Install Commands

To use these commands in System Admin VM, you must be in a user group associated with appropriate command rules and data rules. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

install activate

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

EXEC Mode:

install activate {*device***:***package* | **id** *add-id*} [**auto-abort-timer** *time*] [**location** *node-id*] [{**asynchronous** | **synchronous**}] [**parallel-reload**] [**prompt-level** {**default** | **none**}] [**test**] [**pause sw-change**]

Administration EXEC Mode:

install activate {*package* | **id** *add-id*}

Syntax Description		
package	Enter the package name(s) separated by space. Example: ncs6k.iso ncs6k_upgrade.iso	
	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 *add-id*	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 64 **install add** operations can be specified.	

Command Default

The **install activate** command can be executed without any keywords if the **install prepare** is already executed.

EXEC Mode

- Package is activated on all supported nodes for the SDR.
- Operation is performed in asynchronous mode: The **install activate** command runs in the background, and the EXEC prompt is returned as soon as possible.

Command Modes

EXEC

System Admin EXEC mode

XR EXEC mode

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

Use the **install activate** command to activate ISO images, 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** *add-id* 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.

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 a Specific SDR

- To activate a package for a specific SDR from administration EXEC mode, use the **install activate** command with the **sdr** *sdr-name* keyword and argument.
- To activate a package when logged into an SDR, use the **install activate** command in EXEC mode.

Note   Some packages do not support SDR-specific activation and can only be activated for all SDRs simultaneously from administration EXEC mode. For detailed instructions, see the *Managing Cisco IOS XR Software Packages* module of *System Management Configuration Guide for Cisco NCS 6000 Series Routers*.

In this example, an SMU file, **ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i.smu**, is activated to the active software set.

```
sysadmin-vm:0_RP0# install activate ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i.smu

result Wed Sep 18 05:35:06 2013 Install operation 8 (install activate) started by user
'root' will continue asynchronously.
sysadmin-vm:0_RP0# 0/3:Sep 18 00:35:09.189 : pm[1736]:
%INFRA-Process_Manager-3-PROCESS_RESTART : Process slice_manager restarted
LC/0/3/CPU0:Sep 18 00:37:39.942 : npu_driver[122]: %PLATFORM-NPU-3-SW_ERROR : Slice Manager
 disconnect notification received, Success
sysadmin-vm:0_RP0# Wed Sep 18 05:36:10 2013 Install operation 8 completed successfully.
sysadmin-vm:0_RP0# 0/RP0:Sep 18 00:36:10.075 : inst_mgr[3768]:
%INFRA-INSTMGR-6-OPERATION_SUCCESS : Install operation 8 completed successfully

sysadmin-vm:0_RP0# install commit
```

install add

To copy the contents of the ISO image, package, and SMUs to the software repository, use the **install add** command in EXEC or System Admin EXEC mode or XR EXEC mode.

Administration EXEC Mode:

install add source *source-path package-name*

EXEC Mode:

install add [{**source** *source-path* | **tar**}] *file* [**activate** [**pause sw-change**] [**auto-abort-timer** *time*] [**location** *node-id*]] [{**asynchronous** | **synchronous**}] [**parallel-reload**] [**prompt-level** {**default** | **none**}]

Syntax Description		
source *source*		Specifies the source location of the packages. The source location can be one of the following:
		• **harddisk:**
		• **ftp://***username@server:/package_path*
		• **tftp://***package_path*
package name		Enter the package name(s) separated by space. Example: tftp://server/directory/ file1 file2 file3

Command Default

Packages are added to the software repository, but are not activated.

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

Command Modes

EXEC

XR EXEC mode

System Admin EXEC mode

Command History	Release	Modification
	Release 5.0.0	This command was introduced.
	Release 5.0.1	Support of ftp and sftp protocols was introduced.

Usage Guidelines

Use the **install add** command to unpack the package software files from an ISO image, tar file, package, and SMUs and copy them to the software repository.

You can use ftp, tftp, or sftp protocols to transfer files from the network server to the router. ftp and sftp protocols are supported from R5.0.1. In case of ftp and sftp protocols, you need to enter password within 60 seconds to continue with the install add operation. Else, the operation is aborted. To use ftp and sftp protocols on the XR VM, it is mandatory that the *ncs6k-k9sec package* has been installed on the router.

• From administration EXEC mode, the package software files are added to all route processors (RPs) installed in the . If the **install add** command is entered without specifying an SDR, then the package files are added to all RPs in .

