



Integrated IS-IS Protocol Shutdown Support Maintaining Configuration Parameters

This feature allows you to disable the Integrated Intermediate System-to-Intermediate System (IS-IS) protocol at the interface level or at the global IS-IS process level without removing the IS-IS configuration parameters.

History for Integrated IS-IS Protocol Shutdown Support Maintaining Configuration Parameters

Release	Modification
12.3(4)T	This feature was introduced.
12.0(27)S	This feature was integrated into Cisco IOS Release 12.0(27)S.
12.2(25)S	This feature was integrated into Cisco IOS Release 12.2(25)S.
12.2(18)SXE	This feature was integrated into Cisco IOS Release 12.2(18)SXE.
12.2(27)SBC	This feature was integrated into Cisco IOS Release 12.2(27)SBC.

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Prerequisites for Integrated IS-IS Protocol Shutdown Support Maintaining Configuration Parameters

It is presumed that you have IS-IS configured in your network.

Information About Integrated IS-IS Protocol Shutdown Support Maintaining Configuration Parameters

Before you enable the Integrated IS-IS Protocol Shutdown Support Maintaining Configuration Parameters feature, you should understand the following concept:

- [Benefits of Using the Integrated IS-IS Protocol Shutdown Support Maintaining Configuration Parameters Feature, page 2](#)

Benefits of Using the Integrated IS-IS Protocol Shutdown Support Maintaining Configuration Parameters Feature

Before the introduction of the Integrated IS-IS Protocol Shutdown Support Maintaining Configuration Parameters feature, there was no nondestructive way to disable IS-IS operation. The only way to disable IS-IS at the router level was to issue the **no router isis** command, which removes the IS-IS configuration. At the interface level there are two ways to disable IS-IS operation. You can enter the **no ip router isis** command to either remove IS-IS from the specified interface or you can put the interface into passive mode such that the IP address of the specified interface will still be advertised. In either case, the current IS-IS configuration will be removed.

The Integrated IS-IS Protocol Shutdown Support Maintaining Configuration Parameters feature allows users to set the IS-IS protocol into an administrative state. If the router was rebooted when the protocol was turned off, the protocol would be expected to come back up in the disabled state. When the protocol is set to the administrative state, network administrators are allowed to administratively turn off the operation of the IS-IS protocol without losing the protocol configuration, to make a series of changes to the protocol configuration without having the operation of the protocol transition through intermediate—and perhaps undesirable—states, and then reenabling the protocol at a suitable time.

At the interface level, the feature will disable the operation of the protocol on the interface, no IS-IS protocol data unit (PDU) will be sent out on the specified interface, and the received IS-IS PDU will be discarded. Any existing adjacencies will be removed and no new adjacencies will be formed. A link-state packet (LSP) will rebuild its IS-IS LSP database to remove the IP address of the specified interface.

At the router level, the feature will completely disable the operation of the protocol by internally controlling timers and other variables. However, IS-IS updates and router processes will remain functioning. The LSP database will be cleared, and all IS-IS routes that have been added to the Routing Information Database (RIB) will be removed, and all adjacencies associated with the IS-IS instance will be deleted.

How to Configure Integrated IS-IS Protocol Shutdown Support Maintaining Configuration Parameters

This section contains the following procedures:

- [Shutting Down the IS-IS Protocol in Interface Mode, page 3](#) (optional)
- [Shutting Down the IS-IS Protocol and Maintaining IS-IS Configuration Parameters in Router Mode, page 4](#) (optional)

Shutting Down the IS-IS Protocol in Interface Mode

This task describes how to disable the IS-IS protocol in interface configuration mode so that it will not form adjacencies in the specified interface. The IP address of the specified interface will be placed into the LSP that is generated by the router.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **interface** *type number*
4. **isis protocol shutdown**
5. **end**

DETAILED STEPS

	Command	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	interface <i>type number</i> Example: Router(config)# interface Ethernet 0	Configures an interface and enters interface configuration mode.

