



Installing the Software using install Commands

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Installing the Software Using install Commands

From Cisco IOS XE 17.15.1a, all Cisco IOS XE platforms are shipped in install mode by default. Users can boot the platform, and upgrade or downgrade to Cisco IOS XE software versions using a set of **install** commands.

Restrictions for Installing the Software Using install Commands

- ISSU is not covered in this feature.
- Install mode requires a reboot of the system.

Information About Installing the Software Using install Commands

For routers shipped in install mode, a set of **install** commands can be used for starting, upgrading and downgrading of platforms in install mode. This update is applicable to the Cisco Catalyst 8000 Edge platforms.

From Cisco IOS XE 17.15.1a release, this update is applicable to all Cisco IOS XE platforms.

The following table describes the differences between Bundle mode and Install mode:

Table 1: Bundle Mode vs Install Mode

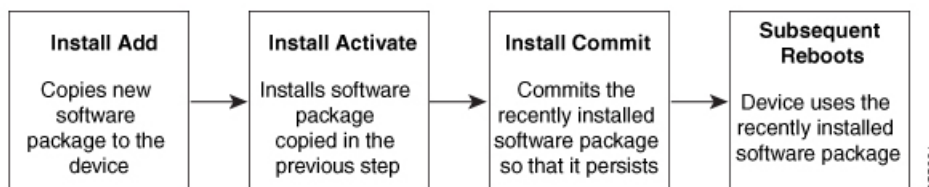
Bundle Mode	Install Mode
This mode provides a consolidated boot process, using local (hard disk, flash) or remote (TFTP) .bin image. Note Bundle boot from USB and TFTPBoot is not supported.	This mode uses the local (bootflash) packages.conf file for the boot process.
This mode uses a single .bin file.	.bin file is replaced with expanded .pkg files in this mode.
CLI: <code>#boot system file <filename></code>	CLI: <code>#install add file bootflash: [activate commit]</code>
To upgrade in this mode, point the boot system to the new image.	To upgrade in this mode, use the install commands.
Image Auto-Upgrade: When a new Field-Replaceable Unit (FRU) is inserted in a modular chassis, manual intervention is required to get the new FRU running with the same version as the active FRUs.	Image Auto-Upgrade: When a new FRU is inserted in a modular chassis, the joining FRU is auto-upgraded to the image version in sync with the active FRUs.
Rollback: Rollback to the previous image with multiple Software Maintenance Updates (SMUs) may require multiple reloads.	Rollback: Enables rollback to an earlier version of Cisco IOS XE software, including multiple patches in single reload.

Install Mode Process Flow

The install mode process flow comprises three commands to perform installation and upgrade of software on platforms—**install add**, **install activate**, and **install commit**.

The following flow chart explains the install process with **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. The 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 the platform on which it is being installed.

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 makes the updates persistent over reloads.



Note Installing an update replaces any previously installed software image. At any time, only one image can be installed in a device.

The following set of install commands is available:

Table 2: List of install Commands

Command	Syntax	Purpose
install add	install add file <i>location:filename.bin</i>	<p>Copies the contents of the image, package, and SMUs to the software repository. File location may be local or remote. This command does the following:</p> <ul style="list-style-type: none"> • 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	<p>Activates the package added using the install add command.</p> <ul style="list-style-type: none"> • Use the show install summary command to see which image is inactive. This image will get activated. • 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>	<p>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.</p> <ul style="list-style-type: none"> • 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	<p>Commits the package activated using the install activate command, and makes it persistent over reloads.</p> <ul style="list-style-type: none"> • Use the show install summary command to see which image is uncommitted. This image will get committed.

Command	Syntax	Purpose
install abort	install abort	<p>Terminates the installation and returns the system to the last-committed state.</p> <ul style="list-style-type: none"> • This command is applicable only when the package is in 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}	<p>Deletes inactive packages from the platform repository. Use this command to free up space.</p> <ul style="list-style-type: none"> • file: Removes specified files. • inactive: Removes all the inactive files.
install rollback to	install rollback to {base label committed id}	<p>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:</p> <ul style="list-style-type: none"> • Requires reload. • Is applicable only when the package is in committed state. • Use this command with the prompt-level none keyword to automatically ignore any confirmation prompts. <p>Note If you are performing install rollback to a previous image, the previous image must be installed in install mode. Only SMU rollback is possible in bundle mode.</p>

Command	Syntax	Purpose
install deactivate	install deactivate file <filename>	Removes a package from the platform repository. This command is supported only for SMUs. <ul style="list-style-type: none"> Use this command with the prompt-level none keyword to automatically ignore any confirmation prompts.

