

Action Commands

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clear configuration inconsistency

To clear an inconsistency alarm for a router configuration, use the **clear configuration inconsistency** command in XR EXEC mode.

clear configuration inconsistency

Syntax Description

This command has no keywords or arguments.

Command Default

EXEC mode: Clears the inconsistency alarms for an SDR configuration.

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 3.0.0	This command was introduced.

Usage Guidelines

An inconsistency alarm is set when there is a failure to restore the configuration; this can occur during router startup, or when a line card or route processor (RP) card is inserted or when there is an OIR (Online Insertion and Removal).

When the inconsistency alarm is set, all configuration commit operations fail until the alarm is cleared using the **clear configuration inconsistency** command. This command clears the alarm and removes the failed configuration.

Enter the **clear configuration inconsistency** command to clear the alarm and allow commit operations to continue.

Note To reapply the failed configuration, you must reapply and recommit the configuration. Use the **load configuration failed** command with the **startup** keyword to populate the target configuration with the contents of the previous failed configuration from the startup configuration.

Use the **show configuration history** command with the **alarm** keyword to view the inconsistency alarm set and alarm clear events in the configuration history log.

Command Modes

To clear the inconsistency alarms for the router, enter the **clear configuration inconsistency** command in XR EXEC mode.

Task ID

Task ID	Operations
config-services	execute

The following example shows how to clear the inconsistency alarms for a router configuration. The command is entered in EXEC mode.

```
Router# clear configuration inconsistency
```

```
Creating any missing directories in Configuration File system...OK
Initializing Configuration Version Manager...OK
Syncing commit database with running configuration...OK
```

In the following example, a history of the inconsistency alarms set and cleared for the configuration are displayed using the **show configuration history** command with the **alarm** keyword:

```
Router# show configuration history alarm

  Sno.  Event      Info                           Time Stamp
  ~~~~  ~~~~~      ~~~~                           ~~~~~~~~~~
  1     alarm      inconsistency alarm raised     Thu Jun 22 15:23:15 2009
  2     alarm      inconsistency alarm cleared    Thu Jun 22 15:42:30 2009
  3     alarm      inconsistency alarm raised     Sun Jul  9 13:39:57 2009
  4     alarm      inconsistency alarm cleared    Sun Jul  9 14:15:48 2009
  5     alarm      inconsistency alarm raised     Sat Jul 15 18:18:26 2009
  6     alarm      inconsistency alarm cleared    Sat Jul 15 19:21:03 2009
```

install apply

To apply the latest changes on the router, use the **install apply** command in XR EXEC mode.

install apply { **reload** | **restart** } [**noprompt**] [**synchronous**]

Syntax Description

noprompt	(Optional) Applies the changes without prompting for permission.
reload	(Optional) Applies the changes by reloading the device.
restart	(Optional) Applies the changes by restarting impacted processes.
synchronous	(Optional) Applies the changes synchronously.

Command Default

Applies the changes by the least impactful method available based on the changeset.

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 7.0.12	This command was introduced.

Usage Guidelines

To activate software changes performed through **install package** or **install source** commands, use the **install apply** command. The apply is either performed through process restart or a full system reload depending on the nature of the changes. Once the changes are applied, you can test the new software. If you are satisfied with the new software, you can run **install commit** to commit to the changes you have performed. If you are unsatisfied, reloading the device will return the device to the previous committed software.

Note The default of installation commands is asynchronous mode, meaning that the command runs in the background and the XR EXEC mode is returned as soon as possible. Performing a command in synchronous mode allows the installation process to finish before the prompt is returned.

Task ID

Task ID	Operations
pkg-mgmt	read, write

This example shows how to apply the changes by reloading the device:

```
Router# install apply reload
```

This example shows how to apply the changes by restarting impacted processes:

