



Cisco 7500 Single Line Card Reload

Feature History

Release	Modification
12.0(13)S	This feature was introduced.
12.1(5)T	This feature was integrated into Cisco IOS Release 12.1(5) T.
12.1(5a)E	This feature was integrated into Cisco IOS Release 12.1(5a)E
12.2(14)S	This feature was integrated into Cisco IOS Release 12.2 (14)S

This document describes the Cisco 7500 Single Line Card Reload feature in Cisco IOS Release 12.0(13)S, 12.1(5)T, 12.1(5a)E, and 12.2(14)S and contains the following sections:

- [Feature Overview, page 1](#)
- [Supported Platforms, page 2](#)
- [Supported Standards, MIBs, and RFCs, page 3](#)
- [Configuration Tasks, page 3](#)
- [Monitoring and Maintaining Single Line Card Reloading, page 5](#)
- [Configuration Examples, page 5](#)
- [Command Reference, page 5](#)
- [Glossary, page 7](#)

Feature Overview

Before the introduction of the Cisco 7500 Single Line Card Reload feature, the only method of correcting a line card hardware failure or a severe software error for one line card on a Cisco 7500 series router required the execution of a Cbus Complex, a process that reloaded every line card on the network backplane. The time taken to complete the Cbus Complex was often inconvenient, and no network traffic could be routed or switched during the Cbus Complex process.

The Cisco 7500 Single Line Card Reload feature allows users to correct a line card failure on a Cisco 7500 series router by automatically reloading the microcode on a failed line card. During the single line card reload process, all physical lines and routing protocols on the other line cards of the network backplane remain active. A single line card reload is also substantially faster than the Cbus Complex process.

The Cisco 7500 Single Line Card Reload feature works on all rsp images for all Cisco IOS releases that support the Cisco 7500 Single Line Card Reload feature.

Benefits

Improved Line Card Recovery Time

The time required to correct a line card hardware failure for one line card is substantially improved when the Cisco 7500 Single Line Card Reload feature is enabled. The entire system, which now reloads only one line card instead of every line card, also experiences a dramatic improvement in recovery time.

Network Traffic Flow Improvements

Because the Cisco 7500 Single Line Card Reload feature reloads only the line card with the hardware failure rather than all of the line cards on the Cisco 7500 network backplane, the active line cards can continue to forward network traffic.

Related Documents

- [Cisco IOS Switching Services Command Reference](#), Release 12.2
- [Cisco IOS Switching Services Configuration Guide](#), Release 12.2

Supported Platforms

This feature is supported on Versatile Interface Processor (VIP)-enabled and non-VIP-enabled Cisco 7500 series routers.

Determining Platform Support Through Cisco Feature Navigator

Cisco IOS software is packaged in feature sets that are supported on specific platforms. To get updated information regarding platform support for this feature, access Cisco Feature Navigator. Cisco Feature Navigator dynamically updates the list of supported platforms as new platform support is added for the feature.

Cisco Feature Navigator is a web-based tool that enables you to determine which Cisco IOS software images support a specific set of features and which features are supported in a specific Cisco IOS image. You can search by feature or release. Under the release section, you can compare releases side by side to display both the features unique to each software release and the features in common.

To access Cisco Feature Navigator, you must have an account on Cisco.com. If you have forgotten or lost your account information, send a blank e-mail to cco-locksmith@cisco.com. An automatic check will verify that your e-mail address is registered with Cisco.com. If the check is successful, account details with a new random password will be e-mailed to you. Qualified users can establish an account on Cisco.com by following the directions found at this URL:

<http://www.cisco.com/register>

Cisco Feature Navigator is updated regularly when major Cisco IOS software releases and technology releases occur. For the most current information, go to the Cisco Feature Navigator home page at the following URL:

<http://www.cisco.com/go/fn>

Availability of Cisco IOS Software Images

Platform support for particular Cisco IOS software releases is dependent on the availability of the software images for those platforms. Software images for some platforms may be deferred, delayed, or changed without prior notice. For updated information about platform support and availability of software images for each Cisco IOS software release, refer to the online release notes or, if supported, Cisco Feature Navigator.

Supported Standards, MIBs, and RFCs

Standards

No new or modified standards are supported by this feature.

