Postswitchover Core Dump

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History for the Postswitchover Core Dump Feature

Release	Modification
12.0(18)ST	This feature was introduced.
12.0(22)S	This feature was integrated into Cisco IOS Release 12.0(22)S.
12.2(28)SB	This feature was integrated into Cisco IOS Release 12.2(28)SB.

Finding Support Information for Platforms and Cisco IOS Software Images

Use Cisco Feature Navigator to find information about platform support and Cisco IOS software image support. Access Cisco Feature Navigator at http://www.cisco.com/go/fn. You must have an account on Cisco.com. If you do not have an account or have forgotten your username or password, click **Cancel** at the login dialog box and follow the instructions that appear.

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Feature Overview

When a Route Processor (RP) crashes, it is sometimes useful to obtain a full copy of the memory image (called a core dump) to identify the cause of the crash. (Not all crash types will produce a core dump.)

In networking devices that support redundant RPs, one processor acts as the active processor while the other processor acts as the standby processor. In the event of a crash, the standby processor switches over to become the active processor. The Postswitchover Core Dump feature allows the newly active processor to complete the switchover process before writing the core dump information from the previously active processor to a preconfigured file.

Core dumps are generally useful only to your technical support representative. The core dump file, which is a very large binary file, must be transferred using the TFTP, FTP, or remote copy protocol (rcp) server and subsequently interpreted by your Cisco Technical Assistance Center (TAC) representative who has access to source code and detailed memory maps.

The Postswitchover Core Dump feature does not introduce any new commands and uses existing **exception** commands to configure dump parameters in the configuration file. It does, however, identify a specific processor core dump for a networking device with redundant processors by appending a processor slot number at the end of the core dump filename.

Caution Use the **exception** commands only under the direction of a Cisco TAC representative. Creating a core dump while the networking device is functioning in a network can disrupt network operation.

Benefits

Decreases Switchover Time

In networking devices with redundant processors, the Postswitchover Core Dump feature uses better software communication techniques between redundant processors to allow the switchover to occur before dumping core information. Not having to wait for dump operations effectively decreases the switchover time between processors. The newly active primary processor runs the core dump operation after switchover.

Restrictions

Restrictions or limitations previously associated with the **exception** commands still apply.

The Cisco IOS software image on the newly active processor must be compatible (12.0(18)ST or a later release) with the software running on the previously active processor.

You can configure a networking device to use any of four different methods to generate a core dump: TFTP, FTP, rcp, and Flash disk. Of these protocols, rcp is not recommended due to its slower transfer rate.

Related Features and Technologies

No new commands or configuration tasks were implemented for this feature. For information on how to configure the networking device for a core dump, refer to “Troubleshooting the Router” in the “System Management” part of the *Cisco IOS Configuration Fundamentals Configuration Guide,* Release 12.2.

Prerequisites

Redundant RPs must be running Cisco IOS Release 12.0(18)ST or a later release.

Configuration Tasks

None.

No new commands or configuration tasks were implemented for this feature. Refer to "Troubleshooting the Router" in the "System Management" part of the *Cisco IOS Configuration Fundamentals Configuration Guide,* Release 12.2, for information on how to configure the networking device for a core dump.

Verifying Postswitchover Core Dump

Step 1 Configure the networking device to perform a core dump following a processor failure. For information on how to configure the networking device for a core dump, refer to "Troubleshooting the Router" in the "System Management" part of the *Cisco IOS Configuration Fundamentals Configuration Guide,* Release 12.2.

Step 2 Contact your Cisco TAC representative to assist you in generating a core dump file.

Step 3 Verify that the core dump file was written to the preconfigured location and that it has the same filename that was configured on the networking device. Confirm that the core dump file is appended with the slot number of the previously active processor.

Troubleshooting Tips

The Core Dump Process Appears Slow

Check that the software images running on the processors are compatible. If for any reason the Cisco IOS software image on the newly active processor is incompatible with the software image running on the previously active processor, the Postswitchover Core Dump feature will not use the newly active processor for dumping the system core information. Instead, the failed processor will use existing processes for writing the core file to Flash memory or to a network file; however, this method will slow down the switchover process. Contact your Cisco TAC representative for assistance.

The Core Dump File Is Missing

If the Cisco software image on the newly active processor software is compatible with the software running on the previously active processor, but the processor-to-processor communication is not successful, the core dump information will not be written to a file. Contact your Cisco TAC representative for assistance.

Line Card Dump Information Is Taking a Long Time

If the networking device experiences one or more line card failures at the same time that the newly active primary processor is writing the core dump information from the failed primary processor, the line card information will be written to a file; however, this process might take more time than for a failed RP alone. Contact your Cisco TAC representative for assistance.

Configuring rcp Transfer Appears to Slow Down the Switchover

You can configure a networking device to use any of four different methods to generate a core dump: TFTP, FTP, rcp, and Flash disk. Of these protocols, rcp is not recommended due to its slower transfer rate.

The Slot Number Is Not Appended to the Dump File

The Postswitchover Core Dump feature adds the slot number to the core dump file to identify which processor generated the file content. If the slot number is not appended to the filename, it could indicate that either the processors are not communicating or the software images running on the processors are incompatible. Contact your Cisco TAC representative for assistance.

Configuration Examples

None.

No new commands or configuration tasks were implemented for this feature. For information on how to configure the networking device for a core dump, refer to "Troubleshooting the Router" in the "System Management" part of the *Cisco IOS Configuration Fundamentals Configuration Guide*, Release 12.2.

Additional References

The following sections provide references related to Postswitchover Core Dump.

Related Documents

Related Topic	Document Title
Cisco IOS configuration fundamentals	• *Cisco IOS Configuration Fundamentals Configuration Guide*, Release 12.2 • *Cisco IOS Configuration Fundamentals Command Reference*, Release 12.2

Standards

Standard	Title
None	—

MIBs

MIB	MIBs Link
None	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
None	—

Technical Assistance

Description	Link
The Cisco Technical Support & Documentation website contains thousands of pages of searchable technical content, including links to products, technologies, solutions, technical tips, and tools. Registered Cisco.com users can log in from this page to access even more content.	http://www.cisco.com/techsupport

Command Reference

This feature uses no new or modified commands.