

1 Software Upgrade Commands

Command	Function
check version	Display the version matching of each device.
show upgrade auto-sync	Display the auto-sync upgrade configuration in the device.
show upgrade file	Display information about the installation package file stored in the file system of the device.
show upgrade history	Display the upgrade history.
show upgrade status	Display the upgrade status of each board of the device and the installation status of the patch package.
upgrade	Install and upgrade the installation package in the local file system.
upgrade auto-sync package	Configure the check scope for auto-sync upgrade of the device system.
upgrade auto-sync policy	Configure an auto-sync upgrade policy for the system.
upgrade auto-sync range	Configure the auto-sync upgrade range for the system.
upgrade sync-server	Configure the auto-sync upgrade range of the system.
clear install storage	Clear all the patch packages not running currently and corresponding database information.
install add	Download a patch package and add the patch information to the database.
install activate	Activate a patch temporarily to make it take effect.
install commit	Activate a patch permanently to make the patch still effective after the device is restarted.
install deactivate	Roll back a patch to the unactivated state.
install remove	Remove an unactivated patch package and delete the patch information from the database.

install auto-sync	Enable the patch auto-sync function on the device. The configuration is valid for only newly connected devices.
show install auto-sync	Display all the patch packages that need auto-sync on the device.
show install	Display information about all the patches of the current device.
patch active	Activate the installation package of a function component.
patch running	Activate a patch permanently to make the patch still effective after the device is restarted.
patch auto-running	Activate a patch and make it take effect automatically and permanently. Namely, the patch is still effective even after the device is restarted.
patch deactivate	Roll back a patch to the unactivated state.
patch delete	Remove an unactivated patch package and delete the patch information from the database.
show patch	Display information about the latest patch of the current device.
show patch detail	Display details about patches of the device.

1.1 check version

Function

Run the **check version** command to display the version matching of each device.

Syntax

```
check version
```

Parameter Description

N/A

Command Modes

Privileged EXEC mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example displays the version matching of each device.

```
Hostname> enable
Hostname# check version
  Dev Slot State
  --- ----  -
  1    0   Compatible
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.2 show upgrade auto-sync

Function

Run the **show upgrade auto-sync** command to display the auto-sync upgrade configuration in the device.

Syntax

```
show upgrade auto-sync
```

Parameter Description

N/A

Command Modes

All modes except the user EXEC mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example displays the auto-sync upgrade information of the system.

```

Hostname> enable
Hostname# show upgrade auto-sync
  auto-sync policy: coordinate
  auto-sync range: vsu
  auto-sync package: flash:/main_1.0.0.0f328e91.bin

```

Table 1-1 Output Fields of the show upgrade auto-sync Command

Field	Description
auto-sync policy	Configured auto-sync upgrade policy: <ul style="list-style-type: none"> ● coordinate: Synchronizes the software of all the other members to the version of the system upgrade package stored in the supervisor module. ● none: No auto-sync upgrade is performed.
auto-sync range	Range of auto-sync upgrade
auto-sync package	Path of the upgrade package for auto-sync upgrade

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.3 show upgrade file

Function

Run the **show upgrade file** command to display information about the installation package file stored in the file system of the device.

Syntax

```
show upgrade file url
```

Parameter Description

url: Local path where the installation package file is stored.

Command Modes

All modes except the user EXEC mode

Default Level

15

Usage Guidelines

After you download an installation package file to the local file system, you can run this command to display the main information of the installation package beforehand.

Caution

This command does not support the rack package.

Examples

The following example displays information about an installation package file.

```
Hostname> enable
Hostname# show upgrade file flash:B26Q_NOS12.1(1)B0101-FULL_install.bin
Name           : main
Version        : 1.0.0.2f1c4dd8
Package type   : unknown
Size           : 166440370
Build time     : Fri 23 Nov 2018 09:01:43 UTC
Description    : main upgrade package
Package files  :
                /fdt.img
                /initrd.img
                /kernel.img
                /rboot-B26Q.bin
                /rootfs.sqsh
```

/u-boot-B26Q_spi.bin

Table 1-1Output Fields of the show upgrade file Command

Field	Description
Name	Name of an installation package: <ul style="list-style-type: none"> ● main: Installation package of the main program ● bios: BIOS installation package ● cpld: Installation package for the CPLD and FPGA firmware
Version	Version of the installation package
Package type	Type of the installation package: <ul style="list-style-type: none"> ● distribute component: installation package for rack-type devices ● main component: Main installation package ● bios component: BIOS installation package ● cpld component: Installation package for the CPLD and FPGA firmware
Size	Size of the installation package, in bytes
Build time	Compilation time
Description	Description of the installation package
Package files	List of files in the installation package

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.4 show upgrade history

Function

Run the **show upgrade history** command to display the upgrade history.

Syntax

show upgrade history

Parameter Description

N/A

Command Modes

All modes except the user EXEC mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example displays the upgrade history.

