

## Chapter 34

# Summary of BGP Configuration Statements

The following sections explain each of the Border Gateway Protocol (BGP) configuration statements. The statements are organized alphabetically.

### advertise-inactive

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<b>Syntax</b>	advertise-inactive;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Have BGP advertise the best route even if the routing table did not select it to be an active route.
<b>Usage Guidelines</b>	See “Setting BGP to Advertise Inactive Routes” on page 595.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## advertise-peer-as

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<b>Syntax</b>	advertise-peer-as;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Disable the default behavior of suppressing AS routes.
<b>Usage Guidelines</b>	See “Disabling Suppression of Route Advertisements” on page 596.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## aggregate-label

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<b>Syntax</b>	aggregate-label { community <i>community-name</i> ; }
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp family inet labeled-unicast], [edit logical-routers <i>logical-router-name</i> protocols bgp family inet-vpn labeled-unicast], [edit protocols bgp family inet labeled-unicast], [edit protocols bgp family inet-vpn labeled-unicast]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Enables aggregate labels for VPN traffic.
<b>Options</b>	community <i>community-name</i> —Specify the name of the community to which to apply the aggregate label.
<b>Usage Guidelines</b>	See “Configuring Aggregate Labels for VPNs” on page 560.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

**allow**


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<b>Syntax</b>	<code>allow ([ <i>network/mask-length</i> ]   all);</code>
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Implicitly configure BGP peers, allowing peer connections from any of the specified networks or hosts. To configure multiple BGP peers, configure one or more networks and hosts within a single <b>allow</b> statement or include multiple <b>allow</b> statements.
<b>Options</b>	<i>network/mask-length</i> —IPv6 or IPv4 network number of a single address or a range of allowable addresses for BGP peers, followed by the number of significant bits in the subnet mask.  all—Allow all addresses, which is equivalent to 0.0.0.0/0 (or ::/0).
<b>Usage Guidelines</b>	See “Minimum BGP Configuration” on page 543 and “Defining BGP Groups and Peers” on page 547.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
<b>See Also</b>	neighbor on page 640

## as-override

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**Syntax** `as-override;`

**Hierarchy Level** [edit logical-routers *logical-router-name* protocols bgp group *group-name*],  
 [edit logical-routers *logical-router-name* protocols bgp group *group-name* neighbor *address*],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name* protocols bgp group *group-name*],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name* protocols bgp group *group-name* neighbor *address*],  
 [edit protocols bgp group *group-name*],  
 [edit protocols bgp group *group-name* neighbor *address*],  
 [edit routing-instances *routing-instance-name* protocols bgp group *group-name*],  
 [edit routing-instances *routing-instance-name* protocols bgp group *group-name* neighbor *address*]

**Release Information** Statement introduced before JUNOS Release 7.4.

**Description** Compare the AS path of an incoming advertised route with the AS number of the BGP peer under the group and replace all occurrences of the peer AS number in the AS path with its own AS number before advertising the route to the peer.



**NOTE:** The `as-override` statement is specific to a particular BGP group. This statement does not affect peers from the same remote AS configured in different groups.

Enabling the AS override feature allows routes originating from an AS to be accepted by a router residing in the same AS. Without AS override enabled, the router refuses the route advertisement once the AS path shows that the route originated from its own AS. This is done by default to prevent route loops. The `as-override` statement overrides this default behavior.

Note that enabling the AS override feature may result in routing loops. Use this feature only for specific applications that require this type of behavior, and in situations with strict network control. One application is the IGP protocol between the provider edge router and the customer edge router in a virtual private network. For more information, see the *JUNOS MPLS Applications Configuration Guide*.

**Usage Guidelines** See “Defining BGP Groups and Peers” on page 547.

**Required Privilege Level** routing—To view this statement in the configuration.  
 routing-control—To add this statement to the configuration.

## authentication-algorithm

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<b>Syntax</b>	<code>authentication-algorithm <i>algorithm</i>;</code>
<b>Hierarchy Level</b>	<code>[edit logical-routers <i>logical-router-name</i> protocols bgp],</code> <code>[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i>],</code> <code>[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i></code> <code>neighbor <i>address</i>],</code> <code>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i></code> <code>protocols bgp],</code> <code>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i></code> <code>protocols bgp group <i>group-name</i>],</code> <code>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i></code> <code>protocols bgp group <i>group-name</i> neighbor <i>address</i>],</code> <code>[edit protocols bgp],</code> <code>[edit protocols bgp group <i>group-name</i>],</code> <code>[edit protocols bgp group <i>group-name</i> neighbor <i>address</i>],</code> <code>[edit routing-instances <i>routing-instance-name</i> protocols bgp],</code> <code>[edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i>],</code> <code>[edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i></code> <code>neighbor <i>address</i>]</code>
<b>Release Information</b>	Statement introduced in JUNOS Release 8.0.
<b>Description</b>	Configure an MD5 authentication algorithm type.
<b>Options</b>	<i>algorithm</i> —Type of authentication algorithm. Specify either md5 or hmac-sha-1-96 as the algorithm type.
<b>Usage Guidelines</b>	See “Configuring Authentication” on page 560.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## authentication-key

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<b>Syntax</b>	authentication-key <i>key</i> ;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Configure an MD5 authentication key (password). Neighboring routers use the same password to verify the authenticity of BGP packets sent from this system.
<b>Options</b>	<i>key</i> —Authentication password. It can be up to 126 characters. Characters can include any ASCII strings. If you include spaces, enclose all characters in quotation marks (" ").
<b>Usage Guidelines</b>	See “Configuring Authentication” on page 560.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## authentication-key-chain

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<b>Syntax</b>	authentication-key-chain <i>key-chain</i> ;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced in JUNOS Release 8.0.
<b>Description</b>	Apply and enable an authentication key chain to the router.
<b>Options</b>	<i>key-chain</i> —Authentication key chain name. It can be up to 126 characters. Characters can include any ASCII strings. If you include spaces, enclose all characters in quotation marks (" ").
<b>Usage Guidelines</b>	See “Configuring Authentication” on page 560.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## authentication-key-chains

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<b>Syntax</b>	<pre> authentication-key-chains {   key-chain <i>key-chain-name</i> {     key <i>key</i> {       secret <i>secret-data</i>;       start-time <i>yyyy-mm-dd.hh:mm:ss</i>;     }   } }</pre>
<b>Hierarchy Level</b>	[edit security]
<b>Release Information</b>	Statement introduced in JUNOS Release 7.6.
<b>Description</b>	<p>Configure authentication key updates for the Border Gateway Protocol (BGP) and Label Distribution Protocol (LDP) routing protocols. When an <b>authentication-key-chain</b> statement is configured at the [edit security] hierarchy level, and associated with the BGP and LDP protocols at the [edit protocols] hierarchy level, authentication key updates can occur without interrupting routing and signaling protocols such as Open Shortest Path First (OSPF), and Resource Reservation Setup Protocol (RSVP).</p>
<b>Options</b>	<p><b>key-chain</b>—Key chain name. This name is also configured at the [edit protocols bgp] or the [edit protocols ldp] hierarchy level to associate unique <b>authentication key-chain</b> attributes with each protocol as specified using the following options:</p> <ul style="list-style-type: none"> <li>■ <b>key</b>—Each key within a key chain is identified by a unique integer value. <b>Range:</b> 0 through 255</li> <li>■ <b>secret</b>—Each key must specify a secret in encrypted text or plain text format. The secret always appears in encrypted format.</li> <li>■ <b>start-time</b>—Start times are specified in UTC (Coordinated Universal Time), and must be unique within the key chain.</li> </ul>
<b>Usage Guidelines</b>	See “Configuring Authentication” on page 560.
<b>Required Privilege Level</b>	<p>admin—To view this statement in the configuration.</p> <p>admin-control—To add this statement to the configuration.</p>



## bfd-liveness-detection

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**Syntax** `bfd-liveness-detection {  
     detection-time {  
         threshold milliseconds;  
     }  
     minimum-interval milliseconds;  
     minimum-receive-interval milliseconds;  
     transmit-interval {  
         threshold milliseconds;  
         minimum-interval milliseconds;  
     }  
     multiplier number;  
     version (1 | automatic);  
}`

**Hierarchy Level** `[edit logical-routers logical-router-name protocols bgp group group-name],  
[edit logical-routers logical-router-name protocols bgp group group-name neighbor  
neighbor-name],  
[edit logical-routers logical-router-name routing-instances routing-instance-name  
protocols bgp group group-name],  
[edit logical-routers logical-router-name routing-instances routing-instance-name  
protocols bgp group group-name neighbor neighbor-name],  
[edit protocols bgp group group-name],  
[edit protocols bgp group group-name neighbor neighbor-name],  
[edit routing-instances routing-instance-name protocols bgp group group-name],  
[edit routing-instances routing-instance-name protocols bgp group group-name neighbor  
neighbor-name]`

**Release Information** Statement introduced in JUNOS Release 8.1.

**Description** Configure bidirectional failure detection timers.

**Options** `detection-time threshold milliseconds`—Configure a threshold. When the BFD session detection time adapts to a value greater than the threshold, a single trap and a single syslog message are sent.

