-12CZ-D, ASR-920-4SZ-A, ASR-920-4SZ-D, ASR-920-10SZ-PD, ASR-920-8S4Z-PD, and ASR-920-12SZ-IM).

> **Note** Always use bootflash instead of flash on all the system operations.

Restrictions for Upgrading from Cisco IOS XE Release 3.x to Cisco IOS XE Release 16.x

- Upgrading from Cisco IOS Release 3.x to Cisco IOS Release 16.x is only supported with consolidated mode.

- Upgrading from Cisco IOS Release 3.x to to Cisco IOS Release 16.x using sub-package mode is *not* supported and vice-versa.

- Extracting the Cisco IOS XE Release 16.x image in Cisco IOS XE Release 3.x is not supported, and vice versa.

Upgrading from Cisco IOS XE Release 3.x to Cisco IOS XE 16.x

Note A full upgrade procedure may require reloading the system repeatedly (around two times). Use the **show version** command, after each reload to verify the image version and license level.

Before you begin

- Download the Cisco IOS XE 16.x image from Cisco.com.

Note Cisco IOS XE Release 16.5.1 and onwards is supported.

- Download the ROMMON release from Cisco.com.

Note The sytem automatically reboot twice, on a FGPA upgrade.

Step 1 Backup the running configuration.

Example:

```
Router# copy running-config bootflash:demo.cfg
Destination filename [demo.cfg]?
1834 bytes copied in 0.112 secs (16375 bytes/sec)
```

Step 2 Upgrade the ROMMON image.

Example:

```
Router# upgrade rom-monitor filename bootflash:<rommon-file-name>.pkg all

Upgrade rom-monitor on Router-Processor 0
Target copying rom-monitor image file
. . .
ROMMON upgrade complete
To make the new ROMMON permanent, you must restart the linecard

Router# reload <-- Reloads the active  router processor and boot the IOS 3.x image
. . .
Router# show platform
. . .

Slot      CPLD Version        Firmware Version
--------- ------------------- -------------------------------------
R0        16040627            15.6(14r)S   □--- Rommon version depends on the type of system

R1        16112128            15.6(14r)S
F0        16040627            15.6(14r)S
F1        16112128            15.6(14r)S
```

Step 3 Install the IOS XE 16.x universal image, save the configuration, and reload the device.

Example:

```
Router# configure terminal
Router(config)# no boot system bootflash:previous_image.bin <-- Removes the previous boot statement
Router(config)# boot system bootflash:16.x-universal-image.bin <-- Adds the new boot statement
Router(config)# end
Router# write
Building configuration….
[OK]
Router# reload <-- Reload the active  router processor and boot the IOS XE 16.x Universal image
```

Step 4 Restore the backup configuration to the running configuration.

Example:

```
Router# copy bootflash:demo.cfg running-config
Destination filename [running-config]?

Router# config terminal
Router(config)# no boot system bootflash:previous_image.bin <-- Removes the previous boot statement
Router(config)# end
Router# write
Building configuration….
[OK]
```

Secure SD Card Configuration

Table 1: Feature History

Feature Name	Release Information	Description
Secure SD Card Configuration	Cisco IOS XE Bengaluru 17.4.1	The features uses the following command to provide enhanced security to the routers: **platform secure-cfg** When you enable the command, the router does not boot if the SD card is replaced, swapped, or modified externally. Thus, you cannot format the SD card externally and this prevents the misuse of the router.

Effective with Cisco IOS XE Bengaluru Release 17.4.1, use the **platform secure-cfg** command to provide enhanced security to the routers. When you enable the command, the router does not boot if the SD card is replaced, swapped, or modified externally. Thus, you cannot format the SD card externally and this prevents the misuse of the router.

This feature is applicable on the Cisco ASR-920-24SZ-IM, Cisco ASR-920-24SZ-M, Cisco ASR-920-24TZ-M, Cisco ASR 920-10SZ-PD (OD), Cisco ASR-920-12CZ-A/ASR-920-12CZ-D, and Cisco ASR-920-4SZ-A/ASR-920-4SZ-D routers.

To enable the **platform secure-cfg** command:

```
Router#enable
Router#configure terminal
Router(conf)#platform secure-cfg
Router(conf)#end
Router# write memory
```

Use the following command to verify that the **platform secure-cfg** command is enabled.

```
Router#show running-config | i secure-cfg
platform secure-cfg
```