The following show commands are also available:

Table 3: List of show Commands

Command	Syntax	Purpose
show install log	show install log	Provides the history and details of all 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 for all the FRUs. <ul style="list-style-type: none"> The table that is displayed will state for which FRUs this information is applicable. If all the FRUs are in sync in terms of the images present and their state, only one table is displayed. If, however, there is a difference in the image or state information among the FRUs, each FRU that differs from the rest of the stack is listed in a separate table.
show install active	show install active	Provides information about the active packages for all the FRUs. If there is a difference in the information among the FRUs, each FRU that differs from the rest of the stack is listed in a separate table.

Command	Syntax	Purpose
show install inactive	show install inactive	Provides information about the inactive packages, if any, for all the FRUs. If there is a difference in the information among the FRUs, each FRU that differs from the rest of the stack is listed in a separate table.
show install committed	show install committed	Provides information about the committed packages for all the FRUs. If there is a difference in the information among the FRUs, each FRU that differs from the rest of the stack is listed in a separate table.
show install uncommitted	show install uncommitted	Provides information about uncommitted packages, if any, for all the FRUs. If there is a difference in the information among the FRUs, each FRU that differs from the rest of the stack is listed in a separate table.
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 hardware and platform information.

Booting the Platform in Install Mode

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

If the platform is working in bundle mode, the one-step install procedure must be used to initially convert the platform from bundle mode to install mode. Subsequent installs and upgrades on the platform can be done with either one-step or three-step variants.

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



Note

- All the CLI actions (for example, add, activate, and so on) are executed on all the available FRUs.
- The configuration save prompt will appear if an unsaved configuration is detected.
- The reload prompt will appear 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.

Use the one-step install procedure described below to convert a platform running in bundle boot mode to install mode. After the command is executed, the platform reboots in install boot mode.

Later, the one-step install procedure can also be used to upgrade the platform.

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

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 privileged EXEC mode. Enter your password, if prompted.
Step 2	install add file location: <i>filename</i> [activate commit] Example: Device#install add file bootflash:c8000e-universal-k9-EFD-V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SFA.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 privileged EXEC mode and returns to user EXEC mode.

Three-Step Installation



- Note**
- All the CLI actions (for example, add, activate, and so on) are executed on all the available FRUs.
 - The configuration save prompt will appear if an unsaved configuration is detected.
 - The reload prompt will appear after the install activate step in this workflow. Use the **prompt-level none** keyword to automatically ignore the confirmation prompts.

The three-step installation procedure can be used only after the platform is in install mode. This option provides more flexibility and control to the customer during installation.

This procedure uses individual **install add**, **install activate**, and **install commit** commands for installing a software package, and to upgrade the platform to a new version.

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 privileged EXEC mode. Enter your password, if prompted.
Step 2	install add file location: <i>filename</i> Example: Device#install add file bootflash:c8000e-universalk9-ED_V17_THROTTLER_LATEST_20211027_030841_V17_7_0_120.SPA.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 for all the FRUs.

	Command or Action	Purpose
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. <ul style="list-style-type: none"> • When doing a full software install, do not provide a package filename. • In the three-step variant, 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 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. <ul style="list-style-type: none"> • Use this command only when the image is in activated state, and not when the image is in 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 <i>filesystem: filename</i> inactive } Example: Device#install remove inactive	(Optional) Deletes software installation files. <ul style="list-style-type: none"> • 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 privileged EXEC mode and returns to user EXEC mode.

Upgrading in Install Mode

Use either the one-step installation or the three-step installation to upgrade the platform in 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 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.

Alternatively, you can downgrade by installing the older image using the **install** commands.

Terminating a Software Installation

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

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

Alternatively, use 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.

