



Stateful Switchover Between Redundancy Paired Intra- or Inter-box Devices

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Stateful switchover provides protection for network edge devices with dual Route Processors (RPs) that represent a single point of failure in the network design, and where an outage might result in loss of service for customers.

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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 Table at the end of this document.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Prerequisites for Stateful Switchover Between Redundancy Paired Intra- or Inter-box Devices



Americas Headquarters:
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

Cisco Unified Border Element (Enterprise)

- Cisco IOS XE Release 3.2 or a later release must be installed and running on your Cisco ASR 1000 Series Router.

Cisco Unified Border Element

- Cisco IOS Release 15.2(3)T or a later release must be installed and running on your Cisco Unified Border Element.

Restrictions for Stateful Switchover Between Redundancy Paired Intra- or Inter-box Devices

- Transcoding calls are not checkpointed: when failover happens; these calls will not be persevered. The expected behavior is for the SPA card to reset the DSPs and start the firmware download.

Information About Stateful Switchover Between Redundancy Paired Intra- or Inter-box Devices

In specific Cisco networking devices that support dual RPs, stateful switchover takes advantage of Route Processor redundancy to increase network availability. When two route processors (RPs) are installed, one RP acts as the active RP, and the other acts as a backup, or standby RP. Following an initial synchronization between the two processors if the active RP fails, or is manually taken down for maintenance or removed, the standby RP detects the failure and initiates a switchover. During a switchover, the standby RP assumes control of the router, connects with the network interfaces, and activates the local network management interface and system console. Stateful switchover dynamically maintains Route Processor state information between them.

The following conditions and restrictions apply to the current implementation of SSO:

- Calls that are handled by nondefault session application (TCL/VXML) will not be checkpointed prebridge.
- Calls that require a DSP to be inserted (for example: Transcoded Calls) will not be checkpointed.
- Flow-through calls whose state has not been accurately checkpointed will be cleared with media inactivity-based clean up. This condition could occur if active failure happens when:
 - Some check point data has not yet been sent to the standby.
 - The call leg was in the middle of a transaction.
 - Flow around calls whose state has not been accurately checkpointed (due to either of the reasons mentioned above) can be cleared with the **clear call voice causecode** command.

For more information about the Stateful Switchover feature and for detailed procedures for enabling this feature, see the "Configuring Stateful Switchover" chapter of the Cisco IOS High Availability Configuration Guide, Release 12.2SR

Feature Information for Stateful Switchover Between Redundancy Paired Intra- or Inter-box Devices

Table 1 *Feature Information for Stateful Switchover Between Redundancy Paired Intra- or Inter-box Devices on the Cisco Unified Border Element (Enterprise)*

Feature Name	Releases	Feature Information
Stateful Switchover Between Redundancy Paired Intra or Inter-box Devices	Cisco IOS XE Release 3.2S	Provides protection for network edge devices with dual Route Processors (RPs) that represent a single point of failure in the network design, and where an outage might result in loss of service for customers. The following commands were introduced or modified: None.

Table 2 *Feature Information for Stateful Switchover Between Redundancy Paired Intra- or Inter-box Devices on the Cisco Unified Border Element*

Feature Name	Releases	Feature Information
Stateful Switchover Between Redundancy Paired Intra or Inter-box Devices	Cisco IOS Release 15.2(3)T	Provides protection for network edge devices with dual Route Processors (RPs) that represent a single point of failure in the network design, and where an outage might result in loss of service for customers. The following commands were introduced or modified: None.

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