Software Package Management Commands

This chapter describes the Cisco IOS XR commands used to add packages to a router storage device, activate or deactivate packages, upgrade or downgrade existing packages, and display information about packages.

For detailed information about the concepts and tasks necessary to manage Cisco IOS XR software see .

show zapdisk locations

To display location information where zapdisk operation is supported, use the **show zapdisk locations** command in XR EXEC mode.

show zapdisk locations [*output-modifiers* { **begin** *line* | **exclude** *line* | **file** | **include** *line* | **utility** *line* }]

Syntax Description

output-modifiers **begin** *line*	(Optional) Displays information from the line that matches to the given content. For example, if you want to display the running configuration starting from the interface configurations, you can enter as **| begin interface**.
output-modifiers **exclude** *line*	(Optional) Displays information by filtering out lines that contain the given content. For example, if you want to view a configuration but skip all lines that mention "interface", you can enter as **| exclude interface**.
output-modifiers **include** *line*	(Optional) Displays information that includes the content that you have given. For example, if you want to view lines that contain the word "interface" within a configuration, you can enter as **| include interface**.
output-modifiers **utility** *line*	(Optional) Specifies various Unix command-line tools to manipulate or analyze the command's output. For example, if you want to sort the output of a command alphabetically, you can enter as **| utility sort**.

output-modifiers **file**	(Optional) Saves the information to a specific file. For example, if you want save information to a perticular file, you can enter as **`| file filename vrf vrfname`**. You can save the content in the following locations: • *filename* - Save the output to a specified filename in VRF. • *append* - Add the output to the end of an existing file. • *config* - Save the output to the device's configuration. • *disk0* - Store the output on the device's disk0 storage. • *ftp* - Transfer and save the output to an FTP server. • *harddisk* - Save the output to the device's internal hard disk. • *http* - Send the output to an HTTP server. • *https* - Send the output to an HTTPS server. • *rootfs* - Save the output to the root file system of the device. • *scp* - Securely copy the output to a remote server using SCP. • *sftp* - Securely transfer the output to a remote server using SFTP. • *tftp* - Transfer the output to a TFTP server.

Command Default

None

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 7.0.1	This command was introduced.

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operations
root-lr	Execute

The following example shows sample output from the **show zapdisk locations** command:

```
Router# show zapdisk locations
0/RP1     Fully qualified location specification
0/7        Fully qualified location specification
0/4        Fully qualified location specification
all        all locations
```

zapdisk start location

To erase data from the disk memory of RSPs and line cards, use the **zapdisk start location** command in XR EXEC mode.

zapdisk start location *node-id*

Syntax Description

location *node-id*	Specifies the node location or all node locations. The node-id argument is entered in the rack/slot/module notation. Displays the information about a specific node.

Command Default

Disabled.

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 7.0.1	This command was introduced.

Usage Guidelines

After the command is executed, the card is shut down. Do not reload the card.

Caution This command should not be used during normal operation of the router. The command should be used only when you have planned to delete the data from the card during return material authorization (RMA).

Task ID

Task ID	Operations
root-lr	Execute

The following example shows how to erase data from the line card location 0/4:

```
Router# zapdisk start location 0/4
Action on designated location is in progress, more detail logs will be located in sysadmin
 at
/misc/disk1/tftpboot/zapdisk.log once action is completed
```

install activate

To add software functionality to the active software set, use the **install activate** command in XR EXEC mode.

install activate { *package-name* | **id** *id-number* | **issu** [*package-name* | **abort** | **auto-abort-cleanup** | **cleanup** | { **id** *id-number* } | **load** | **noprompt** | **run**] | **nooptim** | **noprompt** | **process-restart** | **reload** | **synchronous** } [**replace** | **restrict-release**]