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

Configuration Examples for Installing the Software Using install Commands

The following is an example of the one-step installation or converting from bundle mode to install mode:

```
Router# install add file
bootflash:c8000be-universalk9.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.bin
  activate commit
install_add_activate_commit: START Thu Oct 28 21:57:21 UTC 2021

System configuration has been modified.
Press Yes(y) to save the configuration and proceed.
Press No(n) for proceeding without saving the configuration.
Press Quit(q) to exit, you may save configuration and re-enter the command. [y/n/q]y
Building configuration...

[OK]Modified configuration has been saved

*Oct 28 21:57:39.818: %SYS-6-PRIVCFG_ENCRYPT_SUCCESS: Successfully encrypted private config
file
*Oct 28 21:57:39.925: %INSTALL-5-INSTALL_START_INFO: R0/0: install_engine: Started install
one-shot
bootflash:c8000be-universalk9.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.bininstall_add_activate_commit:
Adding PACKAGE
```

```

install_add_activate_commit: 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: 17.07.01.0.1515
install_add_activate_commit: Activating PACKAGE
Following packages shall be activated:
/bootflash/c8000be-rpboot.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-mono-universalk9.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-firmware_sm_nim_adpt.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-firmware_sm_dsp_sp2700.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-firmware_sm_async.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-firmware_sm_lt3e3.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-firmware_sm_10g.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-firmware_prince.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-firmware_nim_xdsl.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-firmware_nim_ssd.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-firmware_nim_shdsl.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-firmware_nim_ge.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-firmware_nim_cwan.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-firmware_nim_bri_st_fw.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-firmware_nim_async.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-firmware_ngwic_t1e1.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-firmware_dsp_tilegx.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-firmware_dsp_sp2700.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-firmware_dsp_analogbri.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
/bootflash/c8000be-firmware_dreamliner.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg

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

*Oct 28 22:05:49.484: %INSTALL-5-INSTALL_AUTO_ABORT_TIMER_PROGRESS: R0/0: rollback_timer:
Install auto abort timer will expire in 7200 seconds  [1] Activate package(s) on R0
  [1] Finished Activate on R0
Checking status of Activate on [R0]
Activate: Passed on [R0]
Finished Activate

--- Starting Commit ---
Performing Commit on Active/Standby
  [1] Commit package(s) on R0

Building configuration...
  [1] Finished Commit on R0
Checking status of Commit on [R0]
Commit: Passed on [R0]
Finished Commit

[OK]
*Oct 28 22:06:55.375: %SYS-6-PRIVCFG_ENCRYPT_SUCCESS: Successfully encrypted private config
fileSend model notification for install_add_activate_commit before reload
Install will reload the system now!
SUCCESS: install_add_activate_commit  Thu Oct 28 22:07:22 UTC 2021

Router#
*Oct 28 22:07:22.661: %INSTALL-5-INSTALL_COMPLETED_INFO: R0/0: install_engine: Completed
install one-shot PACKAGE

```

```
bootflash:c8000be-universalk9.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.binOct
 28 22:07:26.864: %PMAN-5-EXITACTION: R0/0: pvp: Process manager is exiting: reload action
  requested
```

□

Press RETURN to get started!

