Upgrading the Cisco IOS XE Software

The Cisco Catalyst 8000V virtual router runs on the Cisco IOS XE platform, the same platform that has powered Cisco CSR1000V or Cisco ISRv. To use the Cisco Catalyst 8000V router, first obtain the software image from the Cisco Software Download page. Obtain the installation files and then begin the installation or upgrade. To know more about the installation files, see Installation Files.

If you are an existing Cisco CSR1000V or a Cisco ISRv user, you must download the latest installation file from the Cisco Software Download page and begin the upgrade process by following the procedures mentioned in this chapter.

Software Packaging for Cisco Catalyst 8000V

The software image for Cisco Catalyst 8000V is available as a consolidated package and as optional subpackages. Each consolidated package contains a collection of software subpackages, and each software subpackage is an individual software file that controls a different element or elements of the virtual router. Using a consolidated package, you can upgrade all the individual subpackages with a single software image download.

You can upgrade an individual software subpackage individually, or upgrade all the software subpackages for a specific consolidated package as part of a complete consolidated package upgrade. If you want to run the router using individual subpackages that are part of a consolidated package, download the image from Cisco.com and extract the individual subpackages from the image.

Upgrading using subpackage consumes less memory than upgrading through a consolidated package. For this reason, upgrading through subpackages is the recommended method, especially for deployments with small footprints.

Note   Upgrading a Cisco ISRv or a Cisco CSR1000V to Cisco Catalyst 8000V does not alter the file system layout nor provide any of the new features such as the Secure Object Store which rely on the file system. You must perform a fresh installation to activate these features.

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Important　If you are an existing Cisco CSR1000V or Cisco ISRV user, and you are upgrading to Cisco Catalyst 8000V, your licenses continue to function as-is. However, an HSECK9 license is mandatory to run any throughput level greater than 250 Mbps. If you were running a throughput level greater than 250 Mbps prior to the upgrade, you must purchase an HSECK9 license for service continuity after the upgrade. If an HSECK9 license is not available after upgrade, throughput is restricted to 250 Mbps. If you want to switch to Cisco DNA subscription-based licensing model, you must perform a fresh Catalyst 8000V deployment.

Prerequisites for Upgrading Cisco Catalyst 8000V

- Obtain the Cisco Catalyst 8000V software image from the Cisco Software Download page. To know how to obtain the installation files, see Download the Installation Files.

- Check the version of your hypervisor before you perform the upgrade. The upgrade is not successful if your hypervisor version is not supported by your current version of Cisco IOS XE on Cisco Catalyst 8000V.

- Ensure that you meet the memory requirements of the VM for the Cisco Catalyst 8000V software image. If the upgraded version requires more memory than your previous version, increase the memory allocation on the VM before you begin the upgrade process.

HSECK9 License Requirements for Cisco CSR1000V and Cisco ISRV Upgrade

If you are upgrading a Cisco CSR1000V or Cisco ISRV router where *throughput is greater than 250 Mbps*, to Cisco Catalyst 8000V (Cisco IOS XE Bengaluru 17.4.1 and later), a High Security (HSECK9) license is required.

Depending on your pre-upgrade setup, ensure that you meet the corresponding HSECK9 license requirements, before you upgrade:

- If the Cisco CSR1000V or Cisco ISRV is connected to CSSM, then you must ensure the following:

  - Throughput greater than 250 Mbps is part of start-up configuration.

    To check start-up configuration, enter the **show running-config** command in privileged EXEC mode. For example:

```
Device# show running-config | include throughput
platform hardware throughput level MB 500
```

- There is a positive balance of the required number of HSECK9 licenses (DNA_HSECK9) in the corresponding Smart Account and Virtual Account in CSSM.

No further pre-upgrade action is required. As long as the device is connected to CSSM, on upgrade, the device automatically triggers the HSECK9 request and installs the required Smart Licensing Authorization Code (SLAC).