```

Hostname> enable
Hostname#show upgrade history
Upgrade History Information:
  Time           : 2018-11-05 06:13:17
  Method         : OOBTFTP
  Package Name   : B26Q.bin
  Package Type   : MAIN
  Time           : 2018-11-06 03:11:16
  Method         : OOBTFTP
  Package Name   : B26Q_NOS12.1(1)B1_install.bin
  Package Type   : MAIN

```

Table 1-1 Output Fields of the show upgrade history Command

Field	Description
Upgrade History Information	Upgrade history information
Time	Upgrade time
Method	Upgrade method: <ul style="list-style-type: none"> ● AUTO-SYNC: Auto-sync upgrade ● LOCAL: Upgrade using the local installation package ● TFTP: Upgrade through TFTP downloading ● FTP: Upgrade through FTP downloading ● OOBTFTP: Upgrade through oob_tftp downloading ● OOBFTP: Upgrade through oob_ftp downloading
PackageName	Name of the installation package
PackageType	Type of the installation package: <ul style="list-style-type: none"> ● MAIN: Main installation package ● RBOOT: RBOOT installation package ● UBOOT: UBOOT installation package

Field	Description
	<ul style="list-style-type: none">● CPLD: Installation package for the CPLD and FPGA firmware● BIOS: BIOS installation package● DISTRIBUTE: installation package for rack-type devices

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.5 show upgrade status

Function

Run the **show upgrade status** command to display the upgrade status of each board of the device and the installation status of the patch package.

Syntax

```
show upgrade status
```

Parameter Description

N/A

Command Modes

All modes except the user EXEC mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example displays the upgrade status of each board of the device.

```
Hostname> enable
Hostname# show upgrade status
upgrade global status: INIT
[slot 2/0]
```



```

Device type      : B26Q
Status          : success
[Slot 1/0]
Device type      : B26Q
Status          : success
    
```

The following example displays the installation status of the patch package.

```

Hostname# show upgrade status
[Slot 2/0]
Device type      : B26Q
Status          : success
[Slot 1/0]
Device type      : B26Q
Status          : success
    
```

Table 1-1Output Fields of the show upgrade status Command

Field	Description
upgrade global status	Global status of upgrade: <ul style="list-style-type: none"> ● INIT: Upgrade is not performed or has been completed. ● DOWNLOAD: The downloading process of the installation package ● PRE-UPGRADE: The pre-upgrade process ● UPGRADING: The upgrading process ● POST-UPGRADE: The post-upgrade process
Device type	Device type
Status	Upgrade status of a board: <ul style="list-style-type: none"> ● Ready: Not upgraded ● parse: The parsing process of the installation package ● transmission: The installation package is being transmitted. ● upgrading: The installation package is being upgraded. ● success: Upgrade succeeded ● skipped: Upgrade skipped because it is not supported by the device or the version is consistent with the target version. ● fail: Upgrade failed

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.6 upgrade

Function

Run the **upgrade** command to install and upgrade the installation package in the local file system.

Syntax

```
upgrade [ boot ] { url | download { oob_ftp://path [ via mgmt interface-number ] | oob_tftp://path [ via mgmt { interface-number } ] | ftp://path [ vrf vrf-name ] | tftp://path [ vrf vrf-name ] } [ slot slot-number ] } [ force ]
```

Parameter Description

boot: Upgrades the boot on the device, including **Uboot** and **Rboot**.

url: Local path of the installation package on the device, which is **flash:**, **tmp:**, or **usb0:**. This parameter indicates that the installation package stored in the device is used for upgrade.

force: Indicates that upgrade is performed forcibly when the target upgrade version is the same as the version of the system.

path: Path of the installation package on the File Transfer Protocol (FTP) or Trivial File Transfer Protocol (TFTP) server. This parameter indicates that the installation package is downloaded from the server, and then the device will upgrade itself automatically.

vrf *vrf-name*: Downloads the installation package from the specified Virtual Routing and Forwarding (VRF) table.

slot *slot-number*: Upgrades a specified board.

via mgmt *interface-number*: Specifies an MGMT interface if the installation package is transmitted through **oob_tftp** or **oob_ftp** and there are multiple MGMT interfaces. Here, *interface-number* indicates the specified MGMT interface number.

Command Modes

Privileged EXEC mode

Default Level

15

Usage Guidelines

This command supports installation packages of all the subsystems, installation packages of rack-type devices, and patch installation packages. Before running this command, run the **copy** command to copy the function package to the file system of the device.

The **vrf** parameter is mutually exclusive to the **oob_tftp** and **oob_ftp** parameters.

Examples

The following example sets the upgrade path of the device system to the installation package in the USB flash drive.

