



ISSU—IS-IS

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Intermediate System-to-Intermediate System (IS-IS) supports In Service Software Upgrade (ISSU). This document explains how to enable ISSU for IS-IS.

The In Service Software Upgrade (ISSU) process allows Cisco IOS software to be updated or otherwise modified while packet forwarding continues. In most networks, planned software upgrades are a significant cause of downtime. ISSU allows Cisco IOS software to be modified while packet forwarding continues, which increases network availability and reduces downtime caused by planned software upgrades.

Finding Feature Information in This Module

Your Cisco IOS software release may not support all of the features documented in this module. To reach links to specific feature documentation in this module and to see a list of the releases in which each feature is supported, use the [“Feature Information for IS-IS Support for ISSU”](#) section on page 7.

Finding Support Information for Platforms and Cisco IOS and Catalyst OS Software Images

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

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Prerequisites for Enabling IS-IS Support for ISSU

- IS-IS must be configured on the router.
- Stateful Switchover (SSO) must be configured and working properly. See the [Stateful Switchover](#) feature documentation for more information.

Information About IS-IS Support for ISSU

This section describes the following concept:

- [ISSU, page 2](#)

ISSU

Before enabling IS-IS support for ISSU, you should understand the concepts and configuration tasks for ISSU. The ISSU process allows Cisco IOS software to be updated or otherwise modified while packet forwarding continues. In most networks, planned software upgrades are a significant cause of downtime. ISSU allows Cisco IOS software to be modified while packet forwarding continues, which increases network availability and reduces downtime caused by planned software upgrades. See the [Cisco IOS In Service Software Upgrade Process](#) feature documentation for more information.

How to Configure IS-IS Support for ISSU

This section contains the following task:

- [Enabling IS-IS Support for ISSU, page 3](#)

Enabling IS-IS Support for ISSU

ISSU is enabled by default when you configure Cisco Nonstop Forwarding (NSF).

SUMMARY STEPS

1. `enable`
2. `configure terminal`
3. `router isis area-tag`
4. `nsf cisco [enforce global]`
5. `end`
6. `show issu comp-matrix`

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none">Enter your password if prompted.
Step 2	configure terminal Example: Router# configure terminal	Enters global configuration mode.
Step 3	router isis area-tag Example: Router(config)# router isis tag4	Enables the IS-IS routing protocol and specifies an IS-IS process.
Step 4	nsf cisco [enforce global] Example: Router(config-router)# nsf cisco	Enables Cisco NSF operations on a router.
Step 5	end Example: Router(config-router)# end	Returns to privileged EXEC mode.
Step 6	show issu comp-matrix {negotiated stored} Example: Router# show issu comp-matrix negotiated include ISIS	Displays information regarding the ISSU compatibility matrix. <ul style="list-style-type: none">Entering include ISIS specifies that the command output displayed will be limited to only those lines that include ISIS.

Configuration Examples for IS-IS Support for ISSU

This section contains the following example:

- [Configuring IS-IS Support for ISSU: Example, page 4](#)

Configuring IS-IS Support for ISSU: Example

The following example configures an IS-IS network with RouterA and RouterB. IS-IS support for ISSU is configured on RouterB.

```
RouterA# configure terminal
RouterA(config)# interface Loopback 0
RouterA(config-if)# ip address 10.1.1.129 255.255.255.192
RouterA(config-if)# exit
RouterA(config-if)# interface Loopback 1
RouterA(config-if)# ip address 10.1.1.123 255.255.255.192
RouterA(config-if)# exit
```

```

RouterA(config)# interface Ethernet2/1
RouterA(config-if)# ip address 172.16.1.1 255.255.0.0
RouterA(config-if)# ip router isis
RouterA(config-if)# no shutdown
RouterA(config-if)# exit
RouterA(config-if)# router isis
RouterA(config-router)# hostname dynamic
RouterA(config-router)# net 49.0001.000a.0000.0000.00
RouterA(config-router)# passive-interface Loopback 0
RouterA(config-router)# passive-interface Loopback 1
RouterA(config-router)# end

RouterB# configure terminal
RouterB(config)# interface Loopback0
RouterB(config-if)# ip address 10.1.1.120 255.255.255.192
RouterB(config-if)# exit
RouterB(config-if)# interface Loopback1
RouterB(config-if)# ip address 10.1.1.119 255.255.255.192
RouterA(config-if)# exit
RouterB(config-if)# ip router isis
RouterB(config-if)# interface GigabitEthernet1/11
RouterB(config-if)# ip address 172.16.1.4 255.255.0.0
RouterB(config-if)# ip router isis
RouterB(config-if)# isis priority 100
RouterB(config-if)# no shutdown
RouterA(config-if)# exit
RouterB(config)# router isis
RouterB(config-router)# net 49.0001.000b.0000.0000.00
RouterB(config-router)# nsf cisco
RouterB(config-router)# passive-interface Loopback0
RouterB(config-router)# end

```

Entering the **show issu comp-matrix** command verifies that IS-IS support for ISSU has been enabled on RouterB:

```

RouterB# show issu comp-matrix negotiated | include ISIS

2058      ISIS ISSU RTR client      Non-Base
2059      ISIS ISSU UPD client      Non-Base

```

Additional References

The following sections provide references related to the IS-IS support for ISSU feature.

Related Documents

Related Topic	Document Title
Cisco ISSU	Cisco IOS In Service Software Upgrade Process
IS-IS commands	Cisco IOS IP Routing Protocols Command Reference , Release 12.4T
IS-IS configuration	Cisco IOS IP Routing Protocols Configuration Guide , Release 12.4
SSO configuration	“Stateful Switchover”

Standards

Standard	Title
None	—

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
<p>The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies.</p> <p>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.</p> <p>Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.</p>	http://www.cisco.com/techsupport

Command Reference

This feature uses no new or modified commands.

Feature Information for IS-IS Support for ISSU

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 and Catalyst OS 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 IS-IS Support for ISSU

Feature Name	Releases	Feature Information
ISSU—IS-IS	12.2(31)SB2 12.2(33)SRB1	Intermediate System-to-Intermediate System (IS-IS) supports In Service Software Upgrade (ISSU). This document explains how to enable ISSU for IS-IS. The In Service Software Upgrade (ISSU) process allows Cisco IOS software to be updated or otherwise modified while packet forwarding continues. In most networks, planned software upgrades are a significant cause of downtime. ISSU allows Cisco IOS software to be modified while packet forwarding continues, which increases network availability and reduces downtime caused by planned software upgrades.

Glossary

ISSU—In Service Software Upgrade. ISSU is a process that allows Cisco IOS software to be updated or otherwise modified while packet forwarding continues.

SSO—Stateful Switchover. SSO refers to the implementation of Cisco IOS software that allows applications and features to maintain a defined state between an active and standby RP. When a switchover occurs, forwarding and sessions are maintained. SSO makes an RP failure undetectable to the network.

**Note**

See [Internetworking Terms and Acronyms](#) for terms not included in this glossary.

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