Syntax Description

package name	Specifies the package name. **Note** Multiple packages can be activated at one time. Up to 64 packages can be specified in a single **install activate** command. However, the number of packages is limited based on the length of the character entered. The character length should not exceed 1024.
id *id-number*	Specifies the ID number of an **install add** operation. The command activates all packages that were added in the specified **install add** operation. The ID number of an **install add** operation is indicated in the syslog displayed during the operation and in the output of the **show install log** command. Up to 16 **install add** operations can be specified.
issu	Performs an in-service software upgrade.
nooptim	Executes install operation in traditional mode.
noprompt	(Optional) Sets Yes to any response prompted from an install operation when this keyword is used in the command. **Note** The command functionality remains unaltered even if the keyword is not specified.
process-restart	Restarts the process.
reload	Reloads the process.
synchronous	(Optional) Performs the command in synchronous mode. This mode allows the installation process to finish before the prompt is returned.
abort	(Optional) Specifies abort operation
auto-abort-cleanup	(Optional) Specifies an auto abort cleanup of the v2 nodes if an abort occurs.
cleanup	(Optional) Specifies cleanup operation.
load	(Optional) Specifies interactive mode load operation.
run	(Optional) Specifies run operation.

replace	(Optional) Replaces the active packages with the ones provided in this command.
restrict-release	(Optional) Doesn't allow packages from other releases.

Command Default

If the **install prepare** command was not executed prior to **install activate**, executing the **install activate** command without any keywords aborts the process.

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 7.0.1	This command was introduced.

Usage Guidelines

Use the **install activate** command to activate software packages or SMUs for all valid cards. Information within the package is used to verify compatibility with the target cards and with the other active software. Actual activation is performed only after the package compatibility and application program interface (API) compatibility checks have passed.

Specifying Packages to Activate

You can either use the **id** *id-number* keyword and argument to activate all packages that were added in one or more specific **install add** operations, or specify packages by name. The operation ID of an **install add** operation is indicated in the syslog displayed during the operation and in the output of the **show install log** command. If you specify packages according to operation ID, all the packages that were added by the specified operation must still be on the router.

Upgrading and Downgrading Packages

- To upgrade a package, activate the later version of the package; the earlier version is automatically deactivated.
- To downgrade a package, activate the earlier version of the package; the later version is automatically deactivated.

Note Activating a Software Maintenance Update (SMU) does not cause any earlier SMUs, or the package to which the SMU applies, to be automatically deactivated.

Activating a Package for All Secure Domain Routers

To activate a package for all secure domain routers (SDRs) in the system, use the **install activate** command in XR EXEC mode.

Activating New Versions of the Currently Active Packages

Use the **install activate** command with the **if-active** keyword to activate the package only on SDRs where an earlier version of the package is already active. This command is available only in XR EXEC mode.

The **if-active** keyword is used only for optional packages or SMUs for optional packages.

Router Reloads Following Package Activation

If the activation requires a reload of the SDR, a confirmation prompt appears. Use the **install activate** command with the **prompt-level none** keywords to automatically ignore any reload confirmation prompts and proceed with the package activation. The router reloads if required.

Node Reloads Following Package Activation

If a software operation requires a node reload, the config-register for that node should be set to autoboot. If the config-register for the node is not set to autoboot, the system automatically changes the setting and the node reloads. A message describing the change is displayed.

Synchronous Mode

Use the **install activate** command with the **synchronous** keyword to complete the operation before the prompt is returned. A progress bar indicates the status of the operation. For example:

```
- 1% complete: The operation can still be aborted (ctrl-c for options)
\ 10% complete: The operation can still be aborted (ctrl-c for options)
```

When the **install activate** command is run in asynchronous mode, the system may stay in synchronous mode for a short period of time while the system checks for questions to ask the user.

Press **Ctrl-C** during a synchronous operation to abort the operation or make the operation asynchronous.

Auto-abort Option

Use the **auto-abort-timer** keyword to provide a safety mechanism for the instance that a package is activated and access to the router is lost. This option automatically rolls back to the current committed loadpath, thereby undoing any changes that are activated with the **install activate** command. After the installation, if the activated software is working correctly, use the **install commit** command to cancel the timer and commit the new loadpath.