`minimum-interval milliseconds`—Configure the minimum transmit and receive interval.

**Range:** 1 through 255,000

`minimum-receive-interval milliseconds`—Configure only the minimum receive interval.

**Range:** 1 through 255,000

`minimum-interval milliseconds`—Configure the minimum transmit interval.

**Range:** 1 through 255,000

`multiplier number`—Configure the detection time multiplier.

**Range:** 1 through 255

**Default:** 3

`transmit-interval threshold milliseconds`—Configure a threshold. When the BFD session transmit interval adapts to a value greater than the threshold, a single trap and a single syslog message are sent. The interval threshold must be greater than the minimum transmit interval.

**Range:** 0 through 4,294,967,295

`transmit-interval` `minimum-interval` *milliseconds*—Configure the minimum transmit interval.

**Range:** 1 through 255,000

`version`—Configure the BFD version to detect.

**Range:** 0 (BFD version 0), 1 (BFD version 1), or *automatic* (autodetection)

**Default:** *automatic*

**Usage Guidelines** See “Configuring the BFD Protocol” on page 275.

**Required Privilege Level** `routing`—To view this statement in the configuration.  
`routing-control`—To add this statement to the configuration.

## bgp

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**Syntax** `bgp { ... }`

**Hierarchy Level** [edit logical-routers *logical-router-name* protocols `bgp`],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
 protocols `bgp`],  
 [edit protocols],  
 [edit routing-instances *routing-instance-name* protocols]

**Release Information** Statement introduced before JUNOS Release 7.4.

**Description** Enable BGP on the router or for a routing instance.

**Default** BGP is disabled.

**Usage Guidelines** See “Enabling BGP” on page 544.

**Required Privilege Level** `routing`—To view this statement in the configuration.  
`routing-control`—To add this statement to the configuration.

## cluster

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<b>Syntax</b>	cluster <i>cluster-identifier</i> ;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Specify the cluster identifier to be used by the route reflector cluster in an internal BGP group.
<b>Options</b>	<i>cluster-identifier</i> —IPv6 or IPv4 address to use as the cluster identifier.
<b>Usage Guidelines</b>	See “Configuring Route Reflection” on page 575.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
<b>See Also</b>	no-client-reflect on page 643

## damping

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<b>Syntax</b>	damping;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Enable route flap damping.
<b>Default</b>	Flap damping is disabled on the router.
<b>Usage Guidelines</b>	See “Enabling Route Flap Damping” on page 581 and the <i>JUNOS Policy Framework Configuration Guide</i> .
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## description

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<b>Syntax</b>	<code>description <i>text-description</i>;</code>
<b>Hierarchy Level</b>	<code>[edit logical-routers <i>logical-router-name</i> protocols bgp],</code> <code>[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i>],</code> <code>[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i></code> <code>neighbor <i>address</i>],</code> <code>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i></code> <code>protocols bgp],</code> <code>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i></code> <code>protocols bgp group <i>group-name</i>],</code> <code>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i></code> <code>protocols bgp group <i>group-name</i> neighbor <i>address</i>],</code> <code>[edit protocols bgp],</code> <code>[edit protocols bgp group <i>group-name</i>],</code> <code>[edit protocols bgp group <i>group-name</i> neighbor <i>address</i>],</code> <code>[edit routing-instances <i>routing-instance-name</i> protocols bgp],</code> <code>[edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i>],</code> <code>[edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i></code> <code>neighbor <i>address</i>]</code>
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Text description of the global, group, or neighbor configuration.
<b>Options</b>	<i>text-description</i> —Text description of the configuration. Limited to 126 characters.
<b>Usage Guidelines</b>	See “Defining BGP Global Properties” on page 545, “Defining Group Properties” on page 550, and “Defining Peer Properties” on page 552.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## disable

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<b>Syntax</b>	<code>disable;</code>
<b>Hierarchy Level</b>	<code>[edit logical-routers <i>logical-router-name</i> protocols bgp],</code> <code>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i></code> <code>protocols bgp],</code> <code>[edit protocols bgp],</code> <code>[edit routing-instances <i>routing-instance-name</i> protocols bgp]</code>
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Disable BGP on the system.
<b>Usage Guidelines</b>	See “Defining BGP Global Properties” on page 545.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## explicit-null

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<b>Syntax</b>	explicit-null;
<b>Hierarchy Level</b>	<p>[edit logical-routers <i>logical-router-name</i> protocols bgp family inet labeled-unicast],</p> <p>[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> family inet labeled-unicast],</p> <p>[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> family inet labeled-unicast],</p> <p>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp family inet labeled-unicast],</p> <p>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> family inet labeled-unicast],</p> <p>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> family inet labeled-unicast],</p> <p>[edit protocols bgp family inet labeled-unicast],</p> <p>[edit protocols bgp group <i>group-name</i> family inet labeled-unicast],</p> <p>[edit protocols bgp group <i>group-name</i> neighbor <i>address</i> family inet labeled-unicast],</p> <p>[edit routing-instances <i>routing-instance-name</i> protocols bgp family inet labeled-unicast],</p> <p>[edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> family inet labeled-unicast],</p> <p>[edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> family inet labeled-unicast]</p>
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Advertise label 0 to the egress router of an LSP.
<b>Default</b>	If you do not include the explicit-null statement in the configuration, label 3 (implicit null) is advertised.
<b>Usage Guidelines</b>	See “Advertising an Explicit Null Label” on page 559.
<b>Required Privilege Level</b>	<p>routing—To view this statement in the configuration.</p> <p>routing-control—To add this statement to the configuration.</p>

## export

---

<b>Syntax</b>	export [ <i>policy-names</i> ];
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Apply one or more policies to routes being exported from the routing table into BGP.
<b>Options</b>	<i>policy-names</i> —Name of one or more policies.
<b>Usage Guidelines</b>	See “Configuring BGP Routing Policy” on page 594 and the <i>JUNOS Policy Framework Configuration Guide</i> .
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
<b>See Also</b>	import on page 627 and the <i>JUNOS Policy Framework Configuration Guide</i> .

## family

---

```

Syntax  family {
    (inet | inet6 | inet-vpn | inet6-vpn | l2-vpn) {
      (any | multicast | unicast | signaling) {
        prefix-limit {
          maximum number;
          teardown <percentage> <idle-timeout (forever | time-in-minutes)>;
        }
        rib-group group-name;
      }
      flow {
        no-validate policy-name;
      }
      labeled-unicast {
        aggregate-label {
          community community-name;
        }
        explicit-null {
          connected-only;
        }
        prefix-limit {
          maximum number;
          teardown <percentage> <idle-timeout (forever | time-in-minutes)>;
        }
        resolve-vpn;
        rib inet.3;
        rib-group group-name;
      }
    }
    route-target {
      advertise-default;
      external-paths number;
      prefix-limit {
        maximum number;
        teardown <percentage> <idle-timeout (forever | time-in-minutes)>;
      }
    }
  }