```
Router# install apply restart
```

install commit

To make the active software persistent across system reloads, use the **install commit** command in XR EXEC mode.

install commit [**synchronous**]

synchronous	(Optional) Applies the changes synchronously.

Command Default

Commits the active software set.

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 7.0.12	This command was introduced.

Usage Guidelines

To make the current active software persistent across reloads, use the **install commit** command.

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
pkg-mgmt	read, write

The following example shows how to make the current active software set persistent:

```
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 package

To install packages on the router, use the **install package** command in XR EXEC mode.

install package { **abort** { **all-since-apply** | **latest** } | { **add** | **downgrade** } [**skip-implicit-owner-packages-checks**] [**source** *location*] [**package**] | **remove package** | **replace** *location* | **rollback** *transaction-ID* | **upgrade** [**source** *location*] [**package**] [**synchronous**] }

abort all-since-apply | **latest**	Aborts the latest package update or all package updates since the last apply.
add *packagename* **skip-implicit-owner-packages-checks** | **source** *source*	Adds the specified package. You can either specify the name of the package, Cisco bugfix ID or the full path of the source. The source can be a repository or a local directory or a tarfile (local or remote). Skip checks that prevent the installation of packages from unspecified owners. You can add more than one package.
downgrade *packagename* | **source** *source*	Downgrades the specified package. The source can be a repository or a local directory or a tarfile (local or remote). You can add more than one package.
remove *packagename*	Removes the specified package.
replace *location*	Replaces currently installed software with that in a given ISO. You can specify the full local path to ISO. The ISO must be located in or under one of the following directories: `/harddisk:/` or `/misc/disk1/` or `/ftp://` or `/http://` .
rollback *transaction-ID*	Rolls back to the software committed by the given transaction ID.
upgrade *packagename* | **source** *source*	Upgrades the specified package. You can either specify the name of the package, Cisco bugfix ID or the full path of the source. The source can be a repository (local or remote) or a local directory or a tarfile (local or remote). Remote repository or tarfiles can be accessed via ftp:// or https:// or http://.
synchronous	(Optional) Installs the package synchronously.

Command Default None

Command Modes XR EXEC mode

Command History

Release	Modification
Release 7.0.12	This command was introduced.
Release 24.2.11	The **skip-implicit-owner-packages-checks** keyword was introduced.

Usage Guidelines

To specify the source, you must specify the full path to a local directory. The full path must be a subdirectory of `/var/xr/disk1/`, `/harddisk:/`, or `/misc/disk1/`.

You can use the URL of a remote DNF repository or tarball. The URL can optionally contain a VRF, and should be in the following format:

- `ftp://<server>[;<vrf>]/<full_path_to_repo>`
- `http://<server>[;<vrf>]/<full_path_to_repo>`
- `https://<server>[;<vrf>]/<full_path_to_repo>`

Task ID

Task ID	Operations
pkg-mgmt	read, write

This example shows how to replace the current software with the 8000-x64.iso image:

```
Router# install package replace /harddisk:/8000-x64.iso
```

This example shows how to add more than one package:

```
Router# install package add package-1 package-2 package-n
```

This example shows how to remove an optional package:

```
Router# install package remove package-name
```

This example shows how to upgrade to new package versions which contain bugfixes:

```
Router# install package upgrade xr-8000-core-7.0.11v1.0.1-1 xr-core-7.0.1v1.0.1-1
```

This example shows how to downgrade a package:

```
Router# install package downgrade xr-telnet
Router# install apply reload
```

install source

The **install source** command installs or upgrades packages from the specified source and applies the change automatically.

install source { *location* | **any-configured** } [**reload**] [**noprompt**] [**synchronous**]

location	A source can be the name of a configured DNF repository, a local diectory, a local tar file, a remote repository or tar file.
any-configured	Use any configured repository to obtain packages.
reload	(Optional) Applies the changes through a reload.
noprompt	(Optional) Applies the changes without prompting for permission.
synchronous	(Optional) Applies the changes synchronously.

Command Default

None

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 25.4.1	The **ftp** and **tftp** keywords are deprecated.
Release 7.0.12	This command was introduced.

Usage Guidelines

The location of the source can be a repository, URL, or a local directory.