Note The changes made to the active software set are not persistent during route processor (RP) reloads. Use the **install commit** command to make changes persistent.

ISSU

Note the following prerequisites before activating software packages using ISSU:

Note the following restrictions regarding ISSU:

Task ID

Task ID	Operations
root-system	execute
cisco-support	execute
root-lr	execute

The following example shows how to activate a package that was installed in an **install add** operation that was assigned install operation id 2:

```
Router# install activate id 2

Install operation 3 '(admin) install activate id 2' started by user 'lab' via
CLI at 01:10:21 UTC Thu Jan 03 2010.
Info:     This operation will activate the following package:
Info:         disk0:-mcast-p-4.0.0
Info:     Install Method: Parallel Process Restart
The install operation will continue asynchronously.
Info:     The changes made to software configurations will not be persistent
Info:     across system reloads. Use the command '(admin) install commit' to
Info:     make changes persistent.
Info:     Please verify that the system is consistent following the software
Info:     change using the following commands:
Info:         show system verify
Info:         install verify packages
Install operation 3 completed successfully at 01:11:30 UTC Thu Jan 03 2008.
```

The following example shows how to activate a package on all nodes. Use the **install commit** command to make the changes persistent across DSDRSC reloads.

```
Router# install activate disk0:-mpls-4.0.0 synchronous

Install operation 15 'install activate disk0:-mpls-p-4.0.0 synchronous'
started by user 'user_b' at 19:15:33 UTC Sat Apr 08 2010.
Info:     The changes made to software configurations will not be persistent
Info:     across system reloads. Use the command 'admin install commit' to make
Info:     changes persistent.
Info:     Please verify that the system is consistent following the software
Info:     change using the following commands:
Info:         show system verify
Info:         install verify
Install operation 15 completed successfully at 19:16:18 UTC Sat Apr 08 2010.

Router# install commit

Install operation 16 'install commit' started by user 'user_b' at 19:18:58 UTC
Sat Apr 08 2006.
Install operation 16 completed successfully at 19:19:01 UTC Sat Apr 08 2010.
```

The following example shows how to activate multiple software packages using the wildcard syntax:

```
Router# install activate disk0:*4.0*

Install operation 2 '(admin) install activate disk0:*4.0*' started
  by user 'user_a' via CLI at 04:30:01 PST Fri Dec 28 2009.
    Info:     This operation will activate the following packages:
    Info:         disk0:asr9k-fwdg-4.0.0
    Info:         disk0:asr9k-admin-4.0.0
    Info:         disk0:asr9k-fpd-4.0.0
    Info:         disk0:asr9k-diags-4.0.0
    Info:         disk0:asr9k-mgbl-4.0.0
    Info:         disk0:asr9k-mpls-4.0.0
    Info:         disk0:asr9k-mcast-4.0.0
    Info:         disk0:asr9k-k9sec-4.0.0
    Warning:  The following packages are already active on the specified nodes:
    Warning:      asr9k-admin-4.0.0
    Warning:      asr9k-fwdg-4.0.0
    Warning:  Please check:
    Warning:   - check the name of the packages being activated.
```

```
Warning:   - check the set of active packages using 'show install active'.
Info:     Install Method: Parallel Process Restart
Info:     The changes made to software configurations will not be
 persistent across     system reloads. Use the command '(admin)
Info:     install commit' to make changes persistent.
Info:     Please verify that the system is consistent following the
 software change     using the following commands:
Info:         show system verify
Info:         install verify packages
Install operation 2 completed successfully at 04:32:01 PST Fri Dec 28 2009.
```

install add source

To copy the contents of a package installation envelope (PIE) file to a storage device, use the **install add** command in XR EXEC mode.