• From EXEC mode, the package software files are added to the RPs only for the SDR to which you are logged in.

In this example, an SMU file is added to the router's software repository. The file's TFTP server folder path and name (**ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i.smu**) are specified.

```
sysadmin-vm:0_RP0# install add source
tftp://223.255.254.254/auto/tftp-infra/wmori/ng-install/images/40I/sysadmin-smu/
ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i.smu

result Wed Sep 18 05:06:24 2013 Install operation 3 (install add) started by user 'root'
will continue asynchronously.
sysadmin-vm:0_RP0# Wed Sep 18 05:06:30 2013 Install operation 3 completed successfully.
sysadmin-vm:0_RP0# 0/RP0:Sep 18 00:06:30.471 : inst_mgr[3768]:
%INFRA-INSTMGR-6-OPERATION_SUCCESS : Install operation 3 completed successfully

sysadmin-vm:0_RP0# install commit
```

install backup

To create a hard disk recovery partition and copy the recovery image to this partition, use the **install backup** command in the System Admin EXEC mode. It is important to note that this command is executed in the System Admin EXEC mode only.

> **Note** **When you create a disaster recovery partition for the first time (if a hard disk recovery partition does not exist), the entire hard disk is formatted. So ensure that you backup the important data or files such as logs, configurations, and trace files from XR and Calvados hard disks to a location outside the system.**

install backup /harddisk:/ *tar-file-path* **location** *destination*

Syntax Description

tar-file-path	Enter the location in the hard disk and name of the recovery image file in `.tar` format. For example, `/harddisk:/dr-boot.tar` . Ensure that there is no space between the keyword /harddisk:/ and the recovery image file name.
	Note If you are creating the hard disk recovery partition in a location where the `confd_helper` process is running in SysAdmin plane, the `confd_helper` process is restarted. This results in the user being logged out of SysAdmin mode. Log in to SysAdmin mode to check the install operation logs or to perform any Sysadmin operation.
destination	The *destination* argument is expressed in the rack/slot notation.

Command Default   None

Command Modes   System Admin EXEC

Command History

Release	Modification
Release 5.2.5	This command is introduced.

This example show how to use the **install backup** command. The *tar* file (recovery image) location and the destination location are specified. This command creates a hard disk partition and copies the recovery image to the hard disk of the RP and SC card. If a partition already exists, the recovery image is updated.

```
sysadmin-vm:0_RP0# install backup /harddisk:/dr-boot.tar location 0/RP0
sysadmin-vm:0_RP0# install commit
```

install deactivate

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

EXEC Mode:
install deactivate {**id** *add-id* | *device***:***package*} [**auto-abort-timer** *time*] [**location** *node-id*] [{**asynchronous** | **synchronous**}] [**parallel-reload**] [**prompt-level** {**default** | **none**}] [**test**] [**pause sw-change**]
install deactivate {*package* | **id** *add-id*}

Syntax Description

package	Enter the package name(s) separated by space. Example: ncs6k.iso ncs6k_upgrade.iso
	Note Multiple packages can be deactivated at one time. Up to 64 packages can be specified in a single **install deactivate** command. However, the number of packages is limited based on the length of the character entered. The character length should not exceed 1024.
id *add-id*	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.

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.

Administration EXEC mode: The package is deactivated on all supported nodes in the system.

EXEC mode: The package is deactivated on all supported nodes for the SDR.

Command Modes

EXEC

System Admin EXEC mode

XR EXEC mode

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

Deactivating a package removes the activated package from the active software set from all nodes. 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.

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.

Command Modes

Note To enter administration EXEC mode, you must be logged in to the owner SDR and have root-system access privileges.

Router Reloads

If the deactivation requires a router reload, a confirmation prompt appears.

This example shows how to deactivate a package. Here, the SMU file **ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i.smu** is deactivated.

```
sysadmin-vm:0_RP0# install deactivate install deactivate
ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i.smu

result Wed Sep 18 05:45:49 2013 Install operation 9 (install deactivate) started by user
'root' will continue asynchronously.
sysadmin-vm:0_RP0# LC/0/3/CPU0:Sep 18 00:48:22.153 : npu_driver[122]: %PLATFORM-NPU-3-SW_ERROR
 : Slice Manager disconnect notification received, Success
0/3:Sep 18 00:45:50.978 : pm[1736]: %INFRA-Process_Manager-3-PROCESS_RESTART : Process
slice_manager restarted
Wed Sep 18 05:45:51 2013 Install operation 9 completed successfully.
sysadmin-vm:0_RP0# 0/RP0:Sep 18 00:45:51.260 : inst_mgr[3768]:
%INFRA-INSTMGR-6-OPERATION_SUCCESS : Install operation 9 completed successfully

sysadmin-vm:0_RP0# install commit
```

