



BGP Support for Fast Peering Session Deactivation

The BGP Support for Fast Peering Session Deactivation feature introduces an event driven notification system that allows a Border Gateway Protocol (BGP) process to monitor BGP peering sessions on a per-neighbor basis. This feature improves the response time of BGP to adjacency changes by allowing BGP to detect an adjacency change and deactivate the terminated session in between standard BGP scanning intervals. Enabling this feature improves overall BGP convergence.

Feature History for the BGP Support for Fast Peering Session Deactivation feature

Release	Modification
12.0(29)S	This feature was introduced.
12.3(14)T	This feature was integrated into Cisco IOS Release 12.3(14)T.

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.

Contents

- [Prerequisites for BGP Support for Fast Peering Session Deactivation, page 2](#)
- [Restrictions for BGP Support for Fast Peering Session Deactivation, page 2](#)
- [Information About BGP Support for Fast Peering Session Deactivation, page 2](#)
- [How to Configure Fast Peering Session Deactivation, page 2](#)
- [Configuration Examples for BGP Fast Peering Session Deactivation, page 4](#)
- [Additional References, page 4](#)
- [Command Reference, page 7](#)



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

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Prerequisites for BGP Support for Fast Peering Session Deactivation

This document assumes that BGP is enabled and peering has been established.

Restrictions for BGP Support for Fast Peering Session Deactivation

- This feature is not supported under the IPv6 address family.
- A host route must be available for each peering session that is configured to use BGP fast session deactivation. If a route is aggregated or is an unreachable non-host route (through a loopback interface) but still available to the peer, this feature will not be able to track the route and will be unable to close the session.

Information About BGP Support for Fast Peering Session Deactivation

- [BGP Hold Timer, page 2](#)
- [BGP Fast Peering Session Deactivation, page 2](#)

BGP Hold Timer

By default, the BGP hold timer is set to run every 180 seconds in Cisco IOS software. This timer value is set as default to protect the BGP routing process from instability that can be introduced by peering sessions with other routing protocols. BGP routers typically carry large routing tables, so frequent session resets are not desirable.

BGP Fast Peering Session Deactivation

BGP fast peering session deactivation improves BGP convergence and response time to adjacency changes with BGP neighbors. This feature is event driven and configured on a per-neighbor basis. When this feature is enabled, BGP will monitor the peering session with the specified neighbor. Adjacency changes are detected and terminated peering sessions are deactivated in between the default or configured BGP scanning interval.

How to Configure Fast Peering Session Deactivation

This section contains the following task:

- [Configuring Fast Session Deactivation for a BGP Neighbor, page 3](#)

Configuring Fast Session Deactivation for a BGP Neighbor

The **neighbor fall-over** command was introduced to support BGP fast session deactivation.

Aggressively Dampen IGP Routes

Enabling this feature can significantly improve BGP convergence time. However, unstable Interior Gateway Protocol (IGP) peers can still introduce instability to BGP neighbor sessions. We recommend that you aggressively dampen unstable IGP peering sessions to reduce the possible impact to BGP.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **router bgp** *autonomous-system-number*
4. **address-family ipv4** [**mdt** | **multicast** | **tunnel** | **unicast** [**vrf vrf-name**] | **vrf vrf-name**] | **vpn4** [**unicast**]
5. **exit**
6. **neighbor ip-address remote-as** *autonomous-system-number*
7. **neighbor ip-address fall-over**
8. **end**

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 bgp <i>autonomous-system-number</i> Example: Router(config)# router bgp 50000	Enters router configuration mode to create or configure a BGP routing process.
Step 4	address-family ipv4 [mdt multicast tunnel unicast [vrf vrf-name] vrf vrf-name] vpn4 [unicast] Example: Router(config-router-af)# address-family ipv4 unicast	Enters address-family configuration mode to configure a BGP address-family session. <ul style="list-style-type: none">• The example creates an IPv4 unicast address family session.