install add source *source-path* { **tftp** | **harddisk** | **sftp** | **ftp** | **http** | **https** | **ftp** } *source-path* { *pakage-name* | **vrf** } [**nooptim** | **synchronous**]

Syntax Description

source *source-path*	(Optional) Specifies the source location of the PIE files to be appended to the PIE filenames. Location options are as follows: • **disk0:** • **disk1:** • **compactflash:** • **harddisk:** • **ftp:**//*username* **:** *password*@*hostname* or *ip-address*/*directory-path* • **rcp:**//*username*@*hostname* or *ip-address*/*directory-path* • **tftp:**//*hostname* or *ip-address*/*directory-path* • **http:**//*hostname* or *ip-address*/*directory-path* • **https:**//*hostname* or *ip-address*/*directory-path* • **https:**//*username* **:** *password*@*ip-address*/*directory-path*
package name	Enter the package name(s) separated by space. Example: tftp://server/directory/ file1 file2 file3
synchronous	(Optional) Performs the command in synchronous mode. This mode allows the installation process to finish before the prompt is returned.
nooptim	(Optional) This mode doesn't optimise install add operation.

Command Default

Packages are added to the storage device, but are not activated.

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 7.0.1	This command was introduced.

Usage Guidelines

Use the **install add** command to unpack the package software files from a PIE file and copy them to the boot device (usually disk0:) .

From Cisco IOS XR Software Release 6.0.1 onwards, you must use a forward slash ('/') to the source location of the PIE file while using **install add** command. For example, instead of **install add harddisk:***file*, use **install add harddisk:/***file*.

Synchronous Mode

Use the **install add** command with the **synchronous** keyword to complete the operation before the prompt is returned. A progress bar indicates the status of the operation. For example:

```
- 1% complete: The operation can still be aborted (ctrl-c for options)
\ 10% complete: The operation can still be aborted (ctrl-c for options)
```

TFTP Services and Image Size

Some Cisco IOS XR images may be larger than 32 MB, and the TFTP services provided by some vendors may not support a file this large. If you do not have access to a TFTP server that supports files larger than 32 MB:

- Download the software image using FTP or rcp.
- Use a third-party or freeware TFTP server that supports file sizes larger than 32 MB.

Adding Multiple Packages

To add multiple PIE files, use the **source** keyword to specify the directory path location of the PIE files. Then list all the PIE filenames, as necessary. This alleviates the need to repeat the directory location for each PIE file. Up to 32 files can be added, of which 16 can be tar files.

Following is an example of the **install add** command using the **source** keyword:

```
Router# install add source tftp://192.168.201.1/images/myimages/comp-mini.pie
```

In the previous example, three PIE files are added from the following locations:

- tftp://192.168.254.254/images/user/mcast-p.pie
- tftp://192.168.254.254/images/user/pies/mpls-p.pie
- ftp://1.2.3.4/other_location/mgbl-p.pie

Task ID

Task ID	Operations
root-system	execute
cisco-support	execute
root-lr	execute

The following example shows how to add a PIE file for all SDRs in the system. In the following example, a Multiprotocol Label Switching (MPLS) package is added in synchronous mode. This operation copies the files required for the package to the storage device. This package remains inactive until it is activated with the **install activate** command.

```
Router# install add tftp://209.165.201.1/mpls.pie synchronous

Install operation 4 'install add /tftp://209.165.201.1/mpls.pie synchronous'
  started by user
'user_b' at 03:17:05 UTC Mon Nov 14 2005.
Info:     The following package is now available to be activated:
Info:
Info:         disk0:mpls-3.3.80
Info:
Install operation 4 completed successfully at 03:18:30 UTC Mon Nov 14 2005.
```

install commit

To save the active software set to be persistent across designated system controller (DSC) reloads, use the **install commit** command in XR EXEC mode.

install commit [**sdr** | **synchronous**]

Syntax Description

sdr	(Optional) Commits the active software set for a specific SDR. The *sdr-name* argument is the name assigned to the SDR.
synchronous	Executes install operation in synchronous mode.