The following is an example of the three-step installation:

```
Router# install add file
bootflash:c8000be-universalk9.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.bin

install_add: START Thu Oct 28 22:36:43 UTC 2021

*Oct 28 22:36:44.526: %INSTALL-5-INSTALL_START_INFO: R0/0: install_engine: Started install
 add
bootflash:c8000be-universalk9.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.bininstall_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: 17.07.01.0.1601
SUCCESS: install_add Thu Oct 28 22:40:25 UTC 2021

Router#
*Oct 28 22:40:25.971: %INSTALL-5-INSTALL_COMPLETED_INFO: R0/0: install_engine: Completed
install add PACKAGE
bootflash:c8000be-universalk9.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.bin

Router# show install log
[0|install_op_boot]: START Thu Oct 28 22:09:29 Universal 2021
[0|install_op_boot(INFO, )]: Mount IMG INI state base image
[0|install_op_boot]: END SUCCESS Thu Oct 28 22:09:30 Universal 2021
[0|install_op_boot(INFO, )]: cleanup_trap remote_invocation 0 operation install_op_boot
.. 0 .. 0
[1|display_install_log]: START Thu Oct 28 22:12:11 UTC 2021
[2|install_add]: START Thu Oct 28 22:36:43 UTC 2021
[2|install_add(INFO, )]: Set INSTALL_TYPE to PACKAGE
[2|install_add(CONSOLE, )]: Adding PACKAGE
[2|install_add(CONSOLE, )]: Checking whether new add is allowed ....
[2|install_add(INFO, )]: check_add_op_allowed: Install type PACKAGE
[remote|install_add]: START Thu Oct 28 22:37:12 UTC 2021
[remote|install_add]: END SUCCESS Thu Oct 28 22:40:10 UTC 2021
[remote|install_add(INFO, )]: cleanup_trap remote_invocation 1 operation install_add .. 0
.. 0
[2|install_add(INFO, )]: Remote output from R0
[2|install_add(INFO, )]: install_add: START Thu Oct 28 22:37:12 UTC 2021
Expanding image file:
bootflash:c8000be-universalk9.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.bin
Verifying parameters
Expanding superpackage
bootflash:c8000be-universalk9.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.bin
... parameters verified
Validating package type
... package type validated
```

```

Copying package files
  c8000be-firmware_dreamliner.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg

c8000be-firmware_dsp_analogbri.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg

  c8000be-firmware_dsp_sp2700.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
  c8000be-firmware_dsp_tilegx.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
  c8000be-firmware_ngwic_t1e1.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
  c8000be-firmware_nim_async.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg

c8000be-firmware_nim_bri_st_fw.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg

  c8000be-firmware_nim_cwan.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
  c8000be-firmware_nim_ge.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
  c8000be-firmware_nim_shdsl.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg

  c8000be-firmware_nim_ssd.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
  c8000be-firmware_nim_xdsl.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
  c8000be-firmware_prince.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
  c8000be-firmware_sm_10g.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
  c8000be-firmware_sm_1t3e3.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
  c8000be-firmware_sm_async.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg

c8000be-firmware_sm_dsp_sp2700.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg

  c8000be-firmware_sm_nim_adpt.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg

  c8000be-mono-universalk9.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
  c8000be-rpboot.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
WARNING: A different version of provisioning file packages.conf already exists in bootflash:

WARNING: The provisioning file from the expanded bundle will be saved as
WARNING: bootflash:c8000be-universalk9.BLD_V177_THROTTLE_LATEST_20211027_0.conf
... package files copied
SUCCESS: Finished expanding all-in-one software package.
Image file expanded
SUCCESS: install_add Thu Oct 28 22:40:10 UTC 2021
[2|install_add]: END SUCCESS Thu Oct 28 22:40:25 UTC 2021
[2|install_add(INFO, )]: cleanup_trap remote_invocation 0 operation install_add .. 0 .. 0
[3|COMP_CHECK]: START Thu Oct 28 22:40:26 UTC 2021
[3|COMP_CHECK]: END FAILED exit(1) Thu Oct 28 22:40:27 UTC 2021
[3|COMP_CHECK(INFO, )]: cleanup_trap remote_invocation 0 operation COMP_CHECK .. 1 .. 1
[4|install_activate]: START Thu Oct 28 22:42:53 UTC 2021
[4|install_activate(INFO, )]: install_cli
[4|install_activate(CONSOLE, )]: Activating PACKAGE
[4|install_activate(INFO, )]: Acquiring transaction lock...
[4|install_activate(INFO, )]: global_trans_lock:
/bootflash/.installer/install_global_trans_lock
[4|install_activate(INFO, )]: tmp_global_trans_lock: /tmp/tmp_install_global_trans_lock
[4|install_activate(INFO, )]: tmp lock does not exist: /tmp/tmp_install_global_trans_lock
[4|install_activate(INFO, )]: global_trans_lock:
/bootflash/.installer/install_global_trans_lock
[4|install_activate(INFO, )]: tmp_global_trans_lock: /tmp/tmp_install_global_trans_lock
[4|install_activate(INFO, )]: local_trans_lock: /bootflash/.installer/install_local_trans_lock
[4|install_activate(INFO, )]: global_trans_lock:
/bootflash/.installer/install_global_trans_lock
[4|install_activate(INFO, )]: validate_lock: lock_duration is 7200
[4|install_activate(INFO, )]: install type stored in lock PACKAGE, install type PACKAGE,
install operation install_activate

