



Cisco 7500 Single Line Card Reload

This feature module details the Cisco 7500 Single Line Card Reload feature. This feature module contains the following sections:

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Feature Overview

Table 1 Feature History

Cisco IOS Release	Enhancement
12.0(13)S	This feature was introduced.
12.1(5)T	This command was introduced for Cisco IOS Release 12.1 T.

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 significantly 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 significantly improved when the Cisco 7500 Single Line Card Reload feature is enabled. The entire system, which now only reloads 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 only reloads 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.

Supported Platforms

This feature is supported on VIP-enabled and non-VIP-enabled Cisco 7500 series routers.

Supported Standards, MIBs, and RFCs

Standards

None

MIBs

None

For descriptions of supported MIBs and how to use MIBs, see the Cisco MIB web site on CCO at <http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml>.

RFCs

None

Configuration Tasks

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

- Configuring Cisco 7500 Single Line Card Reloading
- Disabling Cisco 7500 Single Line Card Reloading

Configuring Cisco 7500 Single Line Card Reloading

To enable the Cisco 7500 Single Line Card Reloading feature, enter the **service single-slot-reload-enable** configuration command 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 Reloading feature is disabled by default. Therefore, the process for disabling the Cisco 7500 Single Line Card Reloading feature is only necessary if the Cisco 7500 Single Line Card Reloading feature has been enabled by the user on the Cisco 7500 series router.

To disable the Cisco 7500 Single Line Card feature, enter the **no service single-slot-reload-enable** configuration command 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 successfully enabled on the Cisco 7500 series router. If the “service single-slot-reload-enable” line appears in the command output, Cisco 7500 Single Line Card Reloading is enabled. If this line does not appear in the command output, Cisco 7500 Single Line Card Reloading is disabled.

Troubleshooting Tips

The **debug oir** command is used to debug the online insertion and removal (OIR) feature (which is also known as hot-swapping or power-on servicing). The **debug oir** command is often useful in debugging problems related to OIR, include single line card reloading.

Monitoring and Maintaining Single Line Card Reloading

Command	Purpose
Router# show diag	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 lines 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 new command that configures the Cisco 7500 Series 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** configuration command. 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	single-slot-reload-enable (Required) Specifies single line card reloading for all line cards in the router.
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Defaults	Single line card reloading is disabled by default.
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Command Modes	Global Configuration mode
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Command History	Release	Modification
	12.0(13)S	This command was introduced.
12.1(5)T	This command was introduced on Cisco IOS Release 12.1 T.	

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