Command Default

None.

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 7.0.1	This command was introduced.

Usage Guidelines

When a package is activated, it becomes part of the current running configuration. To make the package activation persistent across designated secure domain router shelf controller (DSDRSC) reloads, enter the **install commit** command. On startup, the DSDRSC of the SDR loads this committed software set.

If the system is restarted before the active software set is saved with the **install commit** command, the previously committed software set is used.

Task ID

Task ID	Operations
root-system	execute
cisco-support	execute
root-lr	execute

The following example shows how to make the current active software set persistent across DSDRSC reloads for all SDRs in the system:

```
Router# install commit

Install operation 16 'install commit' started by user 'user_b' at 19:18:58 UTC
Sat Apr 08 2006.
Install operation 16 completed successfully at 19:19:01 UTC Sat Apr 08 2006.
```

install deactivate

To remove a package from the active software set, use the **install deactivate** command in XR EXEC mode.

install deactivate { *package-name* | **id** *id-number* | **issu** [*package-name* | **abort** | **auto-abort-cleanup** | **cleanup** | { **id** *id-number* } | **load** | **noprompt** | **run**] | **process-restart** | **reload** | **superseded** { **synchronous** } }

Syntax Description

id *id-number*	Specifies the ID number of an **install add** operation. The command deactivates all packages that were added in the specified **install add** operation. The ID number of an **install add** operation is indicated in the syslog displayed during the operation and in the output of the **show install log** command. Up to 16 **install add** operations can be specified.
package name	Specifies the package name. Press **?** after a partial package name to display all possible matches available for activation. If there is only one match, press [TAB] to fill in the rest of the package name. Up to 32 packages can be specified.
auto-abort-cleanup	(Optional) Specifies an auto abort cleanup of the v2 nodes if an abort occurs.
synchronous	(Optional) Performs the command in synchronous mode. This mode allows the installation process to finish before the prompt is returned.
superceded	Deactivates the superceded packages.
abort	(Optional) Specifies ISSU abort operation
cleanup	(Optional) Specifies ISSU cleanup operation.
load	(Optional) Specifies ISSU interactive mode load operation.
run	(Optional) Specifies ISSU run operation.
noprompt	(Optional) Sets Yes to any response prompted from an install operation when this keyword is used in the command. **Note** The command functionality remains unaltered even if the keyword is not specified.
process-restart	Restarts the process.
reload	Reloads the process.

Command Default

The **install deactivate** operation is performed in asynchronous mode: The command runs in the background, and the router prompt is returned as soon as possible.

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 7.0.1	This command was introduced.

Usage Guidelines

Deactivating a package removes the activated package from the active software set from all nodes or from a single node. When a deactivation is attempted, the system runs an automatic check to ensure that the package is not required by other active packages. The deactivation is permitted only after all compatibility checks have passed.

The following conditions apply to software deactivation:

- A feature package cannot be deactivated if active packages need it to operate.
- To downgrade a package, activate the earlier version. The later package version is deactivated automatically.

Specifying Packages to Deactivate

You can either use the **id** *add-id* keyword and argument to deactivate all packages that were added in one or more specific **install add** operations, or specify packages by name. The operation ID of an **install add** operation is indicated in the syslog displayed during the operation and in the output of the **show install log** command. If you specify packages according to operation ID, all the packages that were added by the specified operation must still be on the router.

Router Reloads

If the deactivation requires a router reload, a confirmation prompt appears. Use the **install deactivate** command with the **prompt-level none** keywords to automatically ignore any reload confirmation prompts and proceed with the package deactivation. The router reloads if required.

Node Reloads

If a software operation requires a node reload, the config-register for that node should be set to autoboot. If the config-register for the node is not set to autoboot, then the system automatically changes the setting and the node reloads. A message describing the change is displayed.