```



<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Enable multiprotocol BGP (MBGP) by configuring BGP to carry network layer reachability information (NLRI) for address families other than unicast IPv4, to specify MBGP to carry NLRI for the IPv6 address family, or to carry NLRI for VPNs.
<b>Options</b>	<p><b>any</b>—Configure the family type to be both unicast and multicast.</p> <p><b>labeled-unicast</b>—Configure the family type to be labeled-unicast. This means that the BGP peers are being used only to carry the unicast routes that are being used by labeled-unicast for resolving the labeled-unicast routes.</p> <p><b>multicast</b>—Configure the family type to be multicast. This means that the BGP peers are being used only to carry the unicast routes that are being used by multicast for resolving the multicast routes.</p> <p><b>unicast</b>—Configure the family type to be unicast. This means that the BGP peers only carry the unicast routes that are being used for unicast forwarding purposes.</p> <p><b>Default:</b> unicast</p> <p>The remaining statements are explained separately.</p>
<b>Usage Guidelines</b>	See “Enabling Multiprotocol BGP” on page 581.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

**flow**


---

<b>Syntax</b>	<pre>flow {     no-validate <i>policy-name</i>; }</pre>
<b>Hierarchy Level</b>	<pre>[edit protocols bgp group <i>group-name</i> family (inet   inet-vpn)], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i>   family (inet   inet-vpn)], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> family   (inet   inet-vpn)], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i>   neighbor <i>address</i> family (inet   inet-vpn)]</pre>
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Enables BGP to support flow routes.
<hr/> <div>  <b>NOTE:</b> This statement is supported for the default instance, VRF instance, and virtual-router instance only. It is configured with the <b>instance-type</b> statement at the [edit routing-instance <i>instance-name</i> hierarchy level. For VPNs, this statement is supported for the default instance only. </div> <hr/>	
<b>Options</b>	The statements are explained separately.
<b>Usage Guidelines</b>	See “Enabling BGP to Carry Flow-Specific Routes” on page 585.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## graceful-restart

---

<b>Syntax</b>	<pre> graceful-restart {     disable;     restart-time seconds;     stale-routes-time seconds; } </pre>
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Configure graceful restart for BGP.
<b>Options</b>	<p><b>disable</b>—Disables graceful restart for BGP.</p> <p><b>seconds</b>—Time period when the restart is expected to be complete.  <b>Range:</b> 1 through 600 seconds</p> <p><b>seconds</b>—Maximum time that stale routes are kept during restart.  <b>Range:</b> 1 through 600 seconds</p>
<b>Usage Guidelines</b>	See “Configuring Graceful Restart” on page 114 and “Configuring Graceful Restart” on page 559.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

**group**

```

Syntax  group group-name {
    advertise-inactive;
    [ network/mask-length ];
    authentication-key key;
    cluster cluster-identifier;
    damping;
    description text-description;
    export [ policy-names ];
    family {
        (inet | inet6 | inet-vpn | inet6-vpn | l2-vpn) {
            (any | multicast | unicast | signaling) {
                prefix-limit {
                    maximum number;
                    teardown <percentage> <idle-timeout (forever | time-in-minutes)>;
                }
                rib-group group-name;
            }
        }
        flow {
            no-validate policy-name;
        }
        labeled-unicast {
            explicit-null {
                connected-only;
            }
            prefix-limit {
                maximum number;
                teardown <percentage> <idle-timeout (forever | time-in-minutes)>;
            }
            resolve-vpn;
            rib inet.3;
            rib-group group-name;
        }
    }
    route-target {
        advertise-default;
        external-paths number;
        prefix-limit {
            maximum number;
            teardown <percentage> <idle-timeout (forever | time-in-minutes)>;
        }
    }
    }
    hold-time seconds;
    import [ policy-names ];
    ipsec-sa ipsec-sa;
    keep (all | none);
    local-address address;
    local-as autonomous-system <private>;
    local-preference local-preference;
    log-updown;
    metric-out metric;
    multihop <ttl-value>;

```

```

multipath {
    multiple-as;
}
no-aggregator-id;
no-client-reflect;
out-delay seconds;
passive;
peer-as autonomous-system;
preference preference;
protocol protocol;
remove-private;
tcp-mss segment-size;
traceoptions {
    file name <replace> <size size> <files number> <no-stamp>
    <(world-readable | no-world-readable)>;
    flag flag <flag-modifier> <disable>;
}
type type;
neighbor address {
    numerous peer-specific options;
}
}

```

**Hierarchy Level** [edit logical-routers *logical-router-name* protocols bgp],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
 protocols bgp],  
 [edit protocols bgp],  
 [edit routing-instances *routing-instance-name* protocols bgp]

**Release Information** Statement introduced before JUNOS Release 7.4.

**Description** Define a BGP peer group. BGP peer groups share a common type, peer autonomous system (AS) number, and cluster ID, if present. To configure multiple BGP groups, include multiple **group** statements.

By default, the group's options are identical to the global BGP options. To override the global options, include group-specific options within the **group** statement.

The **group** statement is one of the statements you must include in the configuration to run BGP on the router. See “Minimum BGP Configuration” on page 543.

**Options** *group-name*—Name of the BGP group.

The remaining statements within the **group** statement are explained separately.

**Usage Guidelines** See “Defining BGP Groups and Peers” on page 547.

**Required Privilege Level** routing—To view this statement in the configuration.  
 routing-control—To add this statement to the configuration.

## hold-time

---

<b>Syntax</b>	hold-time <i>seconds</i> ;
<b>Hierarchy Level</b>	<pre> [edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i>], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i>   neighbor <i>address</i>], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i>   protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i>   protocols bgp group <i>group-name</i>], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i>   protocols bgp group <i>group-name</i> neighbor <i>address</i>], [edit protocols bgp], [edit protocols bgp group <i>group-name</i>], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i>], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i>], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i>   neighbor <i>address</i>] </pre>
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	<p>Hold-time value to use when negotiating a connection with the peer. The hold-time value is advertised in open packets and indicates to the peer the length of time that it should consider the sender valid. If the peer does not receive a keepalive, update, or notification message within the specified hold time, the BGP connection to the peer is closed and routers through that peer become unavailable.</p> <p>The hold time is three times the interval at which keepalive messages are sent.</p>
<b>Options</b>	<p><i>seconds</i>—Hold time.</p> <p><b>Range:</b> 20 through 65,535 seconds</p> <p><b>Default:</b> 90 seconds</p>
<b>Usage Guidelines</b>	See “Modifying the Hold-Time Value” on page 558.
<b>Required Privilege Level</b>	<p>routing—To view this statement in the configuration.</p> <p>routing-control—To add this statement to the configuration.</p>

## import

---

<b>Syntax</b>	import [ <i>policy-names</i> ];
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Apply one or more routing policies to routes being imported into the JUNOS routing table from BGP.
<b>Options</b>	<i>policy-names</i> —Name of one or more policies.
<b>Usage Guidelines</b>	See “Configuring BGP Routing Policy” on page 594 and the <i>JUNOS Policy Framework Configuration Guide</i> .
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
<b>See Also</b>	export on page 619 and the <i>JUNOS Policy Framework Configuration Guide</i>

## include-mp-next-hop

---

<b>Syntax</b>	include-mp-next-hop;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit protocols bgp]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Enable multiprotocol updates to contain next-hop reachability information.
<b>Usage Guidelines</b>	See “Enabling Next-Hop Reachability Information” on page 600.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

**ipsec-sa**


---

<b>Syntax</b>	<code>ipsec-sa <i>ipsec-sa</i>;</code>
<b>Hierarchy Level</b>	<code>[edit logical-routers <i>logical-router-name</i> protocols bgp],</code> <code>[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i>],</code> <code>[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i></code> <code>neighbor <i>address</i>],</code> <code>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i></code> <code>protocols bgp],</code> <code>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i></code> <code>protocols bgp group <i>group-name</i>],</code> <code>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i></code> <code>protocols bgp group <i>group-name</i> neighbor <i>address</i>],</code> <code>[edit protocols bgp],</code> <code>[edit protocols bgp group <i>group-name</i>],</code> <code>[edit protocols bgp group <i>group-name</i> neighbor <i>address</i>],</code> <code>[edit routing-instances <i>routing-instance-name</i> protocols bgp],</code> <code>[edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i>],</code> <code>[edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i></code> <code>neighbor <i>address</i>]</code>
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Apply a security association to BGP peers. You can apply the security association globally for all BGP peers, to a group of peers, or to an individual peer.
<b>Options</b>	<i>ipsec-sa</i> —Security association name.
<b>Usage Guidelines</b>	See “Applying IPSec Security Association” on page 562.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.