```

Hostname> enable
Hostname# upgrade usb0: B26Q_NOS12.1(1)B0101-FULL_install.bin
< The terminal is locked by upgrade module >
Upgrade start
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!10%
< you can press Ctrl+C to unlock terminal >
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!20%
< you can press Ctrl+C to unlock terminal >
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!30%
< you can press Ctrl+C to unlock terminal >
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!100%
Upgrade success
< The terminal is unlocked by upgrade module >
[Slot 0]
      Device type      : B26Q
      Status           : success
    
```

The following example upgrades the patch package under the flash path in the device.

```

Hostname# upgrade flash:cmpnt_upgrade_server_99.0.0.0_mips64.deb
< The terminal is locked by patch module >
Upgrade start
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Upgrade finish
< The terminal is unlocked by patch module >
Operate result information:
-----
Slot          Result          Comment
    
```

0 Success NoneNotifications

When upgrade succeeds, the following notification will be displayed:

```
Upgrade success
```

When an installation package is invalid or damaged, the following notification will be displayed. You need to obtain an installation package again and run the upgrade command.

```
Invalid package file
```

When the device does not support that installation package, the following notification will be displayed. You need to obtain the installation package again and run the upgrade command.

```
Device don't support
```

When the device does not need to be upgraded, the following notification will be displayed:

```
The version in device is newer or the same
```

When the upgrade space is insufficient, the following notification will be displayed:

```
No enough space for decompress
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show version](#) (basic configuration/basic management command)

1.7 upgrade auto-sync package

Function

Run the **upgrade auto-sync package** command to configure the check scope for auto-sync upgrade of the device system.

By default, the check scope for auto-sync upgrade of the system is the path of the upgrade package used in the previous system upgrade.

Syntax

```
upgrade auto-sync package url
```

Parameter Description

url: Local path of the used upgrade package in the device during the auto-sync upgrade of the device.

Command Modes

Privileged EXEC mode

Default Level

15

Usage Guidelines

When new members join the system, the upgrade function module determines the location of the installation package according to this path. Each time the system is upgraded, the upgrade function module automatically records the path of the installation package used for this upgrade and uses it for auto-sync upgrade. You can also run the **upgrade auto-sync package** command to manually set a path.

Examples

The following example sets the auto-sync upgrade path of the device system to the upgrade package in the USB flash drive.

```
Hostname> enable
Hostname# upgrade auto-sync package usb0:/main_1.0.0.0f328e91.bin
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show upgrade auto-sync](#)

1.8 upgrade auto-sync policy

Function

Run the **upgrade auto-sync policy** command to configure an auto-sync upgrade policy for the system.

The default auto-sync upgrade policy of the system is **coordinate**.

Syntax

```
upgrade auto-sync policy [ compatible | coordinate | none ]
```

Parameter Description

none: Performs no auto-sync upgrade and disables the patch package auto-sync.

compatible: Checks whether auto-sync is needed based on the sequential order of versions and enables patch package auto-sync.

coordinate: Synchronizes the version of the system upgrade package stored on the supervisor module to this version, and enables patch package auto-sync.

Command Modes

Privileged EXEC mode

Default Level

2

Usage Guidelines

Before using this command, you need to confirm whether the upgrade package is ready.

Examples

The following example configures the auto-sync upgrade policy for the device as **compatible**.

```
Hostname> enable
Hostname# upgrade auto-sync policy coordinate
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show upgrade auto-sync](#)

1.9 upgrade auto-sync range

Function

Run the **upgrade auto-sync range** command to configure the auto-sync upgrade range for the system.

The default auto-sync upgrade range of the system is the VSU system.

Syntax

```
upgrade auto-sync range [ vsu ]
```

Parameter Description

vsu: Performs auto-sync upgrade of the version in the VSU system.

Command Modes

Privileged EXEC mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example sets the auto-sync upgrade range to the VSU system.

```
Hostname> enable
Hostname# upgrade auto-sync range vsu
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show upgrade auto-sync](#)

1.10 upgrade sync-server

Function

Run the **upgrade sync-server** command to configure the auto-sync upgrade range of the system.

Syntax

```
upgrade sync-server [ open | close ]
```

Parameter Description

open: Enables the auto-sync service so that the version of the supervisor module is synchronized to the line card when a line card without the main program is added to the chassis.

close: Disables the auto-sync service so that the version of the supervisor module is not synchronized to the line card when a line card without the main program is added to the chassis.

Command Modes

Privileged EXEC mode

Default Level

15

Usage Guidelines

When the auto-sync upgrade range of the system is set to **open**, the line card without main program is automatically upgraded to the version consistent with the supervisor module after being inserted into the chassis in hot swap mode.

Examples

The following example enables the auto-sync service.

