

## Chapter 21

# Summary of the Interprovider and Carrier-of-Carriers VPNs Configuration Statements

The following section explains