install extract

To extract individual ISO images from the main ISO package and place the installable files in the repository, use the **install extract** command in the System Admin EXEC or XR EXEC mode. Executing this command from XR VM extracts only the xr.ios package. Executing this command in

install **extract** *package-name*

Syntax Description	*package-name*	Enter package names separated by space. For example, ncs6k-mini-x-5.2.3.09 ncs6k-mcast-5.2.3.09 ncs6k-mpls-5.2.3.09

Command Default None

Command Modes System Admin EXEC

XR EXEC

Command History

Release	Modification
Release 5.2.3	This command was introduced.

In this example, the ISO image is extracted from the main package **ncs6k-mini-x-5.2.3.09I**.

```
sysadmin-vm:0_RP0# install extract ncs6k-mini-x-5.2.3.09I
sysadmin-vm:0_RP0# install commit
```

install prepare

To prepare the installable files (ISO image, packages and SMUs) for activation, use the **install prepare** command in the System Admin EXEC or XR EXEC mode. This command performs pre-activation checks and the loads individual components of the installable files on to the router setup. The advantage of preparing the installable files is that the time required for subsequent activation is considerably reduced.

install **prepare** { *package-name* | **clean** | **id** *id* }

Syntax Description		
	package-name	Enter package name(s) separated by space. Example: ncs6k-mini-x-5.2.3.09 ncs6k-mcast-5.2.3.09 ncs6k-mpls-5.2.3.09
	clean	The prepare operation is undone.
	id *id*	Specifies the ID of the add operation whose packages are to be prepared.

Command Default None

Command Modes System Admin EXEC

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.
Release 5.0.1	Support for ISO images was introduced.

In this example, the SMU file **ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i.smu** is prepared for activation:

```
sysadmin-vm:0_RP0# install prepare ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i.smu

result Wed Sep 18 05:18:45 2013 Install operation 4 (install prepare) started by user 'root'
 will continue asynchronously.
sysadmin-vm:0_RP0# Wed Sep 18 05:18:46 2013 Install operation 4 completed successfully.
sysadmin-vm:0_RP0# 0/RP0:Sep 18 00:18:46.600 : inst_mgr[3768]:
%INFRA-INSTMGR-6-OPERATION_SUCCESS : Install operation 4 completed successfully

sysadmin-vm:0_RP0# install commit
```

install prepare issu

To prepare the installable files (ISO image, packages and SMUs) for activation using In-Service Software Upgrade (ISSU), use the **install prepare issu** command in the System Admin EXEC or XR EXEC mode. This command performs pre-activation checks and the loads individual components of the installable files in the router setup. The advantage of preparing the installable files is that the time required for subsequent activation is reduced considerably.

install   prepare   issu *package-name*

Syntax Description	*package-name*	Enter package names separated by space. For example, ncs6k-mini-x-5.2.3.09 ncs6k-mcast-5.2.3.09 ncs6k-mpls-5.2.3.09

Command Default   None

Command Modes   System Admin EXEC

XR EXEC

Command History

Release	Modification
Release 5.2.3	This command was introduced.

In this example, the **ncs6k-sysadmin-5.0.0.40I** package is prepared for activation using ISSU.

```
sysadmin-vm:0_RP0# install prepare issu ncs6k-sysadmin-5.0.0.40I

Fri Jan 16 08:15:06.145 UTC
Jan 16 08:15:07 Install operation 1 started by :
  install prepare issu ncs6k-sysadmin-5.2.3.14I host-5.2.314I
Jan 16 08:15:07 Package list:
Jan 16 08:15:07    ncs6k-sysadmin-5.2.3.14I
Jan 16 08:15:07    host-5.2.314I
Jan 16 08:15:08 Install operation will continue in the background

sysadmin-vm:0_RP0# install commit
```

install activate issu

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

install activate issu[abort-disable][preserve-state]*[package-name] | [install-add-id]*

Syntax Description		
abort-disable		Disables ISSU aborts initiated by applications and turns off the abort timer. Manually aborting the ISSU installation is supported.
preserve-state		Preserves the state of secondary VM if ISSU is aborted.
		If an ISSU procedure is aborted due to errors, the secondary VMs are cleared by default. This keyword preserves the state of the secondary VM.
package-name		Enter package name separated by space. For example, ncs6k-mini-x-5.2.3.09 ncs6k-mcast-5.2.3.09 ncs6k-mpls-5.2.3.09
install-add-id		Specify the ID of package to be activated.