```
Hostname> enable
Hostname# upgrade sync-server open
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.11 clear install storage



This command must be used with caution, because no patch is rolled back to the previous state after this command is run.

Function

Run the **clear install storage** command to clear all the patch packages not running currently and corresponding database information.

Syntax

```
clear install storage [ slot { 0 | all } ]
```

Parameter Description

slot-number: Slot number of a line card. It is used for rack-type devices. The value range of this parameter depends on the actual product.

0: Specifies the current device.

all: Specifies all devices.

Command Modes

Privileged EXEC mode

Default Level

15

Usage Guidelines

This command is used to clear all the patch packages that are not currently running, and delete the patch information from the database. After this command is run, none of the installed patches can be deactivated.

Examples

The following example clears all the patch packages from the device.

```
Hostname> enable
Hostname# clear install storage
Running this command will cause system fail to deactivate. continue?[Y/N]y
< The terminal is lock >
Operating, please wait for a moment
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
```



```
Operate result information:
-----
Slot          Result      Comment
1/0           Success    None
2/0           Success    None
< The terminal is unlock >
```

The following example clears the patch package of the line card in slot 1/0 on the device.

```
Hostname> enable
Hostname# clear install storage slot 1/0
Running this command will cause system fail to deactivate. continue?[Y/N]y
< The terminal is lock >
Operating, please wait for a moment..
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
-----
Slot          Result      Comment
1/0           Success    None
< The terminal is unlock >
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.12 install add

Function

Run the **install add** command to download a patch package and add the patch information to the database.

Syntax

```
install add url [ slot { 0 | all } ]
```

Parameter Description

url: Path of downloading a patch package through **flash**, **TFTP**, **FTP**, or **HTTP**.

0: Specifies the current device.

all: Specifies all devices.

Command Modes

Privileged EXEC mode

Default Level

15

Usage Guidelines

This command is used to copy a patch package to the target location and add it to the database.

Examples

The following example downloads patch packages of all the versions or modules of the device and adds the patch information to the database.

```

Hostname> enable
Hostname# install add tftp//192.1.1.1/smu_rf_hot1002_0118.bin
< The terminal is lock >
Press Ctrl+C to quit
!
Operating, please wait for a moment
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
-----
Slot          Result          Comment
1/0           Success         None
2/0           Success         None
< The terminal is unlock >

```

The following example downloads a patch package to the line card in slot 1/0 on the device and adds the patch information to the database.

```

Hostname# install add tftp//192.1.1.1/smu_rf_hot1002_0118.bin slot 1/0
Press Ctrl+C to quit
!
< The terminal is lock >
Operating, please wait for a moment
!!!!!!!!!!!! 20%

```

```

!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
-----
Slot          Result          Comment
1/0           Success          None
< The terminal is unlock >
    
```

Notifications

- After running this command, you can use the **show install** command to display the patch information. If the state is installed, the patch information is added.
- When an error is reported during running of the command, the format is the same as that in the above guidelines, and the result is **Fail** or **Skip**. The comments are described as follows:

If an installed patch package is reinstalled, the following notification will be displayed:

```
This package already add, don't need to add again!
```

When the space for installing a patch package is insufficient, the following notification will be displayed:

```
No space left on device!
```

When a patch package does not match the device, the following notification will be displayed:

```
Package architecture not match!
```

When the device fails to meet the installation conditions of a patch package, the following notification will be displayed:

```
Package depends not satisfy!
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show install](#)

1.13 install activate

Function

Run the **install activate** command to activate a patch temporarily to make it take effect.

Syntax

```
install activate package_name [ slot { 0 | all } ]
```

Parameter Description

package_name: Name of the patch package file to be activated.

0: Specifies the current device.

all: Specifies all devices.

Command Modes

Privileged EXEC mode

Default Level

15

Usage Guidelines

- This command is used to activate the installation package of a function component.
- Only the installed patches can be activated.
- If an activated patch package does not take effect, the cause is that the version of each component in the current patch package is earlier than or the same as that of the component running in the current device. This is normal.
- If a patch in the device is activated but not confirmed, the patch package will be rolled back to the previous state after the device is restarted. If you confirm that the problem is solved after a patch package is activated, run the **install commit** command immediately.