	Command or Action	Purpose
Step 5	exit Example: Router (config-router-af)# exit	Exits address-family configuration mode and returns to router-configuration mode.
Step 6	neighbor ip-address remote-as autonomous-system-number Example: Router(config-router)# neighbor 10.0.0.1 remote-as 50000	Establishes a peering session with a BGP neighbor.
Step 7	neighbor ip-address fall-over Router(config-router)# neighbor 10.0.0.1 fall-over	Configures the BGP peering to use fast session deactivation. <ul style="list-style-type: none"> BGP will remove all routes learned through this peer if the session is deactivated.
Step 8	end Example: Router (config-router-af) # end	Exits router configuration mode, and enters privileged EXEC mode.

Configuration Examples for BGP Fast Peering Session Deactivation

The following examples show how to configure and verify this feature:

- [Configuring BGP Fast Peering Session Deactivation: Example, page 4](#)

Configuring BGP Fast Peering Session Deactivation: Example

In the following example, the BGP routing process is configured to monitor and use fast peering session deactivation for the 10.0.0.1 neighbor session:

```
router bgp 50000
 neighbor 10.0.0.1 remote-as 50000
 neighbor 10.0.0.1 fall-over
end
```

Where to Go Next

The BGP Support for Next-Hop Address Tracking feature improves the response time of BGP to next-hop changes for routes installed in the RIB, which can also improve overall BGP convergence. For information about BGP next-hop address tracking, see the [BGP Support for Next-Hop Address Tracking](#) feature.

Additional References

The following sections provide references related to the BGP Support for Fast Peering Session Deactivation feature.

Related Documents

Related Topic	Document Title
BGP commands	<ul style="list-style-type: none"> Cisco IOS IP Command Reference, Volume 2 of 4: Routing Protocols, Release 12.3T
BGP configuration tasks	<ul style="list-style-type: none"> Cisco IOS IP Configuration Guide, Release 12.3
BGP Support for Next-Hop Address Tracking	<ul style="list-style-type: none"> BGP Support for Next-Hop Address Tracking
IP Event Dampening	<ul style="list-style-type: none"> IP Event Dampening

Standards

Standards	Title
No new or modified standards are supported by this feature, and support for existing standards has not been modified by this feature.	—

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 obtain lists of supported MIBs by platform and Cisco IOS release, and to download MIB modules, go to the Cisco MIB website on Cisco.com at the following URL: http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml

RFCs

RFCs	Title
No new or modified RFCs are supported by this feature, and support for existing standards has not been modified by this feature.	—

Technical Assistance

Description	Link
Technical Assistance Center (TAC) home page, containing 30,000 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.	TAC Home Page: http://www.cisco.com/public/support/tac/home.shtml BGP Support Page: http://www.cisco.com/cgi-bin/Support/browse/psp_view.pl?p=Inter networking:BGP

Command Reference

This section documents the [neighbor fall-over](#) command.

neighbor fall-over

To enable Border Gateway Protocol (BGP) fast peering session deactivation for the specified neighbor, use the **neighbor fall-over** command in address-family or router configuration mode. To disable BGP fast peering session deactivation, use the **no** form of this command.

neighbor ip-address fall-over

no neighbor ip-address fall-over

Syntax Description

<i>ip-address</i>	IP address of the BGP neighbor.
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Defaults

No default behavior or values

Command Modes

Address family configuration
Router Configuration

Command History

Release	Modification
12.0(29)S	This command was introduced.
12.3(14)T	This command was integrated into Cisco IOS Release 12.3(14)T.

Usage Guidelines

The **neighbor fall-over** command is used to enable the BGP fast peering session deactivation. BGP fast peering session deactivation improves BGP convergence and response time to adjacency changes with BGP neighbors. This feature is event driven and configured on a per-neighbor basis. When this feature is enabled, BGP will monitor the peering session with the specified neighbor. Adjacency changes are detected and terminated peering sessions are deactivated in between the default or configured BGP scanning interval.

Examples

In the following example, the BGP routing process is configured to monitor and use fast peering session deactivation for the 10.0.0.1 neighbor session:

```
Router(config)# router bgp 50000
Router(config-router)# address-family ipv4
Router(config-router-af)# end
Router(config-router)# neighbor 10.0.0.1 remote-as 50000
Router(config-router)# neighbor 10.0.0.1 fall-over
Router(config-router)# end
```

Related Commands

Command	Description
bgp nexthop trigger enable	Enables or disables BGP next-hop address tracking
bgp nexthop trigger delay	Configures the delay interval between routing table walks for BGP next-hop address tracking.

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