- If the Cisco CSR1000V or Cisco ISRV is using Specific License Reservation (SLR), then you must update the SLR authorization code to include an HSECK9 license (DNA_HSECK9) and only then upgrade the device. This ensures uninterrupted throughput after upgrade.

  This example shows you how to update the SLR authorization code: Example: Smart Licensing (SLR With Throughput >250 Mbps, Without Export-Controlled License) to Smart Licensing Using Policy.

If throughput is lesser than or equal to 250 Mbps, an HSECK9 license is not required.

Restrictions for Upgrading Cisco Catalyst 8000V

- You can upgrade to a new software version on the same VM only. The procedures do not describe how to install or rehost an existing router running the same or upgraded software version on a different VM.

- The .bin file is applicable for upgrading or downgrading your software. The .iso, .qcow2, and .ova files are used for first-time installation only.

- If you are upgrading to Cisco Catalyst 8000V, your licenses will continue to function as is. However, if you wish to switch to the CDNA licensing model, you must perform a fresh installation.

- The Cisco Catalyst 8000V router does not support In-Service Software Upgrade (ISSU).

- The system requirements for the x86 hardware might differ from those of the hardware currently running on the router.

- In the case of an upgrade from Cisco CSR1000V or Cisco ISRv, the disk partition structure remains the same as the previous version, and the secure object storage functionality is not available.

- If you want to upgrade to Cisco Catalyst 8000V from a Cisco CSR1000V or a Cisco ISRv prior to 16.12.x, first upgrade from your current version to 16.12.x. Then, upgrade to the latest version of Cisco Catalyst 8000V.

- You cannot upgrade a Cisco CSR1000V running PCI pass-through to Cisco Catalyst 8000V as Cisco Catalyst 8000V does not support PCI pass-through.

- If you have freshly installed Cisco Catalyst 8000V, you cannot downgrade to Cisco ISRv or Cisco CSR1000V. If you previously had a Cisco CSR1000V and upgraded to Cisco Catalyst 8000V, you can downgrade in the case of Cisco CSR1000V but not Cisco ISRv.

- If you want to upgrade from Cisco CSR1000V to Cisco Catalyst 8000V, or if you're upgrading from a lower to a higher version of Cisco Catalyst 8000V, only an N-2 or an N-1 to N release upgrade path is supported. Here, N-1 and N-2 refer to extended maintenance releases. For example, if you want to upgrade a CSR1000V 17.3.x instance to a Cisco Catalyst 8000V 17.11.1a release, 17.6.x is the lowest N-x version you need to update.

• Cisco Catalyst 8000V does not support L2TP functionality including L2TP client and L2TP Network Server (LNS).

Install Mode Process Flow

The install mode process flow comprises three commands to perform the installation and the upgrade of Cisco Catalyst 8000V–**install add**, **install activate**, and **install commit**.

The following flow chart explains the install process with the install commands:

Process with Install Commit
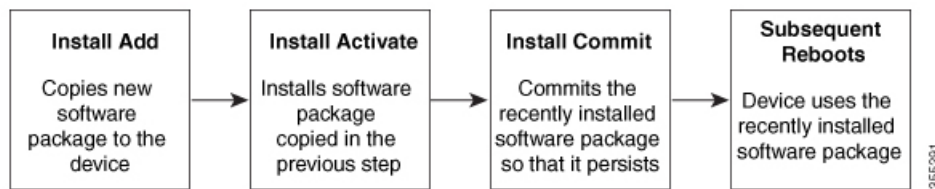
The **install add** command copies the software package from a local or remote location to the platform. The location can be FTP, HTTP, HTTPs, or TFTP. This command extracts individual components of the .package file into subpackages and packages.conf files. It also validates the file to ensure that the image file is specific to Cisco Catalyst 8000V.

The **install activate** command performs the required validations and provisions the packages previously added using the **install add** command. It also triggers a system reload.

The **install commit** command confirms the packages previously activated using the **install activate** command, and ensures the updates are persistent over reloads.

Note Installing an update replaces any previously installed software image. At any time, you can install only one image in your instance.

