

System Upgrade Command Reference

This chapter provides details for the commands used in In-Service System Upgrade (ISSU) and Orchestrated Line Card Reload (OLR).

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hardware-module olr

To divide the line cards on to two planes while preparing the node for OLR, use the **hardware-module olr** command in the global configuation mode.

hardware-module olr plane *plane-id***rack** *rack-id* **nodes** *node/ lc-list*

Syntax Description

plane *plane-id*	Specifies the plane. The line cards can be divided on to plane A or plane B.
rack *rack-id*	Specifies the rack in which the line card is present.
nodes *node/ lc-list*	Specifies the node of the line card.

Command Default

None

Command Modes

Global Configuration

Command History

Release	Modification
Release 6.1.42	This command was introduced.

Usage Guidelines

No specific usage guidelines.

Example

The following example shows how to use the hw-module olr command:

```
RP/0/RP0:hostname(config) # hw-module plane A rack 0 nodes 1,2,3
```

install activate

To enable the package configurations to be made active on the router so new features and software fixes take effect, use the **install activate** command in EXEC mode or Admin EXEC mode.

install activate *package_name*

Syntax Description

package_name	Enter the package name separated by space. Up to 16 packages can be specified in a single **install activate** command at a time.

Command Default

The **install activate** command activates all packages that were added in the specified install add operation and the operation is performed in an asynchronous mode. The command runs in the background and the EXEC prompt is returned soon after.

Command Modes

Admin EXEC, EXEC

Command History

Release	Modification
Release 6.1.42	This command was introduced.

Usage Guidelines

Only the inactive packages can be activated. Use the **show install inactive** command to identify the inactive packages present in the repository.

Example

The following example shows how to use the install activate command:

```
sysadmin-vm:0_RP0#install activate ncs4k-sysadmin-6.1.4.40I
```

install add

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

install add source *source-path file***[issu]**

Syntax Description

source *source-path*	Specifies the source location of the PIE files to be appended to the PIE filenames. Location options are: • **disk0:** • **disk1:** • **compact flash:** • **harddisk** • **ftp://** • **tftp://**
file	Name and location of the PIE file to be installed.
issu	Performs an in-service software upgrade.

Command Default

Packages are added to the storage device. The **install add** command runs in the background and the EXEC prompt is returned as soon as possible.

Command Modes

EXEC, Admin EXEC

Command History

Release	Modification
Release 6.1.42	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:). You can also use ftp, tftp, or sftp protocols to transfer files from the network server to the router.

Example

The following example shows how to use the install add command:

```
sysadmin-vm:0_RP0#install add source tftp://223.255.254.254/auto/tftp
```

install extract

To extract individual ISO images from 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.

install extract *package_name*

Syntax Description

package_name	Enter package names separated by space.

Command Default

None

Command Modes

EXEC, System EXEC

Command History

Release	Modification
Release 6.1.42	This command was introduced.

Usage Guidelines

No specific usage guidelines.

Example

The following example shows how to use the install extract command:

```
sysadmin-vm:0_RP0#install extract ncs4k-mini-x-6.1.4.09I
```

install prepare

To prepare the installable files (ISO image, packages and SMUs) for activation using ISSU , 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 issu *package_name*

Syntax Description

package_name	Enter package names separated by space.

Command Default

None

Command Modes

System Admin EXEC, EXEC

Command History

Release	Modification
Release 6.1.42	This command was introduced.

Usage Guidelines

No specific usage guidelines.

Example

The following example shows how to use the install prepare command:

```
sysadmin-vm:0_RP0#install prepare issu ncs4k-sysadmin-6.1.4.40I
```

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, EXEC

Command History

Release	Modification
Release 6.1.42	This command was introduced.

Usage Guidelines

No specific usage guidelines.

Example

The following example shows how to use show install respository command:

```
sysadmin-vm:0_RP1# show install repository all
```

save configuration database

To back up the contents of persistent configuration commit database and ifindexes into a backup file, use the **save configuration database** command. This command helps to restore a device with the same configuration and ifindexes later.

save configuration database *filename*

Syntax Description

filename	Name of the tar file where persistent configuration commit database and ifindexes are stored.

