



Bundled Image Upgrade

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The Cisco RF Gateway 10 (RFGW-10) is a Carrier Class Universal Edge Quadrature Amplitude Modulation (UEQAM) chassis that supports line cards, field-programmable gate arrays (FPGAs), complex programmable logic devices (CPLDs), and Supervisor cards. These devices can be upgraded to newer software or firmware versions.

Finding Feature Information

Your software release may not support all the features documented in this module. For the latest feature information and caveats, see the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the [“Feature Information for Bundled Image Upgrade”](#) section on page 55.

Use Cisco Feature Navigator to find information about platform support and Cisco IOS, Catalyst OS, and Cisco IOS XE software image support. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>. An account on Cisco.com is not required.

Contents

- [Automated Bundled Image Upgrade, page 52](#)
- [How to Upgrade the Line Card Image from the Bundle Image, page 52](#)
- [Additional References, page 54](#)
- [Command Reference, page 55](#)
- [Feature Information for Bundled Image Upgrade, page 55](#)
- [Glossary, page 56](#)

Automated Bundled Image Upgrade

When the system boots up with the Supervisor image bundled with all the device images, the Supervisor card automatically compares the current versions of the software and firmware on all the line card devices. If the Supervisor identifies a device version that is not the same as what is currently bundled in its image, it delivers the device image to the line card and the line card upgrades the device. The user need not to perform any upgrade operations.

How to Upgrade the Line Card Image from the Bundle Image

**Note**

When upgrading the old DS384 line card, it may take longer time due to the extra upgrade process dedicate for PERM QNX.

To perform image upgrade on individual line cards manually, the user needs to configure the "service internal" first. Under the service internal mode, one can perform the upgrades and inspect the upgrade status with the following procedures.

In all Cisco IOS releases prior to 3.2.0SQ, **service internal** is required for disabling automatic image upgrade of the line card. In Cisco IOS Release 3.2.0SQ and later releases, **service internal** is not required.

- [Configuring Line Card Image Upgrade, page 52](#)
- [Displaying the Upgrade Status of a Line Card, page 52](#)
- [Displaying All the Device Image Versions, page 53](#)
- [Displaying the Upgraded Images of All the Devices on the Supervisor, page 53](#)

Configuring Line Card Image Upgrade

In Cisco IOS Release 3.2.0SQ and later releases, the user need not configure the **no service internal** command for the automatic image upgrade of the line card. The default **no cable image-upgrade disable** command is enabled on the Cisco RFGW-10 for automatic image upgrade of line cards.

To perform automatic image upgrade of the line card, use the **no cable image-upgrade disable** command in global configuration mode:

```
Router(config)# no cable image-upgrade disable
Router(config)#
```

To disable automatic image upgrade use the **cable image-upgrade disable** command.

Displaying the Upgrade Status of a Line Card

To display the upgrade status (number of bytes transferred, and so on) for a line card, use the following command in privileged EXEC mode:

```
Router# show cable image-upgrade status [slot]
```

The following example displays the upgrade status for the line card in slot 12:

```
Router# show cable image-upgrade status 12
No current image upgrade is occurring on slot 12
```

Displaying All the Device Image Versions

To display all the device image versions programmed on the FLASH of the line card, use the following command in privileged EXEC mode:

```
Router# show cable image-upgrade version [slot]
```

The following is sample output for the **cable image-upgrade version 3** command in privileged EXEC mode:

```
Router# show cable image-upgrade version 3
Image Name                               Id  Date      Time
=====
MV_APP_00000011_20080811-00144650      11  20080811  00144650
MV_ROM_00000012_20080605-00074654      12  20080605  00074654
MV_DIS_00000013_20080603-00151016      13  20080603  00151016
MV_COB_00000014_20080609-00205712      14  20080609  00205712
MV_YEL_00000015_20080609-00205659      15  20080609  00205659
MV_GWT_00000016_20080717-00162446      16  20080717  00162446
```

Displaying the Upgraded Images of All the Devices on the Supervisor

To display the bundled images of all the devices, use the following command in user EXEC or privileged EXEC mode:

```
Router# show cable image-upgrade bundle
```