The following table specifies the list of commands that are used when you install or upgrade your Cisco IOS XE platform:

Table 1: List of install Commands

Command	Syntax	Purpose
install add	**install add file** *location:filename.bin*	Copies the contents of the image and the package to the software repository. File location may be local or remote. This command does the following: • Validates the file–checksum, platform compatibility checks, and so on. • Extracts individual components of the package into subpackages and packages.conf • Copies the image into the local inventory and makes it available for the next steps.
install activate	**install activate**	Activates the package added using the **install add** command. • Use the **show install summary** command to see which image is inactive. • The system reloads on executing this command. Confirm if you want to proceed with the activation. Use this command with the **prompt-level none** keyword to automatically ignore any confirmation prompts.

Command	Syntax	Purpose
(install activate) auto abort-timer	**install activate auto-abort timer** *<30-1200>*	The **auto-abort timer** starts automatically with a default value of 120 minutes. If the **install commit** command is not executed within the time provided, the activation process is terminated, and the system returns to the last-committed state. • You can change the time value while executing the **install activate** command. • The **install commit** command stops the timer and continues the installation process. • The **install activate auto-abort timer stop** command stops the timer without committing the package. • Use this command with the **prompt-level none** keyword to automatically ignore any confirmation prompts. • This command is valid only in the three-step install variant.
install commit	**install commit**	Commits the package activated using the **install activate** command and makes it persistent over reloads. • Use the **show install summary** command to see which image is not committed.

Command	Syntax	Purpose
install abort	**install abort**	Terminates the installation and returns the system to the last-committed state. • This command is applicable only when the package is in the activated status (uncommitted state). • If you have already committed the image using the **install commit** command, use the **install rollback to** command to return to the preferred version.
install remove	**install remove {file** *<filename>* **| inactive}**	Deletes the inactive packages from the platform repository. Use this command to free up space. • **file**: Removes the specified files. • **inactive**: Removes all the inactive files.
install rollback to	**install rollback to {base | label | committed | id}**	Rolls back the software set to a saved installation point or to the last-committed installation point. The following are the characteristics of this command: • Requires reload. • Is applicable only when the package is in the committed state. • Use this command with the **prompt-level none** keyword to automatically ignore any confirmation prompts. **Note** If you are performing install rollback to a previous image, the previous image must be installed in the install mode.

Apart from the above-mentioned commands, you can also use the following show commands to verify the installation or upgrade:

Table 2: List of show Commands

Command	Syntax	Purpose
show install log	**show install log**	Provides the history and details of all the install operations that have been performed since the platform was booted.
show install package	**show install package** *<filename>*	Provides details about the .pkg/.bin file that is specified.
show install summary	**show install summary**	Provides an overview of the image versions and their corresponding install states.
show install active	**show install active**	Provides information about the active packages.
show install inactive	**show install inactive**	Provides information about the inactive packages, if any.
show install committed	**show install committed**	Provides information about the committed packages.
show install uncommitted	**show install uncommitted**	Provides information about uncommitted packages, if any.
show install rollback	**show install rollback {point-id	label}**	Displays the package associated with a saved installation point.
show version	**show version [rp-slot] [installed [user-interface]	provisioned	running]**	Displays information about the current package along with the platform information.

Booting Cisco Catalyst 8000V in the Install Mode

You can install, activate, and commit a software package using a single command (one-step install procedure) or multiple separate commands (three-step install procedure).

If your Cisco Catalyst 8000V device is working in the bundle mode, you must use the one-step install procedure to initially convert the platform from the bundle mode to the install mode. You can then perform subsequent installs and upgrades by using either the one-step or the three-step installation method.

One-Step Installation or Converting from Bundle Mode to Install Mode

This procedure uses the **install add file activate commit** command in the privileged EXEC mode to install a software package and to upgrade the platform to a newer version.

The one-step install procedure converts a platform running in the bundle boot mode to the install mode. After the command is executed, the platform reboots in the install boot mode.