```

```
[4|install_activate(INFO, )]: lock duration: 7200
[4|install_activate(INFO, )]: extend trans lock done.
/bootflash/.installer/install_global_trans_lock
[4|install_activate(INFO, require user prompt)]: install_cli
[4|install_activate( FATAL)]: Cannot proceed activate because of user input
[4|install_activate(INFO, )]: cleanup_trap remote_invocation 0 operation install_activate
.. 6 .. 0
[5|install_add]: START Thu Oct 28 22:45:48 UTC 2021
[5|install_add(INFO, )]: Set INSTALL_TYPE to PACKAGE
[5|install_add(CONSOLE, )]: Adding PACKAGE
[5|install_add(CONSOLE, )]: Checking whether new add is allowed ....
[5|install_add(INFO, )]: check_add_op_allowed: Install type PACKAGE
[5|install_add( FATAL)]: Super package already added. Add operation not allowed. install
remove inactive can be used to discard added packages
```

```
Router# install activate
install_activate: START Thu Oct 28 23:57:57 UTC 2021
install_activate: Activating PACKAGE
```

```
*Oct 28 23:57:57.823: %INSTALL-5-INSTALL_START_INFO: R0/0: install_engine: Started install
activateFollowing packages shall be activated:
/bootflash/c8000be-rpboot.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-mono-universalk9.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-firmware_sm_nim_adpt.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-firmware_sm_dsp_sp2700.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-firmware_sm_async.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-firmware_sm_lt3e3.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-firmware_sm_10g.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-firmware_prince.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-firmware_nim_xdsl.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-firmware_nim_ssd.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-firmware_nim_shdsl.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-firmware_nim_ge.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-firmware_nim_cwan.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-firmware_nim_bri_st_fw.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-firmware_nim_async.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-firmware_ngwic_tle1.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-firmware_dsp_tilegx.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-firmware_dsp_sp2700.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-firmware_dsp_analogbri.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
/bootflash/c8000be-firmware_dreamliner.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.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
```

```
*Oct 29 00:04:19.400: %INSTALL-5-INSTALL_AUTO_ABORT_TIMER_PROGRESS: R0/0: rollback_timer:
Install auto abort timer will expire in 7200 seconds [1] Activate package(s) on R0
--- Starting list of software package changes ---
Old files list:
Modified
c8000be-firmware_dreamliner.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
Modified
c8000be-firmware_dsp_analogbri.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
Modified
c8000be-firmware_dsp_sp2700.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
Modified
c8000be-firmware_dsp_tilegx.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
Modified
c8000be-firmware_ngwic_tle1.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
Modified
c8000be-firmware_nim_async.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
Modified
```

```

c8000be-firmware_nim_bri_st_fw.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
    Modified
c8000be-firmware_nim_cwan.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
    Modified
c8000be-firmware_nim_ge.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
    Modified
c8000be-firmware_nim_shdsl.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
    Modified
c8000be-firmware_nim_ssd.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
    Modified
c8000be-firmware_nim_xdsl.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
    Modified
c8000be-firmware_prince.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
    Modified
c8000be-firmware_sm_10g.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
    Modified
c8000be-firmware_sm_1t3e3.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
    Modified
c8000be-firmware_sm_async.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
    Modified
c8000be-firmware_sm_dsp_sp2700.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
    Modified
c8000be-firmware_sm_nim_adpt.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
    Modified
c8000be-mono-universalk9.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
    Modified c8000be-rpboot.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
    New files list:
    Added
c8000be-firmware_dreamliner.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added
c8000be-firmware_dsp_analogbri.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added
c8000be-firmware_dsp_sp2700.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added
c8000be-firmware_dsp_tilegx.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added
c8000be-firmware_ngwic_t1e1.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added
c8000be-firmware_nim_async.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added
c8000be-firmware_nim_bri_st_fw.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added
c8000be-firmware_nim_cwan.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added
c8000be-firmware_nim_ge.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added
c8000be-firmware_nim_shdsl.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added
c8000be-firmware_nim_ssd.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added
c8000be-firmware_nim_xdsl.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added
c8000be-firmware_prince.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added
c8000be-firmware_sm_10g.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added
c8000be-firmware_sm_1t3e3.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added
c8000be-firmware_sm_async.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added