Synchronous Operation

Use the **install deactivate** command with the **synchronous** keyword to complete the operation before the prompt is returned. A progress bar indicates the status of the operation. For example:

```
- 1% complete: The operation can still be aborted (ctrl-c for options)
\ 10% complete: The operation can still be aborted (ctrl-c for options)
```

Auto Abort Option

Use the **auto-abort-cleanup** keyword to provide a safety mechanism for the instance that a package is deactivated and for some reason access to the router is lost. This option automatically rolls back to the current committed loadpath, thereby undoing any changes that are deactivated with the **install deactivate** command. After the installation, if the activated software is working correctly, use the **install commit** command to cancel the timer and commit the new loadpath.

Use the **install commit** command to make changes persistent across route processor (RP) reloads.

Superceded SMUs

When you install a reload SMU which supercedes the existing SMU the router reboots and SMU is placed in the superceded list automatically. If the superceded reload SMU is deactivated and fully supercedes the existing SMU, then router will not reboot when you run the **install deactivate superceded** command

These prerequisites must be met before you can perform ISSU:

- You must have enough disk space for V1 and V2 images, PIEs and SMUs. This prerequisite is no different than that of a non-ISSU downgrade.
- Cisco recommends that you do a backup of the ASCII configuration before each downgrade.

Note the following restrictions regarding ISSU:

- Refer to your release notes for a complete list of hardware that cannot be deactivated during the ISSU process. If you have any non-supported hardware running in your system, the deactivated process automatically shuts them down and reloads them after the deactivation is complete.
- Ethernet OAM flaps after an ISSU deactivation.
- ISSU is not supported on the NV cluster set-up.

Task ID

Task ID	Operations
root-system	execute
cisco-support	execute
root-lr	execute

To deactivate all the fully superceded SMUs, use the install deactivate superceded command.

```
Router# install deactivate superceded
```

The following example shows how to deactivate a package on all supported nodes. The operation is performed in synchronous mode.

```
Router# install deactivate
disk0:-mpls-3.8.0 synchronous

Install operation 14 'install deactivate disk0:-mpls-3.8.0 synchronous'
started by user 'user_b' at 18:38:37 UTC Sat Apr 08 2006.
Info:     The changes made to software configurations will not be persistent
Info:     across system reloads. Use the command 'admin install commit' to make
Info:     changes persistent.
Info:     Please verify that the system is consistent following the software
Info:     change using the following commands:
Info:         show system verify
Info:         install verify
Install operation 14 completed successfully at 18:39:20 UTC Sat Apr 08 2006.
```

The following example shows how to deactivate a package, pausing the operation before locking the configuration for the actual software deactivation. While the operation is paused, you can enter a configuration mode and perform configurations. When you want to complete the operation, you enter the **install operation** *id* **complete** command or the **install operation** *id* **attach synchronous** command.

```
Router# install deactivate
disk0:comp--3.8.0.07I.CSCsr09575-1.0.0
pause sw-change

Install operation 12 '(admin) install deactivate disk0:comp--3.8.0.07I.CSCsr09575-1.0.0
  pause sw-change' started by user 'admin' via CLI at 09:06:26 BST Mon Jul 07 2008.
Info: This operation will reload the following nodes in parallel:
Info: 0/0/CPU0 (RP) (SDR: Owner)
Info: 0/1/CPU0 (LC(E3-GE-4)) (SDR: Owner)
Info: 0/5/CPU0 (LC(E3-OC3-POS-4)) (SDR: Owner)
Proceed with this install operation (y/n)? [y]
The install operation will continue asynchronously.
RP/0/0/CPU0:ensoft-gsr13(admin)#
Info: Install Method: Parallel Reload
Info: Install operation 12 is pausing before the config lock is applied
  for the software change as requested by the user.
Info: No further install operations will be allowed until the operation
  is resumed.
Info: Please continue the operation using one of the following steps:
Info: - run the command '(admin) install operation 12 complete'.
Info: - run the command '(admin) install operation 12 attach synchronous'
  and then answer the query.
```

install remove

To delete inactive packages from a storage device, use the **install remove** command in XR EXEC mode.