Command Default

None

Command Modes

Exec mode

Command History

Release	Modification
Release 6.0.1	This command was introduced.

Usage Guidelines

- User should be part of config-services task ID.
- Command can only be executed from DLRSC node.

Example

This example shows how to use the **save configuration database** command:

```
RP/0/RP0:R4#save configuration database samplebackup
Configuration database successfully backed up at: /harddisk:/ samplebackup.tgz
```

restore configuration database

To restore the saved configuration and ifindexes from the specified tar file, use the **restore configuration database** command. This command boots the system with the configuration and ifindexes present in the back-up file. Also, this command triggers an automatic reload of the router.

restore configuration database *filename*

Syntax Description

filename	Name of the tar file from where persistent configuration database and ifindexes are restored.

Command Default

None

Command Modes

Exec mode

Command History

Release	Modification
Release 6.0.1	This command was introduced.

Usage Guidelines

- User should be part of config-services task ID.
- Command can only be executed from DLRSC node.

Example

This example shows how to use the **restore configuration database** command:

```
RP/0/RP0:ios#restore configuration database samplebackup.tgz
Tue Jun  1 11:25:04.869 UTC

Restore DB will result in router reload. Do you wish to continue?? [no]: yes
Sync Active RP List
Sync Active RP List
RP/0/RP0:Jun  1 11:25:24.604 UTC: sysmgr_control[69132]: %OS-SYSMGR-4-PROC_SHUTDOWN_NAME :
 User root (UNKNOWN) requested a shutdown of process cfgmgr-rp at all nodes
RP/0/RP0:Jun  1 11:25:24.867 UTC: sysmgr_control[69148]: %OS-SYSMGR-4-PROC_SHUTDOWN_NAME :
 User root (UNKNOWN) requested a shutdown of process ifindex_server at all nodes
Reloading in 10 seconds.
Reloading in 9 seconds.
Reloading in 8 seconds.
Reloading in 7 seconds.
Reloading in 6 seconds.
Reloading in 5 seconds.
Reloading in 4 seconds.
Reloading in 3 seconds.
Reloading in 2 seconds.
Reloading in 1 seconds.
nohup: appending output to `/disk0:/nohup.out'
Configuration database restore will start
LC/0/LC0:Jun  1 11:28:44.208 UTC: rmf_svr[255]: %HA-REDCON-1-STANDBY_NOT_READY : standby
card is NOT ready
LC/0/LC0:Jun  1 11:28:46.709 UTC: rmf_svr[255]: %PKT_INFRA-FM-3-FAULT_MAJOR : ALARM_MAJOR
:RP-RED-LOST-NNR :DECLARE :0/LC0:
0/RP1/ADMIN0:Jun  1 11:29:00.876 UTC: vm_manager[3343]: %INFRA-VM_MANAGER-4-INFO : Info:
```

```
vm_manager brought down VM default-sdr--2
0/RP0/ADMIN0:Jun  1 11:29:10.526 UTC: vm_manager[3354]: %INFRA-VM_MANAGER-4-INFO : Info:
vm_manager brought down VM default-sdr--2
0/RP1/ADMIN0:Jun  1 11:29:12.749 UTC: vm_manager[3343]: %INFRA-VM_MANAGER-4-INFO : Info:
vm_manager started VM default-sdr--2
RP/0/RP0:Jun  1 11:29:16.508 UTC: rmf_svr[209]: %HA-REDCON-1-STANDBY_NOT_READY : standby
card is NOT ready
RP/0/RP0:Jun  1 11:29:19.011 UTC: rmf_svr[209]: %PKT_INFRA-FM-3-FAULT_MAJOR : ALARM_MAJOR
:RP-RED-LOST-NNR :DECLARE :0/RP0:
RP/0/RP0:Jun  1 11:29:19.035 UTC: rmf_svr[209]: %PKT_INFRA-FM-2-FAULT_CRITICAL :
ALARM_CRITICAL :RP-RED-LOST-PNP :DECLARE :0/RP0:
RP/0/RP0:Jun  1 11:29:19.037 UTC: rmf_svr[209]: %PKT_INFRA-FM-3-FAULT_MAJOR : ALARM_MAJOR
:RP-RED-LOST-NSRNR :DECLARE :0/RP0:
0/RP0/ADMIN0:Jun  1 11:29:22.105 UTC: vm_manager[3354]: %INFRA-VM_MANAGER-4-INFO : Info:
vm_manager started VM default-sdr--2
```

show redundancy

To display the status of route processor redundancy, use the **show redundancy** command in System Admin EXEC or EXEC mode.

show redundancy [summary]

Syntax Description

summary	Displays a summary of all redundant node pairs in the router.