![Note icon]

Note	• All the CLI actions (for example, add, activate, and so on) are executed.
	• The configuration save prompt appears if an unsaved configuration is detected.
	• The reload prompt appears after the second step in this workflow. Use the **prompt-level none** keyword to automatically ignore the confirmation prompts.
	• If the prompt-level is set to None, and there is an unsaved configuration, the install fails. You must save the configuration before reissuing the command.

SUMMARY STEPS

1. **enable**
2. **install add file location:** *filename* [**activate commit**]
3. **exit**

DETAILED STEPS

	Command or Action	**Purpose**
Step 1	**enable** **Example:** `Device> enable`	Enables the privileged EXEC mode. Enter your password, if prompted.
Step 2	**install add file location:** *filename* [**activate commit**] **Example:** `Device# install add file bootflash:c8000v-universalk9.BLD_POLARIS_DEV_LATEST_20220227_153436.SSA.bin activate commit`	Copies the software install package from a local or remote location (through FTP, HTTP, HTTPs, or TFTP) to the platform and extracts the individual components of the .package file into subpackages and packages.conf files. It also performs a validation and compatibility check for the platform and image versions, activates the package, and commits the package to make it persistent across reloads. The platform reloads after this command is run.
Step 3	**exit** **Example:** `Device# exit`	Exits the privileged EXEC mode and returns to the user EXEC mode.

Three-Step Installation

The three-step installation procedure uses individual **install add**, **install activate**, and **install commit** commands for installing a software package, and to upgrade the platform to a newer version.

✎

Note
- You can perform this procedure only after the platform is in the install mode.

- All the CLI actions (for example, add, activate, and so on) are executed.

- The configuration save prompt appears if an unsaved configuration is detected.

- The reload prompt appears after the install activate step in this workflow. Use the **prompt-level none** keyword to automatically ignore the confirmation prompts.

SUMMARY STEPS

1. **enable**
2. **install add file location:** *filename*
3. **show install summary**
4. **install activate** [**auto-abort-timer** *<time>*]
5. **install abort**
6. **install commit**
7. **install rollback to committed**
8. **install remove** {**file** *filesystem: filename* | **inactive**}
9. **show install summary**
10. **exit**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable** **Example:** Device> enable	Enables the privileged EXEC mode. Enter your password, if prompted.
Step 2	**install add file location:** *filename* **Example:** Device# install add file bootflash:c8000v-universalk9.BLD_POLARIS_DEV_LATEST_20220227_153436.SSA.bin	Copies the software install package from a remote location (through FTP, HTTP, HTTPs, or TFTP) to the platform, and extracts the individual components of the .package file into subpackages and packages.conf files.
Step 3	**show install summary** **Example:** Device# show install summary	(Optional) Provides an overview of the image versions and their corresponding install state.
Step 4	**install activate** [**auto-abort-timer** *<time>*] **Example:** Device# install activate auto-abort-timer 120	Activates the previously added package and reloads the platform. • When you're performing a full software install, do not provide a package filename. • The **auto-abort-timer** starts automatically with the **install activate** command; the default for the timer is 120 minutes. If the **install commit** command is not

Upgrading the Cisco IOS XE Software

	Command or Action	Purpose
		run before the timer expires, the install process is automatically terminated. The platform reloads and boots up with the last committed version.
Step 5	**install abort** **Example:** `Device# install abort`	(Optional) Terminates the software install activation and returns the platform to the last committed version. Use this command only when the image is in the activated state and not when the image is in the committed state.
Step 6	**install commit** **Example:** `Device# install commit`	Commits the new package installation and makes the changes persistent over reloads.
Step 7	**install rollback to committed** **Example:** `Device# install rollback to committed`	(Optional) Rolls back the platform to the last committed state.
Step 8	**install remove** {**file** *filesystem: filename* | **inactive**} **Example:** `Device# install remove inactive`	(Optional) Deletes the software installation files. • **file**: Deletes a specific file. • **inactive**: Deletes all the unused and inactive installation files.
Step 9	**show install summary** **Example:** `Device# show install summary`	(Optional) Displays information about the current state of the system. The output of this command varies according to the **install** commands run prior to this command.
Step 10	**exit** **Example:** `Device# exit`	Exits the privileged EXEC mode and returns to the user EXEC mode.