**iso-vpn**


---

<b>Syntax</b>	<pre>iso-vpn {     unicast }     prefix-limit <i>number</i>;     rib-group <i>group-name</i>; }</pre>
<b>Hierarchy Level</b>	[edit protocols bgp family], [edit protocols bgp group <i>group-name</i> family], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> family], [edit routing-instances <i>routing-instance-name</i> protocols bgp family], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> family], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> family]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Enable BGP to carry ISO VPN NLRI messages between PE routes connecting a VPN.
<hr/>  <b>NOTE:</b> CLNS is supported for the J-series Services Router only. <hr/>	
<b>Options</b>	The statements are explained separately in this chapter.
<b>Default</b>	Disabled.
<b>Usage Guidelines</b>	See “Enabling BGP to Carry Connectionless Network Services Routes” on page 586 and the <i>J-series Services Router Advanced WAN Access Configuration Guide</i> .
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

**keep**


---

<b>Syntax</b>	keep (all   none);
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Specify whether routes learned from a BGP peer are retained in the routing table even if they contain an AS number that was exported from the local AS.
<b>Default</b>	If you do not include this statement, most routes are retained in the routing table.
<b>Options</b>	all—Retain all routes.  none—Retain none of the routes. When <b>keep none</b> is configured for the BGP session and the inbound policy changes, the JUNOS software forces readvertisement of the full set of routes advertised by the peer.
<b>Usage Guidelines</b>	See “Configuring How Often BGP Exchanges Routes with the Routing Table” on page 595.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## labeled-unicast

<b>Syntax</b>	<pre>labeled-unicast {     aggregate-label {         community community-name;     }     explicit-null {         connected-only;     }     prefix-limit {         maximum <i>number</i>;         teardown &lt;percentage&gt; &lt;idle-timeout (forever   timeout-in-minutes)&gt;;     }     resolve-vpn;     rib inet.3;     rib-group <i>group-name</i>; }</pre>
<b>Hierarchy Level</b>	<pre>[edit logical-routers <i>logical-router-name</i> protocols bgp family (inet   inet6   inet-vpn   inet6-vpn   l2-vpn)], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> family (inet   inet6   inet-vpn   inet6-vpn   l2-vpn)], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> family (inet   inet6   inet-vpn   inet6-vpn   l2-vpn)], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp family (inet   inet6   inet-vpn   inet6-vpn   l2-vpn)], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> family (inet   inet6   inet-vpn   inet6-vpn   l2-vpn)], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> family (inet   inet6   inet-vpn   inet6-vpn   l2-vpn)], [edit protocols bgp family (inet   inet6   inet-vpn   inet6-vpn   l2-vpn)], [edit protocols bgp group <i>group-name</i> family (inet   inet6   inet-vpn   inet6-vpn   l2-vpn)], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> family (inet   inet6   inet-vpn   inet6-vpn   l2-vpn)], [edit routing-instances <i>routing-instance-name</i> protocols bgp family (inet   inet6   inet-vpn   inet6-vpn   l2-vpn)], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> family (inet   inet6   inet-vpn   inet6-vpn   l2-vpn)], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> family (inet   inet6   inet-vpn   inet6-vpn   l2-vpn)]</pre>
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Configure the family type to be labeled-unicast.
<b>Options</b>	The statements are explained separately.
<b>Usage Guidelines</b>	See “Enabling Multiprotocol BGP” on page 581.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## local-address

---

<b>Syntax</b>	<code>local-address address;</code>
<b>Hierarchy Level</b>	<code>[edit logical-routers <i>logical-router-name</i> protocols bgp],</code> <code>[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i>],</code> <code>[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i></code> <code>neighbor <i>address</i>],</code> <code>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i></code> <code>protocols bgp],</code> <code>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i></code> <code>protocols bgp group <i>group-name</i>],</code> <code>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i></code> <code>protocols bgp group <i>group-name</i> neighbor <i>address</i>],</code> <code>[edit protocols bgp],</code> <code>[edit protocols bgp group <i>group-name</i>],</code> <code>[edit protocols bgp group <i>group-name</i> neighbor <i>address</i>],</code> <code>[edit routing-instances <i>routing-instance-name</i> protocols bgp],</code> <code>[edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i>],</code> <code>[edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i></code> <code>neighbor <i>address</i>]</code>
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Specify the address of the local end of a BGP session. This address is used to accept incoming connections to the peer and to establish connections to the remote peer. When none of the operational interfaces are configured with the specified local address, a session with a BGP peer is placed in the idle state.
<b>Default</b>	If you do not configure a local address, BGP uses the router's source address selection rules to set the local address. For more information, see the <i>JUNOS Network Interfaces Configuration Guide</i> .
<b>Options</b>	<i>address</i> —IPv6 or IPv4 address of the local end of the connection.
<b>Usage Guidelines</b>	See “Assigning a BGP Identifier” on page 545.
<b>Required Privilege Level</b>	<code>routing</code> —To view this statement in the configuration. <code>routing-control</code> —To add this statement to the configuration.
<b>See Also</b>	<code>router-id</code> on page 176

## local-as

---

<b>Syntax</b>	local-as <i>autonomous-system</i> <private>;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Set the local AS number.
<b>Options</b>	<i>autonomous-system</i> —AS number.  <i>private</i> —(Optional) Hide the local AS in paths learned from this peering.
<b>Usage Guidelines</b>	See “Configuring a Local AS” on page 571.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## local-interface

---

<b>Syntax</b>	local-interface <i>interface-name</i> ;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>ipv6-link-local-address</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>ipv6-link-local-address</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>ipv6-link-local-address</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>ipv6-link-local-address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Specify the interface name of the peer for IPv6 peering using link-local addresses. This peer is link-local in scope.
<b>Options</b>	<i>interface-name</i> —Interface name of the EBGp IPv6 peer.
<b>Usage Guidelines</b>	See “Configuring EBGp Peering Using IPv6 Link-local Address” on page 597.

**Required Privilege Level** routing—To view this statement in the configuration.  
 routing-control—To add this statement to the configuration.

## local-preference

**Syntax** `local-preference local-preference;`

**Hierarchy Level** [edit logical-routers *logical-router-name* protocols bgp],  
 [edit logical-routers *logical-router-name* protocols bgp group *group-name*],  
 [edit logical-routers *logical-router-name* protocols bgp group *group-name*  
 neighbor *address*],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
 protocols bgp],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
 protocols bgp group *group-name*],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
 protocols bgp group *group-name* neighbor *address*],  
 [edit protocols bgp],  
 [edit protocols bgp group *group-name*],  
 [edit protocols bgp group *group-name* neighbor *address*],  
 [edit routing-instances *routing-instance-name* protocols bgp],  
 [edit routing-instances *routing-instance-name* protocols bgp group *group-name*],  
 [edit routing-instances *routing-instance-name* protocols bgp group *group-name*  
 neighbor *address*]

**Release Information** Statement introduced before JUNOS Release 7.4.

**Description** Modify the value of the LOCAL\_PREF path attribute, which is a metric used by internal BGP sessions to indicate the degree of preference for an external route. The route with the highest local preference value is preferred.

The LOCAL\_PREF path attribute always is advertised to internal BGP peers and to neighboring confederations. It is never advertised to external BGP peers.

**Default** If you omit this statement, the LOCAL\_PREF path attribute, if present, is not modified.

**Options** *local-preference*—Preference to assign to routes learned from BGP or from the group or peer.  
**Range:** 0 through 4,294,967,295 ( $2^{32} - 1$ )  
**Default:** If the LOCAL\_PREF path attribute is present, do not modify its value. If a BGP route is received without a LOCAL\_PREF attribute, the route is handled locally (it is stored in the routing table and advertised by BGP) as if it were received with a LOCAL\_PREF value of 100. By default, non-BGP routes that are advertised by BGP are advertised with a LOCAL\_PREF value of 100.

**Usage Guidelines** See “Configuring the BGP Local Preference” on page 567.

**Required Privilege Level** routing—To view this statement in the configuration.  
 routing-control—To add this statement to the configuration.