Examples

The following example activates a patch temporarily to make it take effect.

```

Hostname> enable
Hostname# install activate smu_rf_hot1002_0118.bin
< The terminal is lock >
Operating, please wait for a moment
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
-----
1/0          Success      None
2/0          Success      None
< The terminal is unlock >

```

The following example activates a patch for the line card in slot 1/0 temporarily to make the patch take effect.

```

Hostname# install activate smu_rf_hot1002_0118.bin slot 1/0
< The terminal is lock >
Operating, please wait for a moment
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
Slot          Result          Comment
1/0           Success          None
< The terminal is unlock >

```

Notifications

When the component package file does not exist or the device does not support the entered patch file name, the following notification will be displayed:

```
Package maybe not exist, please check!
```

When a patch package file is damaged and the verification fails, the following notification will be displayed:

```
Package verify fail, please check!
```

When the component, on which a patch package depends, is not installed, the following notification will be displayed:

```
Package depends not satisfy!
```

When the device space is insufficient, the following notification will be displayed:

```
No space left on device!
```

When a patch package error occurs, the following notification will be displayed:

```
Install package error!
```

When the patch package version is the same as or earlier than the current version of the device, the patch will not take effect and the following notification will be displayed:

```
Version is lower or same, it doesn't take effect
```

When a patch has been activated on the device, the patch will not be reactivated, the patch package will be deleted, and the following notification will be displayed:

```
All components have been activated on device, no activate again!
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show install](#)

1.14 install commit

Function

Run the **install commit** command to activate a patch permanently to make the patch still effective after the device is restarted.

Syntax

```
install commit [ slot { 0 | all } ]
```

Parameter Description

0: Specifies the current device.

all: Specifies all devices. Command Modes

Privileged EXEC mode

Default Level

15

Usage Guidelines

- Only the active patches can be activated permanently.
- If the device is reset due to exceptions before the permanent activation, the patch automatically rolls back to its previous state.
- Only the patch packages that has been run the **install commit** command is permanently effective. Otherwise, the activated patch packages will automatically roll back to their previous states after the device is restarted.

Examples

The following example activates a patch permanently to make it still effective after the device is restarted.

```
Hostname> enable
Hostname# install commit
< The terminal is lock >
Operating, please wait for a momen
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
-----
```

```

Slot          Result      Comment
1/0           Success    None
2/0           Success    None
< The terminal is unlock >

```

The following example activates the patch for the line card in slot 1/0 permanently to make the patch still effective after the device is restarted.

```

Hostname# install commit slot 1/0
< The terminal is lock >
Operating, please wait for a moment
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
-----
Slot          Result      Comment
1/0           Success    None
< The terminal is unlock >

```

Notifications

When an error is reported during running of the command, the format is the same as that in the above guidelines, and the result is **Fail** or **Skip**. The comments are described as follows:

When there is no patch in **Active** state and you run the **install commit** command, the following notification will be displayed:

```
There are no active state on the device, no need running!
```

When no patch has been installed on the current device and you run this command, the following notification will be displayed:

```
No package in device, not need commit!
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show install](#)

1.15 install deactivate

Function

Run the **install deactivate** command to roll back a patch to the unactivated state.

Syntax

```
install deactivate package_name [ slot { 0 | all } ]
```

Parameter Description

package_name: Name of a patch package file.

0: Specifies the current device.

all: Specifies all devices. Command Modes

Privileged EXEC mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example rolls back a patch to the unactivated state.

```

Hostname> enable
Hostname# install deactivate smu_rf_hot1002_0118.bin slot 1/0
< The terminal is lock >
Operating, please wait for a moment
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
Slot          Result          Comment
1/0           Success          None
2/0           Success          None
< The terminal is unlock >

```

The following example rolls back the patch of the line card in slot 1/0 to the unactivated state.

```

Hostname# install deactivate smu_rf_hot1002_0118.bin slot 1/0
< The terminal is lock >
Operating, please wait for a moment
!!!!!!!!!!!! 20%

```



```

!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
Slot          Result          Comment
1/0           Success          None
< The terminal is unlock >

```

Notifications

When an error is reported during running of the command, the format is the same as that in the above guidelines, and the result is **Fail** or **Skip**. The comments are described as follows:

When a component package file does not exist, the device does not support the entered patch file name, or a patch package is not installed, the following notification will be displayed:

```
Package maybe not exist, please check!
```

When you deactivate an unactivated patch package, the following notification will be displayed (you need to activate a patch package before deactivating it):

```
Package is not activate or running, not allow deactivate!
```

When the device space is insufficient, the following notification will be displayed:

```
No space left on device!
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show install](#)

1.16 install remove

Function

Run the **install remove** command to remove an unactivated patch package and delete the patch information from the database.

Syntax

```
install remove package_name [ slot { 0 | all } ]
```

Parameter Description

package_name: Name of a patch package file to be removed.

0: Specifies the current device.

all: Specifies all devices.

Command Modes

Privileged EXEC mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example removes an unactivated patch package from the device and deletes the patch package information from the database.

```

Hostname> enable
Hostname# install remove smu_rf_hot1002_0118.bin
< The terminal is lock >
Operating, please wait for a moment
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
-----
Slot          Result          Comment
1/0           Success         None
2/0           Success         None
< The terminal is unlock >
Hostname#

```

The following example removes the unactivated patch package of the line card in slot 1/0 and deletes the patch package information from the database.