	Command	Purpose
Step 4	<code>isis protocol shutdown</code> Example: Router(config-if)# <code>isis protocol shutdown</code>	Disables the IS-IS protocol so that it cannot form adjacencies on a specified interface and places the IP address of the interface into the LSP that is generated by the router.
Step 5	<code>end</code> Example: Router(config-if)# <code>end</code>	(Optional) Saves configuration commands to the running configuration file, exits interface configuration mode, and returns the router to privileged EXEC mode.

Shutting Down the IS-IS Protocol and Maintaining IS-IS Configuration Parameters in Router Mode

This task describes how to disable the IS-IS protocol in router configuration mode so that no adjacencies are formed on any interface and that the IS-IS LSP database is cleared while IS-IS still runs on the router.

SUMMARY STEPS

1. `enable`
2. `configure terminal`
3. `router isis area-tag`
4. `protocol shutdown`
5. `end`

DETAILED STEPS

	Command	Purpose
Step 1	<code>enable</code> Example: Router> <code>enable</code>	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	<code>configure terminal</code> Example: Router# <code>configure terminal</code>	Enters global configuration mode.
Step 3	<code>router isis area-tag</code> Example: Router(config)# <code>router isis 1</code>	Enables the IS-IS routing protocol and specifies an IS-IS process. Enters router configuration mode.

	Command	Purpose
Step 4	protocol shutdown Example: Router(config-router)# protocol shutdown	Prevents IS-IS from forming any adjacency on any interface and clears the IS-IS LSP database, without actually removing the IS-IS configuration.
Step 5	end Example: Router(config-router)# end	(Optional) Saves configuration commands to the running configuration file, exits router configuration mode, and returns to privileged EXEC mode.

Configuration Examples for Integrated IS-IS Protocol Shutdown Support Maintaining Configuration Parameters

This section contains the following configuration examples:

- [Shutting Down the IS-IS Protocol in Interface Mode: Example, page 5](#)
- [Shutting Down the IS-IS Protocol in Router Mode: Example, page 5](#)

Shutting Down the IS-IS Protocol in Interface Mode: Example

The following router output shows that the router has two IS-IS adjacencies:

```
Router# show clns neighbors
```

```
System Id  Interface  SNPA                State  Holdtime  Type      Protocol
first      Et3/1     0002.7dd6.1c21     Up     25        L1L2     IS-IS
second     Et3/2     0004.6d25.c056     Up     29        L1L2     IS-IS
```

When the **isis protocol shutdown** command is entered for Ethernet interface 3/1, the IS-IS protocol will be disabled for the specified interface:

```
Router# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)# interface ethernet3/1
Router(config-if)# isis protocol shutdown
Router(config-if)# end
```

The following router output shows that the adjacency for interface 3/1 has not formed:

```
Router# show clns neighbors
```

```
System Id  Interface  SNPA                State  Holdtime  Type      Protocol
second     Et3/2     0004.6d25.c056     Up     27        L1L2     IS-IS
```

Shutting Down the IS-IS Protocol in Router Mode: Example

The following router output shows that the router has two IS-IS adjacencies:

System Id	Interface	SNPA	State	Holdtime	Type	Protocol
south	Et3/1	0002.7dd6.1c21	Up	29	L1L2	IS-IS
north	Et3/2	0004.6d25.c056	Up	28	L1L2	IS-IS

The **protocol shutdown** command is entered so that IS-IS is disabled and no adjacencies will be formed on any interface:

```
Router# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)# router isis area1
Router(config-router)# protocol shutdown
Router(config-router)# end
```

The following router output now shows that both adjacencies are gone.

System Id	Interface	SNPA	State	Holdtime	Type	Protocol
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When the **no protocol shutdown** command is entered, the adjacencies will again be formed on both interfaces:

```
Router(config)# router isis area1
Router(config-router)# no protocol shutdown
Router(config-router)# end
Router# show clns neighbors
```

System Id	Interface	SNPA	State	Holdtime	Type	Protocol
south	Et3/1	0002.7dd6.1c21	Up	24	L1L2	IS-IS
north	Et3/2	0004.6d25.c056	Up	24	L1L2	IS-IS

Additional References

The following sections provide references related to the Integrated IS-IS Protocol Shutdown Support Maintaining Configuration Parameters feature.