**See Also** preference on page 649

## log-updown

---

<b>Syntax</b>	log-updown;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Log a message whenever a BGP peer makes a state transition. Messages are logged using the system logging mechanism located at the [edit system syslog] hierarchy level.
<b>Usage Guidelines</b>	See “Configuring BGP to Log System Log Messages” on page 599 and the <i>JUNOS System Basics Configuration Guide</i> .
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
<b>See Also</b>	traceoptions on page 658

## metric-out

---

<b>Syntax</b>	<code>metric-out (<i>metric</i>   minimum-igp &lt;offset&gt;  igp &lt;offset&gt;);</code>
<b>Hierarchy Level</b>	<p>[edit logical-routers <i>logical-router-name</i> protocols bgp],</p> <p>[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i>],</p> <p>[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i>],</p> <p>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp],</p> <p>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i>],</p> <p>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i>],</p> <p>[edit protocols bgp],</p> <p>[edit protocols bgp group <i>group-name</i>],</p> <p>[edit protocols bgp group <i>group-name</i> neighbor <i>address</i>],</p> <p>[edit routing-instances <i>routing-instance-name</i> protocols bgp],</p> <p>[edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i>],</p> <p>[edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i>]</p>
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	<p>Metric for all routes sent using the multiple exit discriminator (MED, or MULTI_EXIT_DISC) path attribute in update messages. This path attribute is used to discriminate among multiple exit points to a neighboring AS. If all other factors are equal, the exit point with the lowest metric is preferred.</p> <p>You can specify a constant metric value by including the <i>metric</i> option. For configurations in which a BGP peer sends third-party next hops that require the local system to perform next-hop resolution—IBGP configurations, configurations within confederation peers, or EBGP configurations that include the <i>multihop</i> command—you can specify a variable metric by including the <i>minimum-igp</i> or <i>igp</i> option.</p> <p>You can increase or decrease the variable metric calculated from the IGP metric (either from the <i>igp</i> or <i>igp-minimum</i> statement) by specifying a value for <i>&lt;offset&gt;</i>. The metric is increased by specifying a positive value for <i>&lt;offset&gt;</i>, and decreased by specifying a negative value for <i>&lt;offset&gt;</i>.</p>
<b>Options</b>	<p><i>igp</i>—Set the metric to the most recent metric value calculated in the IGP to get to the BGP next hop.</p> <p><i>metric</i>—Primary metric on all routes sent to peers.  <b>Range:</b> 0 through 4,294,967,295 (<math>2^{32} - 1</math>)  <b>Default:</b> No metric is sent.</p> <p><i>minimum-igp</i>—Set the metric to the minimum metric value calculated in the IGP to get to the BGP next hop. If a newly calculated metric is greater than the minimum metric value, the metric value remains unchanged. If a newly calculated metric is lower, the metric value is lowered to that value.</p>



*offset*—(Optional) Increases or decreases the metric by this value.

**Range:**  $-2^{31}$  through  $2^{31} - 1$

**Default:** No default.

**Usage Guidelines** See “Configuring the Multiple Exit Discriminator Metric” on page 563.

**Required Privilege Level** routing—To view this statement in the configuration.  
routing-control—To add this statement to the configuration.

## mtu-discovery

---

**Syntax** mtu-discovery;

**Hierarchy Level** [edit logical-routers *logical-router-name* protocols bgp],  
[edit logical-routers *logical-router-name* protocols bgp group *group-name*],  
[edit logical-routers *logical-router-name* protocols bgp group *group-name*  
neighbor *address*],  
[edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
protocols bgp],  
[edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
protocols bgp group *group-name*],  
[edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
protocols bgp group *group-name* neighbor *address*],  
[edit protocols bgp],  
[edit protocols bgp group *group-name*],  
[edit protocols bgp group *group-name* neighbor *address*],  
[edit routing-instances *routing-instance-name* protocols bgp],  
[edit routing-instances *routing-instance-name* protocols bgp group *group-name*],  
[edit routing-instances *routing-instance-name* protocols bgp group *group-name*  
neighbor *address*]

**Release Information** Statement introduced before JUNOS Release 7.4.

**Description** Configure TCP path MTU discovery. MTU discovery improves convergence times for internal BGP sessions.

**Usage Guidelines** See “Configuring MTU Discovery” on page 558.

**Required Privilege Level** routing—To view this statement in the configuration.  
routing-control—To add this statement to the configuration.

## multihop

---

<b>Syntax</b>	<pre>multihop {     &lt;ttl-value&gt;;     no-nexthop-change; }</pre>
<b>Hierarchy Level</b>	<pre>[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i>], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i>   neighbor <i>address</i>], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i>   protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i>   protocols bgp group <i>group-name</i>], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i>   protocols bgp group <i>group-name</i> neighbor <i>address</i>], [edit protocols bgp], [edit protocols bgp group <i>group-name</i>], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i>], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i>], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i>   neighbor <i>address</i>]</pre>
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	<p>Configure an EBGp multihop session.</p> <p>External confederation peering is a special case that allows unconnected third-party next hops. You do not need to configure multihop sessions explicitly in this particular case; multihop behavior is implied.</p> <p>If you have confederation external BGP peer-to-loopback addresses, you still need the multihop configuration.</p>
<b>Default</b>	If you omit this statement, all EBGp peers are assumed to be directly connected (that is, you are establishing a nonmultihop, or “regular”, BGP session), and the default time-to-live (TTL) value is 1.
<b>Options</b>	<p><b>ttl-value</b>—Configure the maximum TTL value for the TTL in the IP header of BGP packets.  <b>Range:</b> 1 through 255  <b>Default:</b> 64 (for multihop EBGp sessions, confederations, and internal BGP sessions)</p> <p><b>no-nexthop-change</b>—Specify not to change the BGP next-hop value; for route advertisements, specify the <b>no-nexthop-self</b> option.</p>
<b>Usage Guidelines</b>	See “Configuring an EBGp Multihop Session” on page 567.
<b>Required Privilege Level</b>	<p>routing—To view this statement in the configuration.</p> <p>routing-control—To add this statement to the configuration.</p>

## multipath

---

<b>Syntax</b>	multipath { multiple-as; }
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Allow load sharing among multiple EBGP paths and multiple IBGP paths.
<b>Options</b>	<b>multiple-as</b> —Disable the default check requiring that paths accepted by BGP multipath must have the same neighboring AS.
<b>Usage Guidelines</b>	See “Configuring BGP to Select Multiple BGP Paths” on page 571.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## neighbor

---

**Syntax** `neighbor address {`

```

    advertise-inactive;
    authentication-key key;
    cluster cluster-identifier;
    damping;
    description text-description;
    export [ policy-names ];
    family {
        (inet | inet6 | inet-vpn | inet6-vpn | l2-vpn) {
            (any | multicast | unicast | signaling) {
                prefix-limit {
                    maximum number;
                    teardown <percentage> <idle-timeout (forever | time-in-minutes)>;
                }
                rib-group routing-table-group-name;
            }
        }
        flow {
            no-validate policy-name;
        }
        labeled-unicast {
            explicit-null {
                connected-only;
            }
            prefix-limit {
                maximum number;
                teardown <percentage> <idle-timeout (forever | time-in-minutes)>;
            }
            resolve-vpn;
            rib inet.3;
            rib-group routing-table-group-name;
        }
    }
    route-target {
        advertise-default;
        external-paths number;
        prefix-limit {
            maximum number;
            teardown <percentage> <idle-timeout (forever | time-in-minutes)>;
        }
    }
}
hold-time seconds;
import [ policy-names ];
ipsec-sa ipsec-sa;
keep (all | none);
local-address address;
local-as autonomous-system <private>;
local-interface interface-name;
local-preference preference;
log-updown;
metric-out metric;
multihop <ttl-value>;

```

```

multipath {
    multiple-as;
}
no-aggregator-id;
no-client-reflect;
out-delay seconds;
passive;
peer-as autonomous-system;
preference preference;
tcp-mss segment-size;
traceoptions {
    file name <replace> <size size> <files number> <no-stamp>
    <(world-readable | no-world-readable)>;
    flag flag <flag-modifier> <disable>;
}

```

<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	<p>Explicitly configure a neighbor (peer). To configure multiple BGP peers, include multiple <b>neighbor</b> statements.</p> <p>By default, the peer's options are identical to those of the group. You can override these options by including peer-specific option statements within the <b>neighbor</b> statement.</p> <p>The <b>neighbor</b> statement is one of the statements you can include in the configuration to define a minimal BGP configuration on the router. (You can include an <b>allow all</b> statement in place of a <b>neighbor</b> statement.)</p>
<b>Options</b>	<p><b>address</b>—IPv6 or IPv4 address of a single peer.</p> <p>The remaining statements are explained separately.</p>
<b>Usage Guidelines</b>	See “Minimum BGP Configuration” on page 543 and “Defining BGP Groups and Peers” on page 547.
<b>Required Privilege Level</b>	<p>routing—To view this statement in the configuration.</p> <p>routing-control—To add this statement to the configuration.</p>