```

Hostname# install remove smu_rf_hot1002_0118.bin slot 1/0
< The terminal is lock >
Operating, please wait for a moment
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!

```

```
Operate result information:
-----
Slot          Result      Comment
1/0           Success    None
< The terminal is unlock >
```

Notifications

When an error is reported during running of the command, the format is the same as that in the above guidelines, and the result is **Fail** or **Skip**. The comments are described as follows:

When you run the **install remove** command for a patch in the activated or confirmed state, the following notification will be displayed:

```
Active or running state not allow remove!
```

When you run the **install remove** command for a patch not installed, the following notification will be displayed:

```
Package is not exist, please check!
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show install](#)

1.17 install auto-sync

Function

Run the **install auto-sync** command to enable the patch auto-sync function on the device. The configuration is valid for only newly connected devices.

The patch auto-sync function is enabled by default.

Syntax

```
install auto-sync [ enable | disable ]
```

Parameter Description

enable: Enables the patch auto-sync function.

Disable: Disables the patch auto-sync function.

Command Modes

Global configuration mode

Default Level

15

Usage Guidelines

You are advised to use the default configuration of the system.

Examples

The following example disables the patch auto-sync function.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# install auto-sync disable
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show install](#)

1.18 show install auto-sync

Function

Run the **show install auto-sync** command to display all the patch packages that need auto-sync on the device.

Syntax

```
show install auto-sync
```

Parameter Description

N/A

Command Modes

All modes except the user EXEC mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example displays all the patch packages that need auto-sync on the current device.

```
Hostname> enable
Hostname# show patch auto-sync
```

```

Auto-sync switch: enable
Auto-sync lists :
  Name                State      Flag      Effective time
Package
  SP1.bin             running   Hot       1970-10-08 15:39:42
SP1
  SP2.bin             installed Hot
SP2

```

Table 1-1 Output Fields of the show install auto-sync Command

Field	Description
Component auto-sync switch	Whether patch auto-sync function of a component is enabled

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.19 show install

Function

Run the **show install** command to display information about all the patches of the current device.

Syntax

```
show install
```

Parameter Description

N/A

Command Modes

All modes except the user EXEC mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example displays information about all the patches of the current device.

```

Hostname> enable
Hostname# show install
Install information:
  [Slot 1/0]
    Name                State      Flag      Effective time
Package
  smu_rf_hot1002_0118.bin  active    Hot       2019-09-17 19:00:02
  smu_rf_hot1004_0118.bin  installed Hot       2019-09-17 19:05:01

  [Slot 2/0]
    Name                State      Flag      Effective time
Package
  smu_rf_hot1002_0118.bin  Active    Hot       2019-09-17 19:00:02
  smu_rf_hot1004_0118.bin  install   Hot       2019-09-17 19:05:01

```

Table 1-1 Output Fields of the show install Command

Field	Description
Name	Name of a patch package
Package	Unique identifier in the patch package
State	Status of the patch package
Flag	Operation flag of the patch package
Effective time	Time when the patch package takes effect

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.20 patch active

Function

Run the **patch active** command to activate the installation package of a function component.

Syntax

```
patch active [ slot { 0 | all } ]
```

Parameter Description

slot-number: Slot number of a line card. It is used for rack-type devices.

0: Specifies the current device.

all: Specifies all devices.

Command Modes

Privileged EXEC mode

Default Level

15

Usage Guidelines

- This command is used to activate the installation package of a function component. Only the installed patches can be activated.
- If an activated patch package does not take effect, the cause is that the version of each component in the current patch package is earlier than or the same as that of the component running in the current device. This is normal.
- If a patch in the device has been activated but not confirmed, the patch package will roll back to the previous state after the device is restarted. If you confirm that the problem is solved after a patch package is activated, run the **patch running** command immediately.

Examples

The following example activates the installation package of a function component in the device.

```

Hostname> enable
Hostname# patch active
< The terminal is lock >
Operating, please wait for a moment
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
Slot          Result          Comment

```

```
1/0          Success      None
2/0          Success      None
< The terminal is unlock >
```

Notifications

When a component package file does not exist or the device does not support the entered patch file name, the following notification will be displayed:

```
Package maybe not exist, please check!
```

When a patch package file is damaged and the verification fails, the following notification will be displayed:

```
Package verify fail, please check!
```

When the component on which a patch package depends is not installed, the following notification will be displayed:

```
Package depends not satisfy!
```

When the device space is not sufficient, the following notification will be displayed:

```
No space left on device!
```

When an activated patch package is reactivated, the following notification will be displayed:

```
Package has been activated, no need activate again!
```