install remove { *package-name* | **id** *id-number* | **inactive** [**all** | **synchronous**] } [**synchronous**]

Syntax Description

id *id-number*	Specifies the ID number of an **install add** operation. The command deletes all packages that were added in the specified **install add** operation. The ID number of an **install add** operation is indicated in the syslog displayed during the operation and in the output of the **show install log** command. Up to 16 **install add** operations can be specified
package name	Specifies the package name. **Note** Multiple packages can be removed at the same time. Up to 32 package pairs can be specified.
inactive	Removes all inactive, noncommitted packages from the boot device (usually disk0:).
synchronous	(Optional) Performs the command in synchronous mode. This mode allows the installation process to finish before the prompt is returned.

Command Default

The operation is performed in asynchronous mode: The **install remove** command runs in the background, and the EXEC prompt is returned as soon as possible.

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 7.0.1	This command was introduced.

Usage Guidelines

Note Only inactive packages can be removed. (Packages cannot be in the active or committed software set.)

- To remove all inactive packages from the boot device (usually **disk0:**), use the **install remove** command with the **inactive** keyword.
- To remove a specific inactive package from a storage device, use the **install remove** command with the *package name* arguments.

Note When removing all inactive packages from the boot device, use the **show version**, **show install active**, or **show install committed** command to determine the device used as the boot device.

- To remove all packages that were added in one or more specific **install add** operations, use the **id** *id-number* keyword and argument. The operation ID of an **install add** operation is indicated in the syslog displayed during the operation and in the output of the **show install log** command. If you specify packages according to operation ID, all the packages that were added by the specified operation must still be on the router.

Task ID

Task ID	Operations
root-system	execute
cisco-support	execute
root-lr	execute

The following example shows how to remove a specific inactive package. In this example, the operation is run in test mode. The operation is then confirmed and the package is removed.

```
Router# install remove
disk0:-diags-3.7.90 test

Install operation 30 'install remove disk0:-diags-3.7.90 test' started by user 'user_b' at
 23:40:22 UTC Sat Apr 15 2006.
Warning:  No changes will occur due to 'test' option being specified. The
Warning:  following is the predicted output for this install command.
Info:     This operation will remove the following package:
Info:         disk0:-diags-3.7.90
Info:     After this install remove the following install rollback points will
Info:     no longer be reachable, as the required packages will not be present:
Info:         4, 9, 10, 14, 15, 17, 18
Proceed with removing these packages? [confirm] y

The install operation will continue asynchronously.
Install operation 30 completed successfully at 23.
```

The following example shows how to remove all inactive packages from the boot device:

```
Router# install remove inactive synchronous

   instdir[198]: %INSTALL-INSTMGR-6-INSTALL_OPERATION_STARTED :
Install operation 8 '(admin) install remove inactive' started by user 'user_b'
Install operation 8 '(admin) install remove inactive' started by user 'user_b' at
   09:25:41 UTC Tue Aug 15 2006.
Info:     This operation will remove the following package:
Info:         disk0:-compmgmt__installmgr-0.0.5
Proceed with removing these packages? [confirm]
The install operation will continue asynchronously.
```

show install

To display active packages, use the **show install** command in XR EXEC mode.

show install { **active** | **committed** | **inactive** | **issu** [**inventory** | **stage**] | **log** [*log-id* | **detail** | **reverse**] | **package** *package-name* [**detail** | **verbose**] | **prepare** | **repository** [**all**] | **request** | **superseded** | **which** *file-name* [**detail**] } [**summary** | *output-modifiers* { **begin** *line* | **exclude** *line* | **file** | **include** *line* | **utility** *line* }]