## no-advertise-peer-as

---

**See** advertise-peer-as on page 606

## no-aggregator-id

---

**Syntax** no-aggregator-id;

**Hierarchy Level** [edit logical-routers *logical-router-name* protocols bgp],  
 [edit logical-routers *logical-router-name* protocols bgp group *group-name*],  
 [edit logical-routers *logical-router-name* protocols bgp group *group-name*  
 neighbor *address*],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
 protocols bgp],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
 protocols bgp group *group-name*],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
 protocols bgp group *group-name* neighbor *address*],  
 [edit protocols bgp],  
 [edit protocols bgp group *group-name*],  
 [edit protocols bgp group *group-name* neighbor *address*],  
 [edit routing-instances *routing-instance-name* protocols bgp],  
 [edit routing-instances *routing-instance-name* protocols bgp group *group-name*],  
 [edit routing-instances *routing-instance-name* protocols bgp group *group-name*  
 neighbor *address*]

**Release Information** Statement introduced before JUNOS Release 7.4.

**Description** Set the router ID in the BGP aggregator path attribute to zero. (This is one of the path attributes included in BGP update messages.) Doing this prevents different routers within an AS from creating aggregate routes that contain different AS paths.

**Default** If you omit this statement, the router ID is included in the BGP aggregator path attribute.

**Usage Guidelines** See “Update Messages” on page 540 and “Controlling the Aggregator Path Attribute” on page 566.

**Required Privilege Level** routing—To view this statement in the configuration.  
 routing-control—To add this statement to the configuration.

## no-client-reflect

---

<b>Syntax</b>	no-client-reflect;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Disable intracluster route redistribution by the system acting as the route reflector. Include this statement when the client cluster is fully meshed to prevent the sending of redundant route advertisements.
<b>Usage Guidelines</b>	See “Configuring Route Reflection” on page 575.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
<b>See Also</b>	cluster on page 615

**no-validate**

---

<b>Syntax</b>	<code>no-validate <i>policy-name</i>;</code>
<b>Hierarchy Level</b>	<code>[edit protocols bgp group <i>group-name</i> family (inet   inetflow)],</code> <code>[edit protocols bgp group <i>group-name</i> neighbor <i>address</i></code> <code>family (inet   inetflow)],</code> <code>[edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> family</code> <code>(inet   inetflow)],</code> <code>[edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i></code> <code>neighbor <i>address</i> family (inet   inetflow)]</code>
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Allows you to skip the flow route validation procedure after packets are accepted by a policy.
<b>Options</b>	<i>policy-name</i> —Import policy to match NLRI messages.
<b>Usage Guidelines</b>	See “Enabling BGP to Carry Flow-Specific Routes” on page 585.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.



## out-delay

---

<b>Syntax</b>	out-delay <i>seconds</i> ;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Specify how long a route must be present in the JUNOS routing table before it is exported to BGP. Use this time delay to help bundle routing updates.
<b>Default</b>	If you omit this statement, routes are exported to BGP immediately after they have been added to the routing table.
<b>Options</b>	<i>seconds</i> —Output delay time. <b>Range:</b> 0 through 65,535 seconds <b>Default:</b> 0 seconds
<b>Usage Guidelines</b>	See “Configuring How Often BGP Exchanges Routes with the Routing Table” on page 595.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.


## passive

---

<b>Syntax</b>	passive;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Do not send active open messages to the peer. Rather, wait for the peer to issue an open request.
<b>Default</b>	If you omit this statement, all explicitly configured peers are active, and each peer periodically sends open requests until its peer responds.
<b>Usage Guidelines</b>	See “Opening a Peer Connection Passively” on page 562.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## path-selection

---

<b>Syntax</b>	<pre> path-selection {   (cisco-non-deterministic   always-compare-med   external-router-id);   med-plus-igp {     igp-multiplier <i>number</i>;     med-multiplier <i>number</i>;   } }</pre>
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp], [edit protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4. med-plus-igp option introduced in JUNOS Release 8.1.
<b>Description</b>	Configure BGP path selection.
<b>Default</b>	If the <b>path-selection</b> statement is not included in the configuration, only the MEDs of routes that have the same peer ASs are compared.
<b>Options</b>	<p><b>cisco-non-deterministic</b>—Configure routing table path selection so that it is performed using the same nondeterministic behavior as the Cisco IOS software. The active path is always first. All inactive, but eligible, paths follow the active path and are maintained in the order in which they were received, with the most recent path first. Ineligible paths remain at the end of the list.</p> <p><b>always-compare-med</b>—Always compare MEDs whether or not the peer ASs of the compared routes are the same.</p>
	<b>NOTE:</b> We recommend that you configure the <b>always-compare-med</b> option.
	<p><b>external-router-id</b>—Compare the router ID between external BGP paths to determine the active path.</p> <p><b>med-plus-igp</b>—Add the IGP cost to the next-hop destination to the MED before comparing MED values for path selection.</p> <p><b>igp-multiplier <i>number</i></b>—The multiplier value for the IGP cost to a next-hop address.  <b>Range:</b> 1 through 1000  <b>Default:</b> None</p> <p><b>med-multiplier <i>number</i></b>—The multiplier value for the MED calculation.  <b>Range:</b> 1 through 1000  <b>Default:</b> None</p>
<b>Usage Guidelines</b>	See “Configuring Routing Table Path Selection” on page 569.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

**peer-as**

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<b>Syntax</b>	<code>peer-as <i>autonomous-system</i> ;</code>
<b>Hierarchy Level</b>	<code>[edit logical-routers <i>logical-router-name</i> protocols bgp],</code> <code>[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i>],</code> <code>[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i></code> <code>neighbor <i>address</i>],</code> <code>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i></code> <code>protocols bgp],</code> <code>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i></code> <code>protocols bgp group <i>group-name</i>],</code> <code>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i></code> <code>protocols bgp group <i>group-name</i> neighbor <i>address</i>],</code> <code>[edit protocols bgp],</code> <code>[edit protocols bgp group <i>group-name</i>],</code> <code>[edit protocols bgp group <i>group-name</i> neighbor <i>address</i>],</code> <code>[edit routing-instances <i>routing-instance-name</i> protocols bgp],</code> <code>[edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i>],</code> <code>[edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i></code> <code>neighbor <i>address</i>]</code>
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Specify the neighbor (peer) AS number.
<b>Options</b>	<i>autonomous-system</i> —AS number.
<b>Usage Guidelines</b>	See “Defining BGP Groups and Peers” on page 547.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## preference

---

<b>Syntax</b>	<code>preference <i>preference</i>;</code>
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	<p>Specify the preference for routes learned from BGP.</p> <p>At the BGP global level, the <b>preference</b> statement sets the preference for routes learned from BGP. You can override this preference in a BGP group or peer <b>preference</b> statement.</p> <p>At the group or peer level, the <b>preference</b> statement sets the preference for routes learned from the group or peer. Use this statement to override the preference set in the BGP global <b>preference</b> statement when you want to favor routes from one group or peer over those of another.</p>
<b>Options</b>	<p><b>preference</b>—Preference to assign to routes learned from BGP or from the group or peer.</p> <p><b>Range:</b> 0 through 4,294,967,295 (<math>2^{32} - 1</math>)</p> <p><b>Default:</b> 170 for the primary preference</p>
<b>Usage Guidelines</b>	See “Controlling Route Preference” on page 568.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
<b>See Also</b>	local-preference on page 634

## prefix-limit

---

**Syntax** prefix-limit {  
     maximum *number*;  
     teardown <*percentage*> <idle-timeout (forever | *timeout-in-minutes*)>;  
}