Sample Upgrade Output from Release 17.06.02 To Release 17.07.01

```
=======================================
Upgrade steps
install add file bootflash:/ c8000v-universalk9.17.07.01a.SPA.bin
install activate
install commit
=======================================

Router#show version | inc IOS XE
Cisco IOS XE Software, Version 17.06.02
Router#show version | inc mode
Router operating mode: Autonomous

Router# dir bootflash:*bin*
Directory of bootflash:/*bin*

Directory of bootflash:/
```

```
  31  -rw-   832807301   Mar 7 2022 02:07:28 +00:00  c8000v-universalk9.17.07.01a.SPA.bin
5183766528 bytes total (2348220416 bytes free)

Router#install add file bootflash:/c8000v-universalk9.17.07.01a.SPA.bin
install_add: START Mon Mar 7 02:16:30 UTC 2022
install_add: Adding PACKAGE
install_add: Checking whether new add is allowed ....

--- Starting Add ---
Performing Add on Active/Standby
  [1] Add package(s) on R0
  [1] Finished Add on R0
Checking status of Add on [R0]
Add: Passed on [R0]
Finished Add

Image added. Version: 17.07.01a.0.1883
SUCCESS: install_add  Mon Mar  7 02:20:07 UTC 2022
VK5-C8K-8G-1762-1#

Router# show install summary
[ R0 ] Installed Package(s) Information:
State (St): I - Inactive, U - Activated & Uncommitted,
            C - Activated & Committed, D - Deactivated & Uncommitted
--------------------------------------------------------------------------------
Type  St   Filename/Version
--------------------------------------------------------------------------------
IMG   C    17.06.02.0.2786
IMG   I    17.07.01a.0.1883


--------------------------------------------------------------------------------
Auto abort timer: inactive
--------------------------------------------------------------------------------


====================
install activate
====================

Router# show install summary
[ R0 ] Installed Package(s) Information:
State (St): I - Inactive, U - Activated & Uncommitted,
            C - Activated & Committed, D - Deactivated & Uncommitted
--------------------------------------------------------------------------------
Type  St   Filename/Version
--------------------------------------------------------------------------------
IMG   C    17.06.02.0.2786
IMG   I    17.07.01a.0.1883

Router# install activate
install_activate: START Mon Mar  7 02:50:00 UTC 2022
install_activate: Activating PACKAGE
Following packages shall be activated:
/bootflash/c8000v-rpboot.17.07.01a.SPA.pkg
/bootflash/c8000v-mono-universalk9.17.07.01a.SPA.pkg
/bootflash/c8000v-firmware_nim_xdsl.17.07.01a.SPA.pkg
/bootflash/c8000v-firmware_nim_shdsl.17.07.01a.SPA.pkg
/bootflash/c8000v-firmware_nim_ge.17.07.01a.SPA.pkg
/bootflash/c8000v-firmware_nim_cwan.17.07.01a.SPA.pkg
/bootflash/c8000v-firmware_nim_async.17.07.01a.SPA.pkg
/bootflash/c8000v-firmware_ngwic_t1e1.17.07.01a.SPA.pkg
/bootflash/c8000v-firmware_dsp_sp2700.17.07.01a.SPA.pkg
/bootflash/c8000v-firmware_dreamliner.17.07.01a.SPA.pkg
```

```
      This operation may require a reload of the system. Do you want to proceed? [y/n]y
      --- Starting Activate ---
      Performing Activate on Active/Standby

        [1] Activate package(s) on R0
          --- Starting list of software package changes ---
          Old files list:
            Modified c8000v-firmware_dreamliner.17.06.02.SPA.pkg
            Modified c8000v-firmware_dsp_sp2700.17.06.02.SPA.pkg
            Modified c8000v-firmware_ngwic_t1e1.17.06.02.SPA.pkg
            Modified c8000v-firmware_nim_async.17.06.02.SPA.pkg
            Modified c8000v-firmware_nim_cwan.17.06.02.SPA.pkg
            Modified c8000v-firmware_nim_ge.17.06.02.SPA.pkg
            Modified c8000v-firmware_nim_shdsl.17.06.02.SPA.pkg
            Modified c8000v-firmware_nim_xdsl.17.06.02.SPA.pkg
            Modified c8000v-mono-universalk9.17.06.02.SPA.pkg
            Modified c8000v-rpboot.17.06.02.SPA.pkg
          New files list:
            Added c8000v-firmware_dreamliner.17.07.01a.SPA.pkg
            Added c8000v-firmware_dsp_sp2700.17.07.01a.SPA.pkg
            Added c8000v-firmware_ngwic_t1e1.17.07.01a.SPA.pkg
            Added c8000v-firmware_nim_async.17.07.01a.SPA.pkg
            Added c8000v-firmware_nim_cwan.17.07.01a.SPA.pkg
            Added c8000v-firmware_nim_ge.17.07.01a.SPA.pkg
            Added c8000v-firmware_nim_shdsl.17.07.01a.SPA.pkg
            Added c8000v-firmware_nim_xdsl.17.07.01a.SPA.pkg
            Added c8000v-mono-universalk9.17.07.01a.SPA.pkg
            Added c8000v-rpboot.17.07.01a.SPA.pkg
          Finished list of software package changes
        [1] Finished Activate on R0
      Checking status of Activate on [R0]
      Activate: Passed on [R0]
      Finished Activate

      Send model notification for install_activate before reload
      Install will reload the system now!
      SUCCESS: install_activate  Mon Mar  7 02:57:34 UTC 2022


      ===================================
      install commit
      ===================================

      Router# show version | inc IOS XE
      Cisco IOS XE Software, Version 17.07.01a
      Router# show version | inc mode
      Router operating mode: Autonomous
      Router# show license udi
      UDI: PID:C8000V,SN:9JM01Z7G2JH
```