For local directories, you must specify the full path. The full path must be a subdirectory of `/var/xr/disk1/`, `/harddisk:/`, or `/misc/disk1/`.

For remote repositories or tarballs, the IP address of the repository must be accessible from the Management Ethernet port. In-band interfaces on linecards cannot be used to reach the repository. The URL can optionally contain a VRF, and should be in the following format:

- `ftp://<server>[;<vrf>]/<full_path_to_repo>`
- `http://<server>[;<vrf>]/<full_path_to_repo>`
- `https://<server>[;<vrf>]/<full_path_to_repo>`

Starting with Cisco IOS XR Software Release 25.4.1, do not use the FTP or TFTP protocol for file transfers, as FTP and TFTP is unsecure and deprecated. Instead, use SFTP (Secure File Transfer Protocol) or SCP (Secure Copy Protocol) for improved security, as they provide encrypted communication.

Syslog warnings will be displayed each time these commands are executed.

Task ID

Task ID	Operations
pkg-mgmt	read, write

This example shows how to install the package from the local directory:

```
Router# install source /harddisk:/files xr-ipsla-7.0.11v1.0.1-1.x86_64.rpm
```

This example shows how to install the package from a configured local or remote repository named `install-repo`:

```
Router# install source install-repo xr-ipsla
```

This example shows how to install the package from a repository URL:

```
Router# install source http://72.16.0.0:3333/remote-repo xr-ipsla
```

This example shows how to install more than one package in a single packaging operation:

```
Router# install source /harddisk:/files xr-ipsla-7.0.11v1.0.0-1.x86_64.rpm
xr-mcast-7.0.11v1.0.0-1.x86_64.rpm
```

install rollback

To roll back to the software associated with the specific transaction ID, use the **install rollback** command in XR EXEC mode.

install rollback *id* [**commmit**] [**reload**] [**noprompt**] [**synchronous**]

id	Speecifes the transaction ID for the rollback.
commit	(Optional) Commits the installed software after rollbck.
reload	(Optional) Applies the changes through a reload.
noprompt	(Optional) Applies the changes without prompting for permission.
synchronous	(Optional) Applies the changes synchronously.

Command Default

None

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 7.0.12	This command was introduced.

Usage Guidelines

This roll back operation installs the previous software and also applies the change automatically. This may reload the router depending on the package that is rolled back.

Alternatively, use the **install package rollback** command to only roll back the package but not apply the changes. You can check whether the router will reload or restart if you apply the change using the **show install history last transaction verbose** command or **show install request** command. Based on the command output, you can take the appropriate action using **install apply reload | restart** command to either reload or restart the system. Use the **install commit** command to commit the transaction.

Task ID

Task ID	Operations
pkg-mgmt	read, write

This example shows how to the roll back to the software associated with the specific transaction ID 200.

```
Router# install rollback 200
```

This example shows how to roll back and commit the changes:

```
Router# install rollback 200 commit
```

This example shows how to roll back and reload:

```
Router# install rollback 200 reload
```

install replace

To replace the currently installed software with that in a given ISO and apply the change, use the **install replace** command in XR EXEC mode.

install replace *location* [**commmit**] [**reload**] [**noprompt**] [**synchronous**] [**skip-implicit-owner-packages-checks**]

location	Speecifes the location of the package for installation.
commit	(Optional) Commits the installed software after replacing.
reload	(Optional) Replaces the software through a reload.
noprompt	(Optional) Applies the changes without prompting for permission.
synchronous	(Optional) Applies the changes synchronously.
skip-implicit-owner-packages-checks	(Optional) Skip checks that prevent the installation of packages from unspecified owners.

Command Default

None

Command Modes

XR EXEC mode

Command History

Release	Modification
Release 7.0.12	This command was introduced.
Release 24.2.11	The **skip-implicit-owner-packages-checks** keyword was introduced.

Usage Guidelines

Include the keyword **noprompt** in the command to enable the system to bypass your permission to reload the router.