**Hierarchy Level** [edit logical-routers *logical-router-name* protocols bgp family inet  
     (any | labeled-unicast | multicast | unicast)],  
 [edit logical-routers *logical-router-name* protocols bgp group *group-name* family  
     inet (any | labeled-unicast | multicast | unicast)],  
 [edit logical-routers *logical-router-name* protocols bgp group *group-name*  
     neighbor *address* family inet (any | labeled-unicast | multicast | unicast)],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
     protocols bgp family inet (any | labeled-unicast | multicast | unicast)],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
     protocols bgp group *group-name* family inet  
     (any | labeled-unicast | multicast | unicast)],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
     protocols bgp group *group-name* neighbor *address*  
     family inet (any | labeled-unicast | multicast | unicast)],  
 [edit protocols bgp family inet (any | labeled-unicast | multicast | unicast)],  
 [edit protocols bgp group *group-name* family inet  
     (any | labeled-unicast | multicast | unicast)],  
 [edit protocols bgp group *group-name* neighbor *address*  
     family inet (any | labeled-unicast | multicast | unicast)],  
 [edit routing-instances *routing-instance-name* protocols bgp family inet  
     (any | labeled-unicast | multicast | unicast)],  
 [edit routing-instances *routing-instance-name* protocols bgp group *group-name* family  
     inet (any | labeled-unicast | multicast | unicast)],  
 [edit routing-instances *routing-instance-name* protocols bgp group *group-name*  
     neighbor *address* family inet (any | labeled-unicast | multicast | unicast)]

**Release Information** Statement introduced before JUNOS Release 7.4.

**Description** Limit the number of prefixes received on a BGP peering and a rate-limit logging when injected prefixes exceed a set limit.

**Options** maximum *number*—When you set the maximum number of prefixes, a message is logged when that number is reached.

**Range:** 1 through 4,294,967,295

teardown <*percentage*>—If you include the **teardown** statement, the session is torn down when the maximum number of prefixes is reached. If you specify a percentage, messages are logged when the number of prefixes reaches that percentage. Once the session is torn down, it will reestablish in a short time unless you include the **idle-timeout** statement. Then the session can be kept down for a specified amount of time, or forever. If you specify **forever**, the session is reestablished only after you issue a **clear bgp neighbor** command.

**Range:** 0 through 100

**idle-timeout** (*forever* | *timeout-in-minutes*)—If you include the **idle-timeout** statement, the session is torn down for a specified amount of time, or forever. If you specify a period of time, the session is allowed to reestablish after this timeout period. If you specify **forever**, the session is reestablished only after you intervene with a **clear bgp neighbor** command.  
**Range:** 0 through 2400

**Usage Guidelines** See “Enabling Multiprotocol BGP” on page 581.

**Required Privilege Level** routing—To view this statement in the configuration.  
 routing-control—To add this statement to the configuration.

## protocol

---

**Syntax** `protocol protocol;`

**Hierarchy Level** [edit logical-routers *logical-router-name* protocols bgp group *group-name*],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
 protocols bgp group *group-name*],  
 [edit protocols bgp group *group-name*],  
 [edit routing-instances *routing-instance-name* protocols bgp group *group-name*]

**Release Information** Statement introduced before JUNOS Release 7.4.

**Description** Specify the interior gateway protocol (IGP) that BGP should use to resolve the next hop for BGP routes.

**Default** If you do not include this statement, BGP uses all active routes when resolving next hops.

**Options** *protocol*—Protocol name. It can be *isis* or *ospf*.

**Usage Guidelines** See “Choosing the Protocol Used to Determine the Next Hop” on page 567.

**Required Privilege Level** routing—To view this statement in the configuration.  
 routing-control—To add this statement to the configuration.

## remove-private

---

<b>Syntax</b>	remove-private;
<b>Hierarchy Level</b>	<p>[edit logical-routers <i>logical-router-name</i> protocols bgp],</p> <p>[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i>],</p> <p>[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i>],</p> <p>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp],</p> <p>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i>],</p> <p>[edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i>],</p> <p>[edit protocols bgp],</p> <p>[edit protocols bgp group <i>group-name</i>],</p> <p>[edit protocols bgp group <i>group-name</i> neighbor <i>address</i>],</p> <p>[edit routing-instances <i>routing-instance-name</i> protocols bgp],</p> <p>[edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i>],</p> <p>[edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i>]</p>
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	<p>When advertising AS paths to remote systems, have the local system strip private AS numbers from the AS path. The numbers are stripped from the AS path starting at the left end of the AS path (the end where AS paths have been most recently added). The router stops searching for private ASs when it finds the first non-private AS. This operation takes place after any confederation member ASs have already been removed from the AS path, if applicable.</p> <p>The software recognizes the set of AS numbers that is considered private, a range that is defined in the Internet Assigned Numbers Authority (IANA) assigned numbers document.</p> <p>The set of reserved AS numbers is in the range from 64,512 through 65,535.</p>
<b>Usage Guidelines</b>	See “Removing Private AS Numbers from AS Paths” on page 574.
<b>Required Privilege Level</b>	<p>routing—To view this statement in the configuration.</p> <p>routing-control—To add this statement to the configuration.</p>



**resolve-vpn**

<b>Syntax</b>	resolve-vpn;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp family inet labeled-unicast], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> family inet labeled-unicast], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> family inet labeled-unicast], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp family inet labeled-unicast], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> family inet labeled-unicast], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> family inet labeled-unicast], [edit protocols bgp family inet labeled-unicast], [edit protocols bgp group <i>group-name</i> family inet labeled-unicast], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> family inet labeled-unicast], [edit routing-instances <i>routing-instance-name</i> protocols bgp family inet labeled-unicast], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> family inet labeled-unicast], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> family inet labeled-unicast]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Allow labeled routes to be placed in the <b>inet.3</b> routing table for route resolution. These routes are then resolved for PE router connections where the remote PE is located across another AS. For a PE router to install a route in the VRF, the next hop must resolve to a route stored within the <b>inet.3</b> table.
<b>Usage Guidelines</b>	See “Enabling Multiprotocol BGP” on page 581.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

**rib**

---

<b>Syntax</b>	rib inet.3;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp family inet labeled-unicast], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> family inet labeled-unicast], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> family inet labeled-unicast], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp family inet labeled-unicast], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> family inet labeled-unicast], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> family inet labeled-unicast], [edit protocols bgp family inet labeled-unicast], [edit protocols bgp group <i>group-name</i> family inet labeled-unicast], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> family inet labeled-unicast], [edit routing-instances <i>routing-instance-name</i> protocols bgp family inet labeled-unicast], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> family inet labeled-unicast], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> family inet labeled-unicast]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	You can allow both labeled and unlabeled routes to be exchanged in a single session. The labeled routes are placed in the <b>inet.3</b> routing table, and both labeled and unlabeled unicast routes can be sent or received by the router.
<b>Options</b>	inet.3—Name of the routing table.
<b>Usage Guidelines</b>	See “Enabling Multiprotocol BGP” on page 581.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## rib-group

---

<b>Syntax</b>	<code>rib-group group-name;</code>
<b>Hierarchy Level</b>	<pre>[edit logical-routers logical-router-name protocols bgp family inet   (any   labeled-unicast   unicast   multicast)], [edit logical-routers logical-router-name protocols bgp group group-name family inet   (any   labeled-unicast   unicast   multicast)], [edit logical-routers logical-router-name protocols bgp group group-name neighbor   address family inet (any   labeled-unicast   unicast   multicast)], [edit logical-routers logical-router-name routing-instances routing-instance-name   protocols bgp family inet (any   labeled-unicast   unicast   multicast)], [edit logical-routers logical-router-name routing-instances routing-instance-name   protocols bgp group group-name family inet (any   labeled-unicast     unicast   multicast)], [edit logical-routers logical-router-name routing-instances routing-instance-name   protocols bgp group group-name neighbor address family inet   (any   labeled-unicast   unicast   multicast)], [edit protocols bgp family inet (any   labeled-unicast   unicast   multicast)], [edit protocols bgp group group-name family inet (any   labeled-unicast   unicast     multicast)], [edit protocols bgp group group-name neighbor address   family inet (any   labeled-unicast   unicast   multicast)], [edit routing-instances routing-instance-name protocols bgp family inet   (any   labeled-unicast   unicast   multicast)], [edit routing-instances routing-instance-name protocols bgp group group-name family   inet (any   labeled-unicast   unicast   multicast)], [edit routing-instances routing-instance-name protocols bgp group group-name   neighbor address family inet (any   labeled-unicast   unicast   multicast)]</pre>
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Add unicast prefixes to unicast and multicast tables.
<b>Options</b>	<i>group-name</i> —Name of the routing table group. The name must start with a letter and can include letters, numbers, and hyphens. You generally specify only one routing table group.
<b>Usage Guidelines</b>	See “Creating Routing Table Groups” on page 104, “Configuring How Interface Routes Are Imported into Routing Tables” on page 105, and “Configuring BGP Routing Table Groups” on page 584.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
<b>See Also</b>	interface-routes on page 154, rib-group on page 173