Related Documents

Related Topic	Document Title
IS-IS routing protocol	<ul style="list-style-type: none"> “Integrated IS-IS Commands” chapter in the <i>Cisco IOS IP Command Reference, Volume 2 of 4: Routing Protocols</i>, Release 12.3T “Configuring Integrated IS-IS” chapter in the <i>Cisco IOS IP Configuration Guide</i>

Standards

Standards	Title
None	—

MIBs

MIBs	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

RFCs	Title
None	—

Technical Assistance

Description	Link
The Cisco Technical Support 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 section documents the following modified commands only.

- [isis protocol shutdown](#)
- [protocol shutdown](#)

isis protocol shutdown

To disable the Intermediate System-to-Intermediate System (IS-IS) protocol so that it cannot form adjacencies on a specified interface and place the IP address of the interface into the link-state packet (LSP) that is generated by the router, use the **isis protocol shutdown** command in interface configuration mode. To reenable the IS-IS protocol, use the **no** form of this command.

isis protocol shutdown

no isis protocol shutdown

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes Interface configuration

Command History	Release	Modification
	12.3(4)T	This command was introduced.
	12.2(25)S	This command was intergrated into Cisco IOS Release 12.2(25)S.
	12.2(18)SXE	This command was integrated into Cisco IOS Release 12.2(18)SXE.
	12.2(27)SBC	This command was integrated into Cisco IOS Release 12.2(27)SBC.

Usage Guidelines The **isis protocol shutdown** command allows you to disable the IS-IS protocol for a specified interface without removing the configuration parameters. The IS-IS protocol will not form any adjacencies for the interface for which the **isis protocol shutdown** command has been configured, and the IP address of the interface will be put into the LSP that is generated by the router.

If you do not want IS-IS to form any adjacency on any interface and clear the IS-IS LSP database, you can enter the **protocol shutdown** command.

Examples The following example disables the IS-IS protocol on Ethernet interface 3/1:

```
Router(config)# interface Ethernet 3/1
Router(config-if)# isis protocol shutdown
```

Related Commands	Command	Description
	protocol shutdown	Disables the IS-IS protocol so that it cannot form any adjacency on any interface and clears the IS-IS LSP database.

protocol shutdown

To disable the Intermediate System-to-Intermediate System (IS-IS) protocol so that it cannot form any adjacency on any interface and will clear the IS-IS link-state packet (LSP) database, use the **protocol shutdown** command in router configuration mode. To reenble the IS-IS protocol, use the **no** form of this command.

protocol shutdown

no protocol shutdown

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes Router configuration

Command History

Release	Modification
12.3(4)T	This command was introduced.
12.2(25)S	This command was intergrated into Cisco IOS Release 12.2(25)S.
12.2(18)SXE	This command was integrated into Cisco IOS Release 12.2(18)SXE.
12.2(27)SBC	This command was integrated into Cisco IOS Release 12.2(27)SBC.

Usage Guidelines

The **protocol shutdown** command allows you to disable the IS-IS protocol for a specific routing instance without removing any existing IS-IS configurations parameters. When you enter the **protocol shutdown** command, the IS-IS protocol will continue to run on the router, and you can use the current IS-IS configuration, but IS-IS will not form any adjacencies on any interface, and it will also clear the IS-IS LSP database.

If you want to disable the IS-IS protocol for a specific interface, use the **isis protocol shutdown** command.

Examples

The following example disables the IS-IS protocol for a specific routing instance:

```
Router(config)# router isis area1
Router(config-router)# protocol shutdown
```

Related Commands

Command	Description
isis protocol shutdown	Disables the IS-IS protocol so that it cannot form adjacencies on a specified interface and places the IP address of the interface into the LSP that is generated by the router.

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