Task ID

Task ID	Operations
pkg-mgmt	read, write

This example shows how to replace the currecnt software with the 8000-x64.iso image.

```
Router# install replace /harddisk:/8000-x64.iso
```

This example shows how to replace the currecnt software and commit the changes:

```
Router# install replace /harddisk:/8000-x64.iso commit
```

This example shows how to replace the currecnt software and reload:

```
Router# install replace /harddisk:/8000-x64.iso reload
```

install replace reimage

To reimage the router using an ISO stored on disk, use the **install replace reimage** command in EXEC mode.

This command provides an option to either preserve the existing XR configuration or overwrite it with the configuration stored in the ISO.

- If you reimage to an ISO that corresponds to a different disk layout, the **install replace reimage** command creates a new disk layout.
- If you reimage to an ISO that corresponds to the same disk layout, the **install replace reimage** command won't modify the disk layout.

install replace reimage *source* [**skip-implicit-owner-packages-checks**]

Syntax Description

source	Filename including the directory path or network location of the file. The possible sources are: **WORD:** - Specifies the complete path to a file, including the filename. **ftp:** - Copies from an FTP network server. The syntax is **ftp:***//<server>[;<vrf>]/<remote_path>* **http:** - Copies from one webserver to another over a network. The syntax is **http:***//<server>[;<vrf>]/<remote_path>*
skip-implicit-owner-packages-checks	Skip checks that prevent the installation of packages from unspecified owners.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
Release 7.9.1	This command was introduced.
Release 24.2.11	The **skip-implicit-owner-packages-checks** keyword was introduced.
Release 25.4.1	The **ftp and tftp** keywords are deprecated.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

These are the advantages of booting the router using the **install replace reimage** command:

- You can reimage the router without needing a PXE server setup or USB access.
- By default, the existing XR configuration is retained.

- Booting the router using the **install replace reimage** command is easy since it only requires an image on disk and doesn't need an external PXE server.
- By default, the **install replace reimage** command resets all partitions and the filesystem on the router, which is useful during error recovery scenarios where you need to clear the existing XR configuration and all partitions from the router.

It is recommended to use the **install replace** command for upgrading devices rather than the **install replace reimage** command due to these disadvantages:

- The router takes a long time to reboot when booting the router using the **install replace reimage** command.
- You cannot roll back the operation without an ISO when booting the router using the **install replace reimage** command.
- Booting with the **install replace reimage** command removes all the third party apps installed on the router.

Starting with Cisco IOS XR Software Release 25.4.1, do not use the FTP or TFTP protocols for file transfers, as these are unsecure and deprecated. Instead, use SFTP (Secure File Transfer Protocol) or SCP (Secure Copy Protocol) for improved security, as they provide encrypted communication.

Syslog warnings will be displayed each time these commands are executed.

Task ID

Task ID	Operation
pkg-mgmt	Execute

Example

The following example shows output for the **install replace reimage** command on Cisco IOS XR:

```
Router#install replace reimage /harddisk:/8000-x64.iso synchronous noprompt commit
Fri Jun 14 15:06:00.734 UTC
Starting:
  install replace reimage /harddisk:/8000-x64.iso commit
Reimage 1
Press Ctrl-C to return to the exec prompt. This will not cancel the install operation

Current activity: Initializing
Current activity: Prepare for a reimage from disk operation: downloading ISO and saving
config ....
Current activity: Wait for reload during a reimage operation
```

reload

To reloads the route processor (RP), use the **reload** command in XR EXEC mode.

reload

Syntax Description

This command has no keywords or arguments.

Command Default

None

Command Modes

XR EXEC mode

Command History

Releases	Modifications
Release 7.0.12	This command was introduced.

Usage Guidelines

Use the **reload** command to cause the RP to reload the Cisco IOS XR software according to the configuration register setting (for example, 0x0 to enter ROMMON mode and 0x2 to reload the RP to EXEC mode). If a standby RP is in the ready redundancy state, the **reload** command also causes the router to fail over to the standby RP. Use the **show redundancy** command in EXEC mode to display the status of the standby RP.