```



```

c8000be-firmware_sm_dsp_sp2700.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added
c8000be-firmware_sm_nim_adpt.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added
c8000be-mono-universalk9.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.pkg
    Added c8000be-rpboot.BLD_V177_THROTTLE_LATEST_20211027_030841_V17_7_0_120.SSA.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  Fri Oct 29 00:05:09 UTC 2021

Router#
*Oct 29 00:05:09.504: %INSTALL-5-INSTALL_COMPLETED_INFO: R0/0: install_engine: Completed
install activate PACKAGEOct 29 00:05:14.494: %PMAN-5-EXITACTION: R0/0: pvp: Process manager
is exiting: reload action requested

Initializing Hardware ...

Checking for PCIe device presence...done
System integrity status: 0x610

System Bootstrap, Version 17.3(4.1r), RELEASE SOFTWARE
Copyright (c) 1994-2021 by cisco Systems, Inc.

Current image running   : Boot ROM1
Last reset cause        : LocalSoft
C8300-2N2S-6T platform with 8388608 Kbytes of main memory

□

Press RETURN to get started!

□

Router# install commit
install_commit: START Fri Oct 29 00:13:58 UTC 2021
install_commit: Committing PACKAGE

--- Starting Commit ---
Performing Commit on Active/Standby

*Oct 29 00:13:59.552: %INSTALL-5-INSTALL_START_INFO: R0/0: install_engine: Started install
commit [1] Commit package(s) on R0
    [1] Finished Commit on R0
Checking status of Commit on [R0]
Commit: Passed on [R0]
Finished Commit

SUCCESS: install_commit  Fri Oct 29 00:14:03 UTC 2021

Router#
*Oct 29 00:14:03.712: %INSTALL-5-INSTALL_COMPLETED_INFO: R0/0: install_engine: Completed
install commit PACKAGE

```

The following is an example of downgrading in install mode:

```

ROUTER# install activate file bootflash:c8000be-universalk9.17.06.01a.SPA.bin activate
commit

install_add_activate_commit: START Fri Dec 10 18:07:17 GMT 2021

*Dec 10 18:07:18.405 GMT: %INSTALL-5-INSTALL_START_INFO: R0/0: install_engine: Started
install one-shot bootflash:c8000be-universalk9.17.06.01a.SPA.bininstall_add_activate_commit:
  Adding PACKAGE
install_add_activate_commit: 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: 17.06.01a.0.298
install_add_activate_commit: Activating PACKAGE
Following packages shall be activated:
/bootflash/c8000be-rpboot.17.06.01a.SPA.pkg
/bootflash/c8000be-mono-universalk9.17.06.01a.SPA.pkg
/bootflash/c8000be-firmware_sm_nim_adpt.17.06.01a.SPA.pkg
/bootflash/c8000be-firmware_sm_dsp_sp2700.17.06.01a.SPA.pkg
/bootflash/c8000be-firmware_sm_async.17.06.01a.SPA.pkg
/bootflash/c8000be-firmware_sm_lt3e3.17.06.01a.SPA.pkg
/bootflash/c8000be-firmware_sm_10g.17.06.01a.SPA.pkg
/bootflash/c8000be-firmware_prince.17.06.01a.SPA.pkg
/bootflash/c8000be-firmware_nim_xdsl.17.06.01a.SPA.pkg
/bootflash/c8000be-firmware_nim_ssd.17.06.01a.SPA.pkg
/bootflash/c8000be-firmware_nim_shdsl.17.06.01a.SPA.pkg
/bootflash/c8000be-firmware_nim_ge.17.06.01a.SPA.pkg
/bootflash/c8000be-firmware_nim_cwan.17.06.01a.SPA.pkg
/bootflash/c8000be-firmware_nim_bri_st_fw.17.06.01a.SPA.pkg
/bootflash/c8000be-firmware_nim_async.17.06.01a.SPA.pkg
/bootflash/c8000be-firmware_ngwic_tle1.17.06.01a.SPA.pkg
/bootflash/c8000be-firmware_dsp_tilegx.17.06.01a.SPA.pkg
/bootflash/c8000be-firmware_dsp_sp2700.17.06.01a.SPA.pkg
/bootflash/c8000be-firmware_dsp_analogbri.17.06.01a.SPA.pkg
/bootflash/c8000be-firmware_dreamliner.17.06.01a.SPA.pkg

This operation may require a reload of the system. Do you want to proceed? [y/n]
--- Starting Activate ---
Performing Activate on Active/Standby
  [1] Activate package(s) on R0
  [1] Finished Activate on R0
Checking status of Activate on [R0]
Activate: Passed on [R0]
Finished Activate

--- Starting Commit ---
Performing Commit on Active/Standby
  [1] Commit package(s) on R0
Building configuration...

  [1] Finished Commit on R0
Checking status of Commit on [R0]
Commit: Passed on [R0]
Finished Commit

[OK]
*Dec 10 18:14:57.782 GMT: %SYS-6-PRIVCFG_ENCRYPT_SUCCESS: Successfully encrypted private
config fileSend model notification for install_add_activate_commit before reload