Command Default

None

Command Modes

EXEC, System EXEC

Command History

Release	Modification
Release 6.5.31	This command was introduced.

Usage Guidelines

No specific usage guidelines.

Example

The following example shows how to use the show redundancy summary command for single chassis system:

```
RP/0/RP0:R1 #show redundancy summmary
Active Node Standby Node
----------- ------------
0/RP0 0/RP1 (Node Ready, NSR:Ready)
0/LC0 0/LC1 (Node Ready, NSR:Not Configured)
```

This command checks the current status of the RP1 and RP0.

The following example shows how to use the show redundancy summary command for multi chassis system:

```
RP/0/RP0:R1#show redundancy summary
Active Node Standby Node
----------- ------------
1/LC0 1/LC1 (Node Ready, NSR:Not Configured)
0/RP1 2/RP0 (Node Ready, NSR:Not Configured)
3/LC0 3/LC1 (Node Ready, NSR:Not Configured)
0/RP0 1/RP1 (Node Ready, NSR:Not Configured)
2/RP1 3/RP0 (Node Ready, NSR:Ready)
0/LC0 0/LC1 (Node Ready, NSR:Not Configured)
1/RP0 3/RP1 (Node Ready, NSR:Not Configured)
2/LC0 2/LC1 (Node Ready, NSR:Not Configured)
```

show processes

To display information about active processes, use the **show processes** command in System Admin EXEC, or EXEC mode.

show processes { process-name | location *node id* **}**

Syntax Description

process-name	Process name for which all simultaneously running instances are displayed, if applicable
location *node-id*	Displays information about the active processes from a designated node.

Command Default

None

Command Modes

System Admin EXEC, EXEC

Command History

Release	Modification
Release 6.5.31	This command was introduced.

Usage Guidelines

No specific usage guidelines.

Example

The following example shows how to use the show processes command:

```
show processes shelf_mgr location 3/RP0
Fri Jan 24 07:27:49.529 UTC
------------------------------------------------------------------------
PID: 3327
Executable path:
/opt/cisco/calvados/packages/ncs4k-sysadmin-system-6.5.26.CSCvp28576.all-1.0.0/bin/shelf_mgr
Instance #: 0
Respawn: ON
Respawn count: 1
Max. spawns per 4 mins: 4
Last started: 01/24/2020 05:37:36.000
Process state: Run
startup_path:
/opt/cisco/calvados/packages/ncs4k-sysadmin-system-6.5.26.CSCvp28576.sc-1.0.0/etc/startup/shelf_mgr_rp.startup
Ready: 3s
Table of services hosted on this process:
------------------------------------------------------------------------
LAST STARTED SCOPE SELE- ROLE STATE HA- SERVICE NAME
CTED RDY
------------------------------------------------------------------------
01/24/2020 05:41:17.000 RACK Y ACT Run RM
01/24/2020 06:48:49.000 SYS Y ACT Run SM
----------------------
```

install commit

To commit the newly activated software, use the **install commit** command in System Admin EXEC, or EXEC mode.

install commit

Command Default None

Command Modes System Admin EXEC, EXEC

Command History

Release	Modification
Release 6.5.31	This command was introduced.

Usage Guidelines None

Example

The following example shows how to use the install commit command:

```
sysadmin-vm:0_RP0# install commit
result Mon Jan 21 00:41:32 2020 Install operation 78 (install commit) started by user 'root'
 will
continue asynchronously.
sysadmin-vm:0_RP0# Tue Jan 21 00:41:36 2020 Install operation 78 completed successfully.
sysadmin-vm:0_RP0#
```