MIBs

No new or modified MIBs are supported 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://tools.cisco.com/ITDIT/MIBS/servlet/index>

If Cisco MIB Locator does not support the MIB information that you need, you can also obtain a list of supported MIBs and download MIBs from the Cisco MIBs page at the following URL:

<http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml>

To access Cisco MIB Locator, you must have an account on Cisco.com. If you have forgotten or lost your account information, send a blank e-mail to cco-locksmith@cisco.com. An automatic check will verify that your e-mail address is registered with Cisco.com. If the check is successful, account details with a new random password will be e-mailed to you. Qualified users can establish an account on Cisco.com by following the directions found at this URL:

<http://www.cisco.com/register>

RFCs

No new or modified RFCs are supported by this feature.

Configuration Tasks

See the following sections for configuration tasks for the Cisco 7500 Single Line Card Reload feature. Each task in the list is identified as either required or optional.

- [Configuring Cisco 7500 Single Line Card Reloading](#) (required)
- [Disabling Cisco 7500 Single Line Card Reloading](#) (optional)
- [Verifying Cisco 7500 Single Line Card Reloading](#) (optional)

Configuring Cisco 7500 Single Line Card Reloading

To enable the Cisco 7500 Single Line Card Reload feature, use the **service single-slot-reload-enable** command in global configuration mode on the Cisco 7500 series router.

Command	Purpose
Router(config)# service single-slot-reload-enable	Enables single line card reloading for all of the line cards in the Cisco 7500 series router.

Disabling Cisco 7500 Single Line Card Reloading

The Cisco 7500 Single Line Card Reload feature is disabled by default. Disabling the Cisco 7500 Single Line Card Reload feature is necessary only if the Cisco 7500 Single Line Card Reload feature has been enabled by the user.

To disable the Cisco 7500 Single Line Card Reload feature, use the **no service single-slot-reload-enable** command in global configuration mode on the Cisco 7500 series router.

Command	Purpose
Router(config)# no service single-slot-reload-enable	Disables single line card reloading for all of the line cards in the Cisco 7500 series router.

Verifying Cisco 7500 Single Line Card Reloading

Use the **show running-config** command to verify that single line card reloading has been enabled on the Cisco 7500 series router. If the “service single-slot-reload-enable” line appears in the command output, the Cisco 7500 Single Line Card Reloading feature is enabled. If this line does not appear in the command output, the Cisco 7500 Single Line Card Reloading feature is disabled.

```
Router# show running-config
```

```
Building configuration...
```

```
Current configuration :3166 bytes
```

```
!
version 12.2
no parser cache
service single-slot-reload-enable <Indicates Single Line Card Reloading is enabled.>
no service pad
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
service udp-small-servers
service tcp-small-servers
```

Monitoring and Maintaining Single Line Card Reloading

Command	Purpose
Router# <code>show diag</code>	Displays hardware information on line cards, including the history of line card reloads.

Configuration Examples

This section provides the following configuration examples:

- [Enabling Single Line Card Reloading](#)
- [Disabling Single Line Card Reloading](#)

Enabling Single Line Card Reloading

In the following example, single line card reloading is enabled for all line cards in the Cisco 7500 series router:

```
Router(config)# service single-slot-reload-enable
```

Disabling Single Line Card Reloading

In the following example, single line card reloading is disabled for all line cards in the Cisco 7500 series router:

```
Router(config)# no service single-slot-reload-enable
```

Command Reference

This section documents the [service single-slot-reload-enable](#) command that configures the Cisco 7500 Single Line Card Reload feature.

service single-slot-reload-enable

To enable single line card reloading for all line cards in the Cisco 7500 series router, use the **service single-slot-reload-enable** command in global configuration mode. To disable single line card reloading for the line cards in the Cisco 7500 series router, use the **no** form of this command.

service single-slot-reload-enable

no service single-slot-reload-enable

Syntax Description This command has no arguments or keywords.

Defaults Single line card reloading is disabled by default.

Command Modes Global configuration

Command History	Release	Modification
	12.0(13)S	This command was introduced.
	12.1(5)T	This command was integrated into Cisco IOS Release 12.1(5)T.
	12.1(5a)E	This command was integrated into Cisco IOS Release 12.1(5a)E.
	12.2(14)S	This command was integrated into Cisco IOS Release 12.2(14)S.

Examples In the following example, single line card reloading is enabled for all lines cards on the Cisco 7500 series router:

```
Router(config)# service single-slot-reload-enable
```

Related Commands	Command	Description
	show running-config	Displays configuration information.
	show diag	Displays hardware information on line cards.

Glossary

line card—Any I/O card that can be inserted in a modular chassis.

OIR—online insertion and removal. Feature that permits the addition, replacement, or removal of cards without interrupting the system power, entering console commands, or causing other software or interfaces to shut down. Sometimes called hot swapping or power-on servicing.