```

```
/usr/binos/conf/install_util.sh: line 164: /bootflash/.prst_sync/reload_info: No such file
or directory
/usr/binos/conf/install_util.sh: line 168: /bootflash/.prst_sync/reload_info: No such file
or directory
cat: /bootflash/.prst_sync/reload_info: No such file or directory
Install will reload the system now!
SUCCESS: install_add_activate_commit  Fri Dec 10 18:15:23 GMT 2021

ROUTER#
*Dec 10 18:15:23.955 GMT: %INSTALL-5-INSTALL_COMPLETED_INFO: R0/0: install_engine: Completed
install one-shot PACKAGE bootflash:c8000be-universalk9.17.06.01a.SPA.binDec 10 18:15:27.708:
%PMAN-5-EXITACTION: R0/0: pvp: Process manager is exiting: reload action requested

Initializing Hardware ...

Checking for PCIe device presence...done
System integrity status: 0x610
Rom image verified correctly

System Bootstrap, Version 17.3(5r), RELEASE SOFTWARE
Copyright (c) 1994-2021 by cisco Systems, Inc.

Current image running: Boot ROM0

Last reset cause: LocalSoft
ROUTER platform with 8388608 Kbytes of main memory

□

Press RETURN to get started!

□

ROUTER#
ROUTER# show version
Cisco IOS XE Software, Version 17.06.01a
Cisco IOS Software [Bengaluru], c8000be Software (X86_64_LINUX_IOSD-UNIVERSALK9-M), Version
17.6.1a, RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2021 by Cisco Systems, Inc.
Compiled Sat 21-Aug-21 03:27 by mcpre

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software code licensed under GPL Version 2.0 is free software that comes
with ABSOLUTELY NO WARRANTY. You can redistribute and/or modify such
GPL code under the terms of GPL Version 2.0. For more details, see the
documentation or "License Notice" file accompanying the IOS-XE software,
or the applicable URL provided on the flyer accompanying the IOS-XE
software.

ROM: 17.3(5r)

ROUTER uptime is 0 minutes
Uptime for this control processor is 2 minutes
System returned to ROM by LocalSoft
System image file is "bootflash:packages.conf"
Last reload reason: LocalSoft

This product contains cryptographic features and is subject to United
States and local country laws governing import, export, transfer and
use. Delivery of Cisco cryptographic products does not imply
third-party authority to import, export, distribute or use encryption.
```

Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at: <http://www.cisco.com/wwl/export/crypto/tool/stqrg.html>

If you require further assistance please contact us by sending email to export@cisco.com.

Technology Package License Information:

```

-----
Technology      Type           Technology-package Current  Technology-package Next Reboot
-----
Smart License  Perpetual      None                    None
Smart License  Subscription   None                    None

```

The current crypto throughput level is 250000 kbps

Smart Licensing Status: Registration Not Applicable/Not Applicable

```

cisco ROUTER (1RU) processor with 3747220K/6147K bytes of memory.
Processor board ID FDO2521M27S
Router operating mode: Autonomous
5 Gigabit Ethernet interfaces
2 2.5 Gigabit Ethernet interfaces
2 Cellular interfaces
32768K bytes of non-volatile configuration memory.
8388608K bytes of physical memory.
7573503K bytes of flash memory at bootflash:.
1875361792K bytes of NVMe SSD at harddisk:.
16789568K bytes of USB flash at usb0:.

```

Configuration register is 0x2102

The following is an example of terminating a software installation:

```

Router# install abort
install_abort: START Fri Oct 29 02:42:51 UTC 2021

This install abort would require a reload. Do you want to proceed? [y/n]
*Oct 29 02:42:52.789:
  %INSTALL-5-INSTALL_START_INFO: R0/0: install_engine: Started install aborty
--- Starting Abort ---
Performing Abort on Active/Standby

  [1] Abort package(s) on R0
  [1] Finished Abort on R0
Checking status of Abort on [R0]
Abort: Passed on [R0]
Finished Abort

Send model notification for install_abort before reload
Install will reload the system now!
SUCCESS: install_abort  Fri Oct 29 02:44:47 UTC 2021

Router#
*Oct 29 02:44:47.866: %INSTALL-5-INSTALL_COMPLETED_INFO: R0/0: install_engine: Completed
install abort PACKAGEOct 29 02:44:51.577: %PMAN-5-EXITACTION: R0/0: pvp: Process manager