Upgrading in Install Mode

Use either the one-step installation or the three-step installation procedures mentioned in this chapter to upgrade Cisco Catalyst 8000V in the install mode.

Downgrading in Install Mode

Use the **install rollback** command to downgrade the platform to a previous version by pointing it to the appropriate image, provided the image you are downgrading to was installed in the install mode.

The **install rollback** command reloads the platform and boots it with the previous image.

Note   The **install rollback** command succeeds only if you have not removed the previous file using the **install remove inactive** command.

Note   If you're unable to use this command, you can downgrade by installing the older image using the **install** commands.

Sample Downgrade Configuration

```
==========================
install rollback
==========================

Router# install rollback to base
install_rollback: START Tue Mar 01 03:25:46 UTC 2022
install_rollback: Rolling back to base
This operation may require a reload of the system. Do you want to proceed? [y/n]
*Mar 29 21:17:36.496: %INSTALL-5-INSTALL_START_INFO: R0/0: install_mgr: Started install
rollback
--- Starting Rollback ---
Performing Rollback on all members
 [1] Rollback package(s) on  R0
 [1] Finished Rollback package(s) on  R0
Checking status of Rollback on [R0]
Rollback: Passed on [R0]
Finished Rollback operation
SUCCESS: install_rollback Tue Mar 01 03:30:16 UTC UTC 2022
```

Terminating a Software Installation

You can terminate the activation of a software package in the following ways:

* By allowing the auto-abort-timer to expire before issuing the **install commit** command. When the platform reloads after activating a new image, the auto-abort-timer is triggered (in the three-step install method). When this timer expires, the installation process is terminated and the platform reloads and boots with the last committed version of the software image.

  By using the **install auto-abort-timer stop** command to stop this timer without using the **install commit** command. The new image remains uncommitted in this process.

* By using the **install abort** command which returns the platform to the version that was running before installing the new software. Use this command before issuing the **install commit** command.