When a patch package error occurs, the following notification will be displayed:

```
Install package error!
```

When the patch package version is the same as or earlier than the version of the device and fails to take effect, the following notification will be displayed:

```
Version is lower or same, it doesn't take effect
```

An activated patch on the device will not be reactivated, this patch package will be deleted, and the following notification will be displayed:

```
All components have been activated on device, no activate again!
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show patch](#)

1.21 patch running

Function

Run the **patch running** command to activate a patch permanently to make the patch still effective after the device is restarted.

Syntax

```
patch running [ slot { 0 | all } ]
```


Parameter Description

0: Specifies the current device.

all: Specifies all devices. Command Modes

Privileged EXEC mode

Default Level

15

Usage Guidelines

- Only the active patches can be activated permanently.
- If the device is reset due to exceptions when a patch is not in the permanently activated state, the patch automatically rolls back to the previous state.
- Only a patch package that has been run the **patch running** command is permanently effective. Otherwise, the activated patch package will automatically roll back to the previous state after the device is restarted.

Examples

The following example activates a patch permanently to make it still effective after the device is restarted.

```

Hostname> enable
Hostname# patch running
< The terminal is lock >
Operating, please wait for a moment
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
-----
Slot          Result          Comment
1/0           Success          None
2/0           Success          None
< The terminal is unlock >

```

The following example permanently activates the patch of the line card in slot 1/0 to make it still effective after the device is restarted.

```

Hostname> enable
Hostname# patch running slot 1/0
< The terminal is lock >
Operating, please wait for a moment
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%

```

```

!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
-----
Slot          Result          Comment
1/0           Success          None
< The terminal is unlock >

```

Notifications

When an error is reported during running of the command, the format is the same as that in the above guidelines, and the result is **Fail** or **Skip**. The comments are described as follows:

When there is no patch in **Active** state and you run the **install commit** command, the following notification will be displayed:

```
There are no active state on the device, no need running !
```

When no patch has been installed on the current device and you run this command, the following notification will be displayed:

```
No package in device, not need commit !
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show patch](#)

1.22 patch auto-running

Function

Run the **patch auto-running** command to activate a patch and make it take effect automatically and permanently. Namely, the patch is still effective even after the device is restarted.

Syntax

```
patch auto-running [ slot { 0 | all } ]
```

Parameter Description

0: Specifies the current device.

all: Specifies all devices. **Command Modes**

Privileged EXEC mode

Default Level

15

Usage Guidelines

- You can run this command for the patches to be activated only.
- After this command is run and the configuration is confirmed to take effect, the patch will not roll back to the previous state even if the device is restarted.

Examples

The following example activates a patch and makes it permanently effective.

```

Hostname> enable
Hostname# patch auto-running
< The terminal is lock >
Operating, please wait for a moment
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
-----
Slot          Result          Comment
1/0           Success          None
2/0           Success          None
< The terminal is unlock >

```

The following example activates the patch of the line card in slot 1/0 and makes it permanently effective.

```

Hostname> enable
Hostname# patch auto-running slot 1/0
< The terminal is lock >
Operating, please wait for a moment
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
-----
Slot          Result          Comment
1/0           Success          None

```

```
< The terminal is unlock >
```

Notifications

When an error is reported during running of the command, the format is the same as that in the above guidelines, and the result is **Fail** or **Skip**. The comments are described as follows:

When there is no patch in **Active** state and you run the **install commit** command, the following notification will be displayed:

```
There are no active state on the device, no need running!
```

When no patch has been installed on the current device and you run this command, the following notification will be displayed:

```
No package in device, not need commit!
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show patch](#)

1.23 patch deactivate

Function

Run the **patch deactivate** command to roll back a patch to the unactivated state.

Syntax

```
patch deactivate [ slot { 0 | all } ]
```

Parameter Description

0: Specifies the current device.

all: Specifies all devices. **Command Modes**

Privileged EXEC mode

Default Level

15

Usage Guidelines

When no parameter is set in this command, it is used to delete unactivated patch packages and database information of all the device members from the device.

Examples

The following example rolls back a patch to the unactivated state.

```
Hostname> enable
```

```

Hostname# patch deactivate
< The terminal is lock >
Hostname> enable
Hostname# patch auto-running
< The terminal is lock >
Operating, please wait for a moment
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
-----
Slot          Result          Comment
1/0           Success         None
2/0           Success         None
< The terminal is unlock >
Patch operation finish!
Operate result information:
-----
1/0           Success         None
2/0           Success         None
< The terminal is unlock >

```

The following example rolls back the patch of the line card in slot 1/0 to the unactivated state.