```

```

is exiting: reload action requested

Initializing Hardware ...

Checking for PCIe device presence...done
System integrity status: 0x610

System Bootstrap, Version 17.3(4.1r), RELEASE SOFTWARE
Copyright (c) 1994-2021 by cisco Systems, Inc.

Current image running   : Boot ROM1
Last reset cause       : LocalSoft
C8300-2N2S-6T platform with 8388608 Kbytes of main memory

□

Press RETURN to get started!

□

```

The following are sample outputs for show commands:

show install log

```

Device# show install log
[0|install_op_boot]: START Thu Oct 28 22:09:29 Universal 2021
[0|install_op_boot(INFO, )]: Mount IMG INI state base image
[0|install_op_boot]: END SUCCESS Thu Oct 28 22:09:30 Universal 2021

```

show install summary

```

Device# 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   17.07.01.0.1515
-----
Auto abort timer: inactive
-----

```

show install package *filesystem: filename*

```

Device# show install package
bootflash:c8000be-universalk9.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.bin
Package: c8000be-universalk9.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.bin
Size: 831447859
Timestamp: 2021-10-23 17:08:14 UTC
Canonical path:
/bootflash/c8000be-universalk9.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.bin

Raw disk-file SHA1sum:
5c4e7617a6c71ffbcc73dcd034ab58bf76605e3f
Header size: 1192 bytes
Package type: 30000
Package flags: 0
Header version: 3

Internal package information:

```

```
Name: rp_super
BuildTime: 2021-10-21_13.00
ReleaseDate: 2021-10-21_03.11
BootArchitecture: i686
RouteProcessor: radium
Platform: C8000BE
User: mcpre
PackageName: universalk9
Build: BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117
CardTypes:
```

Package is bootable from media and tftp.
Package contents:

```
Package:
c8000be-firmware_nim_ge.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
Size: 2966620
Timestamp: 2021-10-21 20:10:44 UTC
```

```
Raw disk-file SHA1sum:
 501d59d5f152ca00084a0da8217bf6f6b95dddb1
Header size: 1116 bytes
Package type: 40000
Package flags: 0
Header version: 3
```

```
Internal package information:
Name: firmware_nim_ge
BuildTime: 2021-10-21_13.00
ReleaseDate: 2021-10-21_03.11
BootArchitecture: none
RouteProcessor: radium
Platform: C8000BE
User: mcpre
PackageName: firmware_nim_ge
Build: BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117
CardTypes:
```

Package is not bootable.

```
Package:
c8000be-firmware_prince.BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117.SSA.pkg
Size: 10204252
Timestamp: 2021-10-21 20:10:43 UTC
```

```
Raw disk-file SHA1sum:
 a57bed4ddecfd08af3b456f69d11aaeb962865ea
Header size: 1116 bytes
Package type: 40000
Package flags: 0
Header version: 3
```

```
Internal package information:
Name: firmware_prince
BuildTime: 2021-10-21_13.00
ReleaseDate: 2021-10-21_03.11
BootArchitecture: none
RouteProcessor: radium
Platform: C8000BE
User: mcpre
PackageName: firmware_prince
Build: BLD_V177_THROTTLE_LATEST_20211021_031123_V17_7_0_117
CardTypes:
```

Package is not bootable.

show install active

```
Device# show install active
[ R0 ] Active Package(s) Information:
State (St): I - Inactive, U - Activated & Uncommitted,
             C - Activated & Committed, D - Deactivated & Uncommitted
-----
Type  St   Filename/Version
-----
IMG   C    17.07.01.0.1515
-----
Auto abort timer: inactive
-----
```

show install inactive

```
Device# show install inactive
[ R0 ] Inactive Package(s) Information:
State (St): I - Inactive, U - Activated & Uncommitted,
             C - Activated & Committed, D - Deactivated & Uncommitted
-----
Type  St   Filename/Version
-----
No Inactive Packages
-----
```

show install committed

```
Device# show install committed
[ R0 ] Committed Package(s) Information:
State (St): I - Inactive, U - Activated & Uncommitted,
             C - Activated & Committed, D - Deactivated & Uncommitted
-----
Type  St   Filename/Version
-----
IMG   C    17.07.01.0.1515
-----
Auto abort timer: inactive
-----
```

show install uncommitted

```
Device# show install uncommitted
[ R0 ] Uncommitted Package(s) Information:
State (St): I - Inactive, U - Activated & Uncommitted,
             C - Activated & Committed, D - Deactivated & Uncommitted
-----
Type  St   Filename/Version
-----
No Uncommitted Packages
-----
```

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.