## route-target

---

**Syntax** route-target {  
     advertise-default;  
     external-paths *number*;  
     prefix-limit {  
         maximum *number*;  
         teardown <*percentage*> <idle-timeout (forever | *time-in-minutes*)>;  
     }  
 }

**Hierarchy Level** [edit logical router *logical-router-name* protocols bgp family],  
 [edit logical-routers *logical-router-name* protocols bgp group *group-name* family],  
 [edit logical-routers *logical-router-name* protocols bgp group *group-name*  
   neighbor *address* family],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
   protocols bgp group *group-name* family],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
   protocols bgp group *group-name* neighbor *address* family],  
 [edit protocols bgp family],  
 [edit protocols bgp group *group-name* family],  
 [edit protocols bgp group *group-name* neighbor *address* family],  
 [edit routing-instances *routing-instance-name* protocols bgp group *group-name* family],  
 [edit routing-instances *routing-instance-name* protocols bgp group *group-name*  
   neighbor *address* family]

**Release Information** Statement introduced before JUNOS Release 7.4.

**Description** Limit the number of prefixes advertised on BGP peerings specifically to the peers that need the updates.

**Options** advertise-default—Advertise default routes and suppress more specific routes.

external-paths *number*—Number of external paths accepted for route filtering.

**Range:** 1 through 16 paths

**Default:** 1 path

The remaining statements are explained separately.

**Usage Guidelines** See “Enabling Route Target Filtering” on page 592.

**Required Privilege Level** routing—To view this statement in the configuration.  
 routing-control—To add this statement to the configuration.

**tcp-mss**


---

<b>Syntax</b>	tcp-mss <i>segment-size</i> ;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>neighbor-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>neighbor-name</i> ], [edit protocols bgp], [edit protocol bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>neighbor-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> neighbor <i>neighbor-name</i> ]
<b>Release Information</b>	Statement introduced in JUNOS Release 8.1.
<b>Description</b>	Configure the maximum segment size (MSS) for the TCP connection for BGP neighbors.
<b>Usage Guidelines</b>	See “Configuring the Segment Size for TCP” on page 602.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## traceoptions

---

**Syntax** traceoptions {  
     file *name* <replace> <size *size*> <files *number*> <no-stamp>  
     <(world-readable | no-world-readable)>;  
     flag *flag* <flag-modifier> <disable>;  
 }

**Hierarchy Level** [edit logical-routers *logical-router-name* protocols bgp],  
 [edit logical-routers *logical-router-name* protocols bgp group *group-name*],  
 [edit logical-routers *logical-router-name* protocols bgp group *group-name*  
   neighbor *address*],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
   protocols bgp],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
   protocols bgp group *group-name*],  
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name*  
   protocols bgp group *group-name* neighbor *address*],  
 [edit protocols bgp],  
 [edit protocols bgp group *group-name*],  
 [edit protocols bgp group *group-name* neighbor *address*],  
 [edit routing-instances *routing-instance-name* protocols bgp],  
 [edit routing-instances *routing-instance-name* protocols bgp group *group-name*],  
 [edit routing-instances *routing-instance-name* protocols bgp group *group-name*  
   neighbor *address*]

**Release Information** Statement introduced before JUNOS Release 7.4.

**Description** Configure BGP protocol-level tracing options.

To specify more than one tracing operation, include multiple **flag** statements.

**Default** The default BGP protocol-level tracing options are inherited from the routing protocols **traceoptions** statement included at the [edit routing-options] hierarchy level. The default group-level trace options are inherited from the BGP protocol-level **traceoptions** statement. The default peer-level trace options are inherited from the group-level **traceoptions** statement.

**Options** **disable**—(Optional) Disable the tracing operation. You can use this option is to disable a single operation when you have defined a broad group of tracing operations, such as **all**.

**file *name***—Name of the file to receive the output of the tracing operation. Enclose the name within quotation marks. All files are placed in the directory **/var/log**. We recommend that you place BGP tracing output in the file **bgp-log**.

**files *number***—(Optional) Maximum number of trace files. When a trace file named **trace-file** reaches its maximum size, it is renamed **trace-file.0**, then **trace-file.1**, and so on, until the maximum number of trace files is reached. Then, the oldest trace file is overwritten.

If you specify a maximum number of files, you must also specify a maximum file size with the **size** option.

**Range:** 2 through 1000 files

**Default:** 10 files

*flag*—Tracing operation to perform. To specify more than one tracing operation, include multiple *flag* statements.

#### **BGP Tracing Flags**

- *as-path*—AS path regular expression operations.
- *damping*—Damping operations.
- *keepalive*—BGP keepalive messages.
- *open*—Open packets. These packets are sent between peers when they are establishing a connection.
- *packets*—All BGP protocol packets.
- *update*—Update packets. These packets provide routing updates to BGP systems.

#### **Global Tracing Flags**

- *all*—All tracing operations.
- *general*—A combination of the *normal* and *route* trace operations.
- *normal*—All normal operations.  
**Default:** If you do not specify this option, only unusual or abnormal operations are traced.
- *policy*—Policy operations and actions.
- *route*—Routing table changes.
- *state*—State transitions.
- *task*—Interface transactions and processing.
- *timer*—Timer usage.

*flag-modifier*—(Optional) Modifier for the tracing flag. You can specify one or more of these modifiers:

- *detail*—Provide detailed trace information.
- *filter*—Filter trace information. Applies only for *route* and *damping* tracing flags.
- *receive*—Packets being received.
- *send*—Packets being transmitted.

*no-stamp*—(Optional) Do not place timestamp information at the beginning of each line in the trace file.

**Default:** If you omit this option, timestamp information is placed at the beginning of each line of the tracing output.

**no-world-readable**—(Optional) Disallow any user to read the log file.

**replace**—(Optional) Replace an existing trace file if there is one.

**Default:** If you do not include this option, tracing output is appended to an existing trace file.

**size size**—(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named *trace-file* reaches this size, it is renamed *trace-file.0*. When the *trace-file* again reaches its maximum size, *trace-file.0* is renamed *trace-file.1* and *trace-file* is renamed *trace-file.0*. This renaming scheme continues until the maximum number of trace files is reached. Then, the oldest trace file is overwritten.

If you specify a maximum file size, you also must specify a maximum number of trace files with the **files** option.

**Syntax:** *xk* to specify KB, *xm* to specify MB, or *xg* to specify GB

**Range:** 10 KB through the maximum file size supported on your system

**Default:** 128 KB

**world-readable**—(Optional) Allow any user to read the log file.

**Usage Guidelines** See “Tracing BGP Protocol Traffic” on page 602.

**Required Privilege Level** routing and trace—To view this statement in the configuration.  
routing-control and trace-control—To add this statement to the configuration.

**See Also** log-updown on page 635



**type**


---

<b>Syntax</b>	<code>type type;</code>
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> ], [edit routing-instances <i>routing-instance-name</i> protocols bgp group <i>group-name</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Specify the type of BGP peer group.
<b>Options</b>	<i>type</i> —Type of group: <ul style="list-style-type: none"> <li>■ <code>internal</code>—Internal group</li> <li>■ <code>external</code>—External group</li> </ul>
<b>Usage Guidelines</b>	See “Defining BGP Groups and Peers” on page 547.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

**vpn-apply-export**


---

<b>Syntax</b>	<code>vpn-apply-export;</code>
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> neighbor <i>address</i> ], [edit protocols bgp], [edit protocols bgp group <i>group-name</i> ], [edit protocols bgp group <i>group-name</i> neighbor <i>address</i> ]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Apply a BGP export policy in addition to a VPN routing and forwarding (VRF) export policy to routes.
<b>Default</b>	The default action is to accept.
<b>Usage Guidelines</b>	See “Applying BGP Export Policy to VRF Routes” on page 600.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