```

Hostname> enable
Hostname# patch deactivate slot 1/0
< The terminal is lock >
Hostname> enable
Hostname# patch auto-running
< The terminal is lock >
Operating, please wait for a moment
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
-----
Slot          Result          Comment
1/0           Success         None

```

```

< The terminal is unlock >
Patch operation finish!
Operate result information:
-----
1/0          Success      None
< The terminal is unlock >

```

Notifications

When an error is reported during running of the command, the format is the same as that in the above guidelines, and the result is **Fail** or **Skip**. The comments are described as follows:

When a component package file does not exist, the device does not support the entered patch file name, or a patch package is not installed, the following notification will be displayed:

```
Package maybe not exist, please check!
```

When you deactivate an unactivated patch package, the following notification will be displayed (you need to activate a patch package before deactivating it):

```
Package is not activate or running, not allow deactivate!
```

When the device space is insufficient, the following notification will be displayed:

```
No space left on device!
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show patch](#)

1.24 patch delete

Function

Run the **patch delete** command to remove an unactivated patch package and delete the patch information from the database.

Syntax

```
patch delete [ slot { 0 | all } ]
```

Parameter Description

0: Specifies the current device.

all: Specifies all devices. **Command Modes**

Privileged EXEC mode

Default Level

15

Usage Guidelines

When no parameter is set in this command, it is used to delete unactivated patch packages and database information of all the device members from the device.

Examples

The following example removes unactivated patch packages and deletes the patch information from database.

```

Hostname> enable
Hostname# patch delete
< The terminal is lock >
Operating, please wait for a moment
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
-----
Slot          Result          Comment
1/0           Success         None
2/0           Success         None
< The terminal is unlock >

```

The following example removes the unactivated patch package of the line card in slot 1/0 and deletes the patch information from the database.

```

Hostname> enable
Hostname# patch delete slot 1/0
< The terminal is lock >
Operating, please wait for a moment
!!!!!!!!!!!! 20%
!!!!!!!!!!!! 40%
!!!!!!!!!!!! 60%
!!!!!!!!!!!! 80%
!!!!!!!!!!!! 90%
!!!!!!!!!!!! 90%
!!          100%
Patch operation finish!
Operate result information:
-----
Slot          Result          Comment
1/0           Success         None
< The terminal is unlock >

```

Notifications

When an error is reported during running of the command, the format is the same as that in the above guidelines, and the result is **Fail** or **Skip**. The comments are described as follows:

When you run the **patch delete** command for a patch in the activated or confirmed state, the following notification will be displayed:

```
Active or running state not allow remove!
```

When you run the **patch delete** command for a patch not installed, the following notification will be displayed:

```
Package is not exist, please check!
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show patch](#)

1.25 show patch

Function

Run the **show patch** command to display information about the latest patch of the current device.

Syntax

```
show patch
```

Parameter Description

N/A

Command Modes

All modes except the user EXEC mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example displays information about the latest patch of the current device.

```
Hostname# show patch
[Slot 1/0]:
  Patch package SP1 installed in the system, version:5.0.0.0
  -----
Patch      : SP1.bin
```



```

Status      : active
Version     : 5.0.0.0
Size        : 1770
Install time: 2020-07-06 06:59:28
Description : test SP1

[Slot 2/0]:
  Patch package SP1 installed in the system, version:5.0.0.0
  -----
Patch       : SP1.bin
Status      : active
Version     : 5.0.0.0
Size        : 1770
Install time: 2020-07-06 06:59:28
Description : test SP1
    
```

Table 1-1 Output Fields of the show patch Command

Field	Description
Patch	Name of a patch package
Status	Status of the patch package
Version	Version of the patch package
Size	Size of the patch package
Install time	Time when the patch package takes effect
Description	Description of the patch package

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.26 show patch detail

Function

Run the **show patch detail** command to display details about patches of the device.

Syntax

```
show patch detail
```

Parameter Description

N/A

Command Modes

All modes except the user EXEC mode

Default Level

15

Usage Guidelines

N/A

Examples

The following example displays details about patches of the device.

```

Hostname# show patch detail
[Slot 1/0]:
  Patch package SP4 installed in the system, version:5.0.0.4
  -----
  Patch      : SP4.bin
  Status     : active
  Version    : 5.0.0.4
  Size       : 5248
  Install time: 1970-05-29 15:43:27
  Description : test SP4
  Flag       : Hot
  Last patch  : SP1
  Include    : rf_test6; rf_test7; rf_test8; rf_test5;

```

Table 1-1 Output Fields of the show patch detail Command

Field	Description
Patch	Name of a patch package
Version	Version of the patch package
Size	Size of the patch package
Install time	Activation time of the patch package

Field	Description
Description	Description of the patch package
Flag	Whether the patch is a hot patch or cold patch <ul style="list-style-type: none">● Hot: Hot patch● Cold: Cold patch
Last patch	Name of the patch package of the last version
Include	Files included in the patch package

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A