When the **reload** command is used and a switchover occurs, the running (active) software configuration is automatically maintained during switchover.

Caution If a standby RP is not installed or is not in the ready state, then the router experiences a loss of service while the active RP is reloading Cisco IOS XR software. To view the status of the standby RP, issue the **show redundancy** command in EXEC mode.

If you use the **reload** command and there is no available standby node, you are prompted to continue with the reload:

```
Router# reload

Standby card not present or not Ready for failover. Proceed?[confirm]y
```

Task ID

Task ID	Operations
root-lr	execute

The following example shows how to reload the active RP. If a standby RP is in the ready state, then the router fails over to the standby RP. If the standby RP is not installed or is not in the ready state, then the router enters ROMMON mode and routing operations stop.

```
Router# reload
```

```
Updating Commit Database.  Please wait...[OK]
Proceed with reload? [confirm] y

PCI0 device[7]: Vendor ID 0x10ee
PCI0 device[7]: Device ID 0x300e
PCI1 device[7]: Device ID 0x1100
PCI1 device[7]: Vendor ID 0x1013
PCI1 device[8]: Device ID 0x649
PCI1 device[8]: Vendor ID 0x1095
PCI1 device[9]: Device ID 0x5618
PCI1 device[9]: Vendor ID 0x14e4
PCI1 device[10]: Device ID 0x5618
PCI1 device[10]: Vendor ID 0x14e4
System Bootstrap, Version 1.15(20040120:002852) ,
Copyright (c) 1994-2004 by cisco Systems, Inc.
Board type is 0x100000 (1048576)
Enabling watchdog
Broadcom 5618 #0 Found on PCI
Broadcom 5618 #1 Found on PCI
No. of BCM 56xx switches found 2 .
BCM Switch #0 initialisation complete.
BCM Switch #1 initialisation complete
G4(7450-SMP-GT64260_A) platform with 2048 Mb of main memory

rommon B1 >
```

reload bootmedia

To reload bootable image from the hardware module network location, use the **reload bootmedia** command in EXEC mode.

reload bootmedia { **network location** { *node-id* | **all** } | **usb** }

Syntax Description

network	To reload bootable image from the hardware module.
location *node-id*	Specifies a node. The *node-id* argument is expressed in the *rack/slot* notation.
location all	Copies to all nodes.
usb	To reload bootable image from usb.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
Release 7.0.12	This command was introduced.

Usage Guidelines

The reload bootmedia network command reloads reload bootable image from the hardware module network location. Include the keyword **noprompt** in the command to enable the system to bypass your permission to reload the router.

The following example shows how to reload bootable image from all hardware module network location:

```
Router#reload bootmedia network location all
Wed Feb 15 07:21:42.536 UTC
Proceed with reload? [confirm]
```

The following example shows how to reload bootable image from specific hardware module network location:

```
Router#reload bootmedia network location 0/RP0/CPU0
Wed Feb 15 07:21:42.536 UTC
Proceed with reload? [confirm]
```

The following example shows how to reload bootable image from usb:

```
Router#reload bootmedia usb
Wed Feb 15 07:21:42.536 UTC
Proceed with reload? [confirm]
```

upgrade optics

To initiate a firmware upgrade on the specified optic port, use the **upgrade optics** command in XR EXEC mode.

upgrade optics port *port-number* **filename** *file-path* **location** *node-id*

port*port-number*	Specifies the optic port number where the firmware upgrade is performed.
filename*file-path*	Specifies the full path to the firmware image stored on the router.
location*node-id*	Specifies the CPU node responsible for managing the optic. This may be the route processor or a line card CPU depending on the platform architecture.

Command Default

None

Command Modes

XR EXEC mode

Usage Guidelines

No specific guidelines impact the use of this command.

Task ID

Task ID	Operations
system	read

This example shows how to perform a firmware upgrade on the specified optic port.

```
Router# upgrade optics port 16 filename disk0:/firmware_image.bin location 0/RP0/CPU0
```