Syntax Description

active	Displays active packages installed.
committed	Displays committed software packages.
inactive	Displays the inactive packages.
issu	Displays ISSU information.
log	Displays log file.
package	Displays information about package.
prepare	Displays prepared packages that are ready for activation.
repository	Displays SDR software repository.
request	Displays the list of incomplete installation requests, running and queued.
superseded	Displays superseded package.
Which	Displays the origin of a named process, component, or package.
detail	(Optional) Displays a detailed summary of the active packages for a system, secure domain router (SDR), or node.
summary	(Optional) Displays a summary of the active packages in a system or SDR. Use this command to display the default software profile for SDRs
verbose	(Optional) Displays a detailed summary of the active packages for a system, SDR, or node, including component and file information for each package.
output-modifiers **begin** *line*	(Optional) Displays information from the line that matches to the given content. For example, if you want to display the running configuration starting from the interface configurations, you can enter as **`| begin interface`**.
output-modifiers **exclude** *line*	(Optional) Displays information by filtering out lines that contain the given content. For example, if you want to view a configuration but skip all lines that mention "interface", you can enter as **`| exclude interface`**.
output-modifiers **include** *line*	(Optional) Displays information that includes the content that you have given. For example, if you want to view lines that contain the word "interface" within a configuration, you can enter as **`| include interface`**.

output-modifiers **utility** *line*	(Optional) Specifies various Unix command-line tools to manipulate or analyze the command's output. For example, if you want to sort the output of a command alphabetically, you can enter as **`| utility sort`**.
output-modifiers **file**	(Optional) Saves the information to a specific file. For example, if you want to save information to a specific file, you can enter as **`| file filename vrf vrfname`**. You can save the content in the following locations: • *filename* - Save the output to a specified filename in VRF. • *append* - Add the output to the end of an existing file. • *config* - Save the output to the device's configuration. • *disk0* - Store the output on the device's disk0 storage. • *ftp* - Transfer and save the output to an FTP server. • *harddisk* - Save the output to the device's internal hard disk. • *http* - Send the output to an HTTP server. • *https* - Send the output to an HTTPS server. • *rootfs* - Save the output to the root file system of the device. • *scp* - Securely copy the output to a remote server using SCP. • *sftp* - Securely transfer the output to a remote server using SFTP. • *tftp* - Transfer the output to a TFTP server.

Command Default

None.

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 7.0.1	This command was introduced.

Usage Guidelines

Use the **show install** command to display the active software set for all nodes, or for specific nodes. Enter the command in XR EXEC mode to display information for all nodes in all SDRs.

Summary, Detailed, and Verbose Information

Use the **summary** keyword to display a summary of the active packages in a system or SDR. Use the **detail** keyword to display the active packages for each node in an SDR, or in all SDRs. Use the **verbose** keyword to display additional information, including component and file information for each package.

Displaying the Default SDR Software Profile

When an SDR is created, the nodes assigned to that SDR are configured with the default software profile. To view a summary of the default SDR software configuration, enter the **show install active summary** command in XR EXEC mode. Any new nodes that are configured to become a part of an SDR boot with the default software profile listed in the output of this command.

Task ID

Task ID	Operations
root-system	execute
cisco-support	execute
root-lr	execute

Use the **summary** keyword to display a summary of the active packages in the system. This command also shows the default software profile used for new SDRs.

```
# show install active summary

Thu May 20 10:14:38.919 DST
  Active Packages:
    disk0:-upgrade-p-3.9.0
    disk0:-k9sec-p-3.9.0
    disk0:-mpls-p-3.9.0
    disk0:-mgbl-p-3.9.0
    disk0:-mcast-p-3.9.0
    disk0:-doc-p-3.9.0
    disk0:comp--mini-3.9.0
    disk0:-fpd-3.9.0
    disk0:-diags-p-3.9.0
```

Table 1: show install Field Descriptions

Field	Description
Boot Device	Device where the node stores the active software.
Boot Image	Location on the DSC of the active minimum boot image (MBI) used to boot the node.
Active Packages	Active packages loaded on the node.