Command Default   None

Command Modes   XR EXEC

Command History

Release	Modification
Release 5.2.3	This command was introduced.

In this example, three packages, including multicast and MPLS packages, are activated using ISSU:

```
RP/0/RP0/CPU0:router# install activate issu ncs6k-x-5.2.3.09I ncs6k-mcast-5.2.3.09I
ncs6k-mpls-5.2.3.09I
RP/0/RP0/CPU0:router# install commit
```

install activate issu load

To run the load prepare phase to the active software set, use the **install activate issu load** command in System Admin EXEC or XR EXEC mode. This command downloads the new image (V2) to all nodes in the router. The new image is checked for compatibility to ensure that the router can be upgraded.

install activate issuload[abort-disable][preserve-state]*[package-name] | [install-add-id]*

Syntax Description		
	abort-disable	Disables ISSU aborts initiated by applications and turns off the abort timer. Manually aborting the ISSU installation is supported.
	preserve-state	Preserves the state of secondary VM if ISSU is aborted.
		If an ISSU procedure is aborted due to errors, the secondary VMs are cleared by default. This keyword preserves the state of the secondary VM.
	package-name	Enter package name separated by space. For example, ncs6k-x-5.2.3.09I ncs6k-mcast-5.2.3.09I ncs6k-mpls-5.2.3.09I .
	install-add-id	Specify the ID of package to be activated.

Command Default   None

Command Modes   System Admin EXEC

XR EXEC

Command History

Release	Modification
Release 5.2.3	This command was introduced.

In this example, the load preparation phase for ISSU activation is enabled for three packages, including multicast and MPLS packages.

```
sysadmin-vm:0_RP0# install activate issu load ncs6k-x-5.2.3.09I ncs6k-mcast-5.2.3.09I
ncs6k-mpls-5.2.3.09I
sysadmin-vm:0_RP0# install commit
```

install activate issu run

To start ISSU version switch from old version (V1) to new version (V2) of the software, use the **install activate issu run** command in XR EXEC mode. All the packages that have been prepared are activated to make the package configurations active on the router. This command is issued from the old version (V1).

install activate issurun

This command has no keywords or arguments.

Command Default	None

Command Modes	XR EXEC

Command History

Release	Modification
Release 5.2.3	This command was introduced.

This example show how to start the version switch of v1 to v2 versions of a package:

```
RP/0/RP0/CPU0:router# install activate issu run
RP/0/RP0/CPU0:router# install commit
```

install deactivate issu

To remove an Software Maintenance Updates (SMU) package from the active software set using ISSU, use the **install deactivate issu** command in XR EXEC mode. If an ISSU session is in progress, this command is blocked until the ISSU session is complete.

install deactivate issu[*SMU-name*] | [*install-add-id*]

Syntax Description		
	SMU-name	Enter SMU name separated by space.
	install-add-id	Specify the ID of package to be deactivated.

Command Default None

Command Modes XR EXEC

Command History

Release	Modification
Release 5.2.3	This command was introduced.

In this example, three packages from the active software set are deactivated using ISSU:

```
RP/0/RP0/CPU0:router# install deactivate issu ncs6k-x-5.2.3.09I ncs6k-mcast-5.2.3.09I
ncs6k-mpls-5.2.3.09I
RP/0/RP0/CPU0:router# install commit
```

install activate issu cleanup

To initiate shutdown of VMs with previous versions (V1) after running the activation command, use the **install activate issu cleanup** command in the XR EXEC mode. The *Cleanup* phase concludes the ISSU process and the new software runs on all nodes in the system.

install activate issucleanup

This command has no keywords or arguments.

Command Default	None
Command Modes	XR EXEC

Command History

Release	Modification
Release 5.2.3	This command was introduced.

This example shows how to initiate shutdown of VMs with previous versions (V1).

```
RP/0/RP0/CPU0:router# install activate issu cleanup
RP/0/RP0/CPU0:router# install commit
```

install activate issu abort

To initiate exiting ISSU process, use the **install activate issu abort** command in the XR EXEC mode. ISSU aborts if the command is executed before ISSU *Run* phase starts. If the command is used after the *Run* phase, the **install activate issu abort** command is rejected. When ISSU process stops, the state of activities for new version (v2) such as v2 VMs and partitions are cleared.

install activate issuabort

This command has no arguments or keywords.