Sample Abort Configuration

```
===========================
install abort
===========================
Router# show install summary
[ R0 ] Installed Package(s) Information:
State (St): I - Inactive, U - Activated & Uncommitted,
            C - Activated & Committed, D - Deactivated & Uncommitted
Type  St   Filename/Version
--------------------------------------------------------------------------------
IMG   U    17.09.01.0.154628


--------------------------------------------------------------------------------
Auto abort timer: active , time before rollback - 01:56:56
--------------------------------------------------------------------------------


Router# show version | inc IOS XE
Cisco IOS XE Software, Version BLD_POLARIS_DEV_LATEST_20220227_153436
Router# show version | inc mode
Router operating mode: Autonomous
Router# install abort
install_abort: START Tue Mar 01 04:03:52 UTC 2022

This operation may require a reload of the system. Do you want to proceed? [y/n]y

--- Starting Abort ---
Performing Abort on all members
 [1] Abort packages(s) on  R0
 [1] Finished Abort packages(s) on  R0
Checking status of Abort on [R0]
Abort: Passed on [R0]
Finished Abort operation

SUCCESS: install_abort Tue Mar 01 04:04:45 UTC 2022

Router# Mar  1 04:04:50.161: %PMAN-5-EXITACTION: R0/0: pvp: Process manager is exiting:
reload action requested
```

Troubleshooting Software Installation Using install Commands

Problem Troubleshooting the software installation

Solution Use the following show commands to view installation summary, logs, and software versions.

- **show install summary**

- **show install log**

- **show version**

- **show version running**

Problem Other installation issues

Solution Use the following commands to resolve installation issue:

- **dir** <*install directory*>

- **more location:***packages.conf*

- **show tech-support install**: this command automatically runs the **show** commands that display information specific to installation.

- **request platform software trace archive target bootflash** *<location>*: this command archives all the trace logs relevant to all the processes running on the system since the last reload, and saves this information in the specified location.

Frequently Asked Questions

Q. Can I downgrade from Cisco Catalyst 8000V to Cisco CSR1000V or Cisco ISRv?

A. You can downgrade from Cisco Catalyst 8000V only if you've upgraded to Cisco Catalyst 8000V from a Cisco CSR1000V or a Cisco ISRv 17.3.x or a later version.

Note You cannot downgrade to Cisco CSR1000V or Cisco ISRv if you have freshly installed Cisco Catalyst 8000V.

Q. When I upgrade from a Cisco CSR1000V 16.12.x version or below, will Secure Object Storage be supported?

A. No, Secure Object Storage is not carried over through upgrades. You must perform a fresh installation or reinstall the VM to enable Secure Object Storage support.

Q. Will my license need to change when I upgrade from a Cisco CSR1000V or a Cisco ISRv to Cisco Catalyst 8000V?

A. When you upgrade to Cisco Catalyst 8000V, the licenses remain the same. However, the licenses move from SL to SLE after the upgrade. If the throughput was <=250M before the upgrade, it is retained as is after the upgrade.

If the throughput was >250M and the device was registered to CSSM, the connection stays intact and the throughput automatically triggers the SLAC installation on the device. The corresponding throughput is set once SLAC is installed.

If the device was not connected to CSSM and throughput was >250M, you must manually install SLAC in the offline mode or configure SLE commands to establish trust with CSSM. Then, configure the throughput to trigger the SLAC installation.

Note If SLAC is not installed, the throughput remains at 250M.

Q. Is automation available for the upgrade process?

A. No, automation is currently not supported for the migration.

Q. What is the failure mode handling when I perform a downgrade?

A. When a Cisco CSR1000V image is booting up as a result of a downgrade, the system checks for the partition format. If the partition format does not match the requirements, the boot up is halted. If a Cisco

Catalyst 8000V image is booting up as a result of an upgrade or a downgrade, it continues to boot using the existing partition format.

Q. What is the memory and performance impact after the upgrade?

A. The size of the Cisco Catalyst 8000V image might be slightly larger which could affect the overall memory footprint. However, this does not alter the overall memory requirements. The minimum required RAM for this image is 4GB, and there is no impact on performance by this feature.