The following is sample output for the **show cable image-upgrade bundle** command in privileged EXEC mode:

```
Router# show cable image-upgrade bundle
Image Name                               Id  Date      Time
=====
TCC_APP_00000000_20080811-00144654      00  20080811  00144654
TCC_ROM_00000001_20080317-00170141      01  20080317  00170141
TCC_GEN_00000002_20080612-00140709      02  20080612  00140709
TCC_DTI_00000003_20080428-00094708      03  20080428  00094708
TCC_RST_00000004_20080612-00140712      04  20080612  00140712
RFS_CPL_00000005_20080428-00105357      05  20080428  00105357
MV_APP_00000011_20080811-00144650      11  20080811  00144650
MV_ROM_00000012_20080605-00074654      12  20080605  00074654
MV_DIS_00000013_20080603-00151016      13  20080603  00151016
MV_COB_00000014_20080609-00205712      14  20080609  00205712
MV_YEL_00000015_20080609-00205659      15  20080609  00205659
MV_GWT_00000016_20080717-00162446      16  20080717  00162446
RFGW_GUI_00000017_20080603-00114822     17  20080603  00114822
```

Additional References

The following sections provide references related to Bundled Image Upgrade feature.

Related Documents

Related Topic	Document Title
Cisco RFGW-10 commands	Cisco RF Gateway 10 Command Reference http://www.cisco.com/en/US/docs/cable/rf_gateway/command/reference/RFGW-10_Book.html
New Software Features in Cisco IOS Release 12.2SQ	Cisco RF Gateway 10 Software Feature and Configuration Guide http://www.cisco.com/en/US/docs/cable/rf_gateway/feature/guide/rfgw_scg.html

Standards

Standard	Title
No new or modified standards are supported by this feature, and support for existing standards has not been modified by this feature.	—

MIBs

MIB	MIBs Link
No new or modified MIBs are supported by this feature, and support for existing MIBs has not been modified by this feature.	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

RFCs

RFC	Title
No new or modified RFCs are supported by this feature, and support for existing RFCs has not been modified by this feature.	—

Technical Assistance

Description	Link
The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies. To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds. Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.	http://www.cisco.com/techsupport

Command Reference

The following commands are introduced or modified in the feature or features documented in this module. For information about these commands, see the *Cisco RF Gateway 10 Command Reference* at http://www.cisco.com/en/US/docs/cable/rf_gateway/command/reference/RFGW-10_Book.html. For information about all Cisco IOS commands, use the Command Lookup Tool at <http://tools.cisco.com/Support/CLILookup> or the *Cisco IOS Master Command List, All Releases*, at http://www.cisco.com/en/US/docs/ios/mcl/allreleasemcl/all_book.html.

- **show cable image-upgrade status** [*slot*]
- **show cable image-upgrade version** [*slot*]
- **show cable image-upgrade bundle**

Feature Information for Bundled Image Upgrade

Table 1 lists the release history for this feature.

Not all commands may be available in your Cisco IOS software release. For release information about a specific command, see the command reference documentation.

Use Cisco Feature Navigator to find information about platform support and software image support. Cisco Feature Navigator enables you to determine which Cisco IOS, Catalyst OS, and Cisco IOS XE software images support a specific software release, feature set, or platform. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>. An account on Cisco.com is not required.



Note

Table 1 lists only the Cisco IOS software release that introduced support for a given feature in a given Cisco IOS software release train. Unless noted otherwise, subsequent releases of that Cisco IOS software release train also support that feature.

Table 1 Feature Information for Bundled Image Upgrade

Feature Name	Releases	Feature Information
Bundled Image Upgrade	12.2(44)SQ	This feature was introduced in the Cisco IOS Release 12.2(44)SQ to support the Cisco RF Gateway 10. The following commands were introduced or modified: • show cable image-upgrade status [<i>slot</i>] • show cable image-upgrade version [<i>slot</i>] • show cable image-upgrade bundle

Glossary

CPLD—Complex Programmable Logic Device

EQAM—Edge Quadrature Amplitude Modulation. A network element, which receives MPEG-TS frames over a network interface such as Ethernet, and modulates them onto QAM carriers for use on an HFC plant.

FPGA—Field-Programmable Gate Array

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