Command Default	None

Command Modes	XR EXEC

Command History

Release	Modification
Release 5.2.3	This command was introduced.

This example shows how to abort an ISSU process.

```
RP/0/RP0/CPU0:router# install activate issu abort
RP/0/RP0/CPU0:router# install commit
```

install remove

To delete inactive packages from the software repository, use the **install remove** command in EXEC or System Admin EXEC orXR EXEC mode.

EXEC Mode:
install remove {*device***:***package* | **inactive**} [**prompt-level** {**default** | **none**}] [{**asynchronous** | **synchronous**}] [**test**]
install remove {*package* | **id** *add-id*}

Syntax Description		
package		Enter the package name(s) separated by space. Example: ncs6k.iso ncs6k_upgrade.iso
	Note	Multiple packages can be removed at one time. Up to 64 packages can be specified in a single **install remove** command. However, the number of packages is limited based on the length of the character entered. The character length should not exceed 1024.
id *add-id*		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.

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 EXEC

System Admin EXEC

XR EXEC

Command History	Release	Modification
	Release 5.0.0	This command was introduced.

Usage Guidelines

Note Only inactive packages can be removed.

- To remove all packages that were added in one or more specific **install add** operations, use the **id** *add-id* 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.

Command Modes

- To remove all inactive packages from the boot device in the system or SDR, use the **install remove** command with the **inactive** keyword.

In this example, the inactive **ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i.smu** SMU file is deleted from the software repository.

```
sysadmin-vm:0_RP0# install remove ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i.smu

result Wed Sep 18 05:48:05 2013 Install operation 10 (install remove) started by user 'root'
 will continue asynchronously.
sysadmin-vm:0_RP0# 0/RP0:Sep 18 00:48:09.050 : inst_mgr[3768]:
%INFRA-INSTMGR-6-OPERATION_SUCCESS : Install operation 10 completed successfully
Wed Sep 18 05:48:09 2013 Install operation 10 completed successfully.

sysadmin-vm:0_RP0# install commit
```

install verify packages

To verify packages installed on the router, use the **install verify packages** command in the System Admin EXEC mode. The command checks for any anomalies present in the installed packages. This command can be run after each system upgrade, or after activation or deactivation of packages and SMUs. Additionally it also checks if a hard disk recovery partition exists on a node in the hard disk.

install verify packages [**location** *node-id*]

Syntax Description	**location**	Executes target process on the designated node.
	node-id	The *node-id* argument is expressed in the *rack/slot* notation.

Command Default None

Command Modes System Admin EXEC

XR EXEC

Command History

Release	Modification
Release 5.0.1	This command was introduced.

Usage Guidelines The output of **install verify packages** command is saved in a log file. Status of the command is captured as part of the log file which can be viewed using `show install log` command. Any anomaly found in the installation is reported in the log.

This example shows how to verify a package in the location **0/RP1**:

```
sysadmin-vm:0_RP0# install verify packages location 0/RP1

Sun Jan  12 20:37:09.796 UTC
Sun Jan  12 20:37:10.588 UTC
result Sun Jan 12 20:37:11 2014 Install operation 2 (install verify) started by user 'root'
 will continue asynchronously.
sysadmin-vm:0_RP0# Node 0/RP1  replied.check show install log 2 for detailed log
sysadmin-vm:0_RP0# Sun Jan 12 20:37:46 2014 Install operation 2 completed successfully.

sysadmin-vm:0_RP0# install commit
```

This example shows the output of the command when a hard disk recovery partition exists:

```
sysadmin-vm:0_RP0# install verify packages location 0/RP1

Fri Feb  5  01:01:51.970 UTC
result Fri Feb  5 01:01:52 2016 Install operation 124 (install verify) started by user
'root' will continue asynchronously.
sysadmin-vm:0_RP0# Node 0/RP1  replied.check 'show install log 124 detail' for detailed log
sysadmin-vm:0_RP0# Fri Feb  5 01:02:15 2016 Install operation 124 completed successfully.

sysadmin-vm:0_RP0# install commit
```

```
sysadmin-vm:0_RP0# show install log 124
Fri Feb  5  01:02:43.400 UTC
log 124
  Feb 05 01:01:51 Admin install operation 124 started by user 'root'
Feb 05 01:01:51 install verify packages location 0/RP0
Feb 05 01:02:15 Disaster Recovery Partition found
./system_image.iso 833443840
MD5: a1954e06e972d516505e24d31b0236a8 ./system_image.iso
./EFI/Recovery/grub.cfg 516
MD5: 525ce5b5b65701c3942afefd3d4a3249 ./EFI/Recovery/grub.cfg
./EFI/Recovery/grub.efi 887836
MD5: 4abf58ec0fd23255d42e1548aeae2e3e ./EFI/Recovery/grub.efi
Feb 05 01:02:15 Node 0/RP0  completed verification successfully

Feb 05 01:02:15 Install operation 124 completed successfully.
Feb 05 01:02:15 Ending 'install verify' operation 124.
```

This example shows the output of the log file for the **install verify packages** command in which anomalies are detected:

```
sysadmin-vm:0_RP0# show install log 17
Thu Jan  2 13:17:52.973 UTC
Jan 02 13:17:00 Install operation 17 started by root:
  install verify packages
Jan 02 13:17:02 Action 1: install verify action started
Jan 02 13:17:02 Install operation will continue in the background
Jan 02 13:17:30 Anomaly Detected on 0/1/CPU0 --> needs repair
Jan 02 13:17:30 Node 0/1/CPU0
SOFTWARE PROFILE VERIFICATION START
No inconsistencies found
SOFTWARE PROFILE VERIFICATION END
PACKAGE VERIFICATION START
RPM detected 'missing
/opt/cisco/XR/packages/iosxr-infra-5.0.1.14I.CSCxr11111.lc-1.0.0/lib/librmf_plfm.so'


iosxr-infra-5.0.1.14I.CSCxr11111.lc-1.0.0 : ANOMALIES found

PACKAGE VERIFICATION END
RPMDB VERIFICATION START
No inconsistencies found
RPMDB VERIFICATION END
SYMLINK VERIFICATION START
No inconsistencies found
SYMLINK VERIFICATION END
LOADPATH VERIFICATION START
No inconsistencies found
LOADPATH VERIFICATION END
Jan 02 13:17:30 0/1/CPU0 completed verification successfully
Jan 02 13:17:30 Install operation 17 finished successfully
Jan 02 13:17:32 Ending operation 17
```

If any installation has an issue, uninstall and then reinstall the corresponding package afresh. If this does not resolve the issue, contact Cisco TAC with the output of the **show tech-support install** command.

show install active

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

show install active

Syntax Description   This command has no keywords or arguments.

Command Default   None

Command Modes   System Admin EXEC

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines   Use the **show install active** command to display the active software set for all nodes.

For Superceded SMUs

The **show install active** command doesnot display superceded SMUs. To get details of the superceded SMUs, use the **show install superceded** command.

The following example illustrates sample output from the **show install active** command :

```
sysadmin-vm:0_RP0# show install active
 Node 0/RP0 [RP]
    Boot Partition: calvados_lv0
    Active Packages: 2
      ncs6k-sysadmin-5.0.0.40I version=5.0.0.40I [Boot image]
      ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i

 Node 0/RP1 [RP]
    Boot Partition: calvados_lv0
    Active Packages: 2
      ncs6k-sysadmin-5.0.0.40I version=5.0.0.40I [Boot image]
      ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i

 Node 0/3 [LC]
    Boot Partition: calvados_lv0
    Active Packages: 2
      ncs6k-sysadmin-5.0.0.40I version=5.0.0.40I [Boot image]
      ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i
```

Table 1: show install active Field Descriptions

Boot Partition	Location 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.

show install inactive

To display the inactive packages , use the **show install inactive** command in System Admin EXEC or XR EXEC mode.

show install inactive

Syntax Description	This command has no keywords or arguments.

Command Default   None

Command Modes   System Admin EXEC

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines   Use the **show install inactive** command to display the inactive packages .

> **Note**   Use the **show install active** command to determine the device used as the boot device.

The following example shows sample output from the **show install inactive** command:

```
sysadmin-vm:0_RP0# show install inactive

 Node 0/RP0 [RP]
    Inactive Packages:
      ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i
 Node 0/RP1 [RP]
    Inactive Packages:
      ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i
 Node 0/3 [LC]
    Inactive Packages:
      ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i
```

Table 2: show install inactive Field Descriptions

Field	Description
Inactive Packages	Inactive packages present on the load.

show install log

To display the details of installation requests, use the **show install log** command in System Admin EXEC or XR EXEC mode.

show install log [{*install-id*}]

Syntax Description	*install-id*	(Optional) Identifier assigned to an installation operation.

Command Default

None

Command Modes

System Admin EXEC

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

Enter the **show install log** command with no arguments to display a summary of all installation operations, including the changes to files and the processes impacted by each request. Specify the *install-id* argument to display details for a specific operation.

The *install-id* argument is listed beside each operation in the **show install log** summary and is attached to messages from that operation. For example, the third installation operation has "Install 3:" attached to all its status messages.

This example shows how to display the summary of installation requests:

```
sysadmin-vm:0_RP0# show install log
Sep 17 07:33:12 Admin install operation 1 started by user 'root'
Sep 17 07:33:12 install add source
tftp://223.255.254.254/auto/tftp-infra/wmori/ng-install/images/40I/sysadmin-smu/
ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i.smu
Sep 17 07:33:38 Sending abort command to all nodes
Sep 17 07:33:38 Sending remove command to all nodes
Sep 17 07:33:41 Install operation 1 failed (Unable to connect to 223.255.254.254 server on
 node 0/RP1 where install service is running).
Sep 17 07:33:41 Ending 'install add' operation 1
Sep 17 07:39:59 Admin install operation 2 started by user 'root'
Sep 17 07:39:59 install add source
tftp://223.255.254.254/auto/tftp-infra/wmori/ng-install/images/40I/sysadmin-smu/
ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i.smu
Sep 17 07:40:25 Sending abort command to all nodes
Sep 17 07:40:25 Sending remove command to all nodes
Sep 17 07:40:26 Install operation 2 failed (Unable to connect to 223.255.254.254 server on
 node 0/RP1 where install service is running).
Sep 17 07:40:26 Ending 'install add' operation 2
Sep 18 05:06:23 Admin install operation 3 started by user 'root'
Sep 18 05:06:23 install add source
tftp://223.255.254.254/auto/tftp-infra/wmori/ng-install/images/40I/sysadmin-smu/
ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i.smu
Sep 18 05:06:30 Packages added:
Sep 18 05:06:30 ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i
```

```
Sep 18 05:06:30 Install operation 3 completed successfully.
Sep 18 05:06:30 Ending 'install add' operation 3
Sep 18 05:18:44 Admin install operation 4 started by user 'root'
Sep 18 05:18:44 install prepare ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i
Sep 18 05:18:45 Sending prepare command to all nodes
Sep 18 05:18:46 Install operation 4 completed successfully.
Sep 18 05:18:46 Ending 'install prepare' operation 4
```

This example shows how to display the output of show install log 7:

```
sysadmin-vm:0_RP0# show install log 4
Sep 18 05:18:44 Admin install operation 4 started by user 'root'
Sep 18 05:18:44 install prepare ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i
Sep 18 05:18:45 Sending prepare command to all nodes
Sep 18 05:18:46 Install operation 4 completed successfully.
Sep 18 05:18:46 Ending 'install prepare' operation 4
```

show install package

To display information about a package, use the **show install package** command in System Admin EXEC or XR EXEC mode.

show install package *package-name* [{**detail** | **verbose**}]

Syntax Description	*package*	Enter the package name.
	detail	(Optional) Displays detailed information including impact to processes and nodes, vendor information, card support, and component information.
	verbose	(Optional) Displays the information included in the keyword, plus information about dynamic link libraries (DLLs).

Command Default   None

Command Modes   System Admin EXEC

XR EXEC

Command History	Release	Modification
	Release 5.0.0	This command was introduced.

Usage Guidelines   Use the **show install package** command with the **detail** keyword to display the version of the package, name of the manufacturer, name of the package, date and time when the package was built, and source directory where the package was built.

Use the **show install package** command with the **verbose** keyword to display the same information as the **detail** keyword, plus additional information about DLLs.

For additional information about the status of installed software packages, use the **show install active** and **show install inactive** commands.

The following sample output from the **show install package** command lists all packages that are available on the router:

```
sysadmin-vm:0_RP0# show install package
package ncs6k-sysadmin-5.0.0.40I
  Filename        : ncs6k-sysadmin
          Version        : 5.0.0.40I
          ISO Type       : calvados
          RPM count      : 23

  ISO Contents    :
      ncs6k-sysadmin-boot.all
      ncs6k-sysadmin-boot.lc
      ncs6k-sysadmin-boot.rp
      ncs6k-sysadmin-boot.sc
```

```
ncs6k-sysadmin-fabric.all
ncs6k-sysadmin-fabric.rp
ncs6k-sysadmin-hostos.all
ncs6k-sysadmin-hostos.rp
ncs6k-sysadmin-mgbl.all
ncs6k-sysadmin-mgbl.lc
ncs6k-sysadmin-mgbl.rp
ncs6k-sysadmin-mgbl.sc
ncs6k-sysadmin-platform.all
ncs6k-sysadmin-platform.lc
ncs6k-sysadmin-platform.rp
ncs6k-sysadmin-platform.sc
ncs6k-sysadmin-shared.all
ncs6k-sysadmin-shared.lc
ncs6k-sysadmin-shared.rp
ncs6k-sysadmin-system.all
ncs6k-sysadmin-system.lc
ncs6k-sysadmin-system.rp
ncs6k-sysadmin-topo.all
```

show install prepare

To display the ISO image, packages and SMUs that are in the prepared state and are ready for activation, use the **show install prepare** command in the System Admin EXEC or XR EXEC mode.

show install prepare

Syntax Description   This command has no keywords or arguments.

Command Default   None

Command Modes   System Admin EXEC

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

The following example shows the output of **show install prepare** command:

```
sysadmin-vm:0_RP0#show install prepare
Wed Sep  18 05:20:58.309 UTC
 Prepared Boot Image: NONE
 Prepared Boot Partition: NONE
 Restart Type: Process restart
 Prepared Packages: 1
     ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i


 Use the "install activate" command to activate the prepared packages.
 Use the "install prepare clean" command to undo the install prepare operation.
```

show install repository

To display the packages in the repository, use the **show install repository** command in the System Admin EXEC or XR EXEC mode.

show install repository [**all**]

Syntax Description	all	Displays the ISO images, SMUs, and software packages present in the software repository of all VMs.

Command Default   None

Command Modes   System Admin EXEC

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

The following example shows the output of the **show install repository all** command:

```
sysadmin-vm:0_RP0#show install repository all
Thu Aug  22 13:48:37.520 UTC
Admin repository
------------------
ncs6k-sysadmin-5.0.0.40I
ncs6k-sysadmin-5.0.0.40I.CSCui05185-0.0.7.i

XR repository
-------------
ncs6k-5.0.0.40I.CSCuj17596-0.0.3.i
ncs6k-k9sec-5.0.0.40I
ncs6k-xr-5.0.0.40I


Host repository
---------------
host-5.0.0.40I
```

show install request

To display the list of incomplete installation requests, running and queued, use the **show install request** command in System Admin EXEC or XR EXEC mode.

show install request

Syntax Description	This command has no keywords or arguments.
Command Default	None
Command Modes	System Admin EXEC
	XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines The software processes only one installation request at a time. The **show install request** command displays any incomplete request that is currently running.

> **Note** The default of installation commands is asynchronous mode, meaning that the command runs in the background and the EXEC prompt is returned as soon as possible.

The following example shows sample output from the **show install request** command:

```
sysadmin-vm:0_RP0# show install request
Wed Sep  18 05:35:49.102 UTC
 User root, Op Id 8
 install activate
 ncs6k-sysadmin-5.0.0.40I.CSCui84128-0.0.9.i
```

The following example shows sample output from the **show install request** command when no installation operations are running:

```
sysadmin-vm:0_RP0# show install request
 No install operation in progress
```

show issu summary

To display the summary of the ISSU installation process, use the **show issu summary** command in the XR EXEC mode.

show issu summary

Syntax Description This command has no keywords or arguments.

Command Default None

Command Modes XR EXEC

Command History

Release	Modification
Release 5.2.3	This command was introduced.

The following example shows the output of **show issu summary** command:

```
RP/0/RP0/CPU0:router# show issu summary
Mon Jan 23 11:11:02.912 UTC
Last ISSU operation completed successfully.
List of ISSU phases:
---------------------------------------------------------
Phase name      : Prep Phase
Status          : Completed
Start time      : Mon Jan 23 10:20:59 2012
Complete time   : Mon Jan 23 10:24:19 2012
---------------------------------------------------------
Phase name      : Load Phase
Status          : Completed
Start time      : Mon Jan 23 10:24:23 2012
Complete time   : Mon Jan 23 10:33:46 2012
---------------------------------------------------------
Phase name      : Run Phase
Status          : Completed
Start time      : Mon Jan 23 10:34:26 2012
Complete time   : Mon Jan 23 10:34:26 2012
---------------------------------------------------------
Phase name      : Cleanup Phase
Status          : Completed
Start time      : Mon Jan 23 10:35:36 2012
Complete time   : Mon Jan 23 10:35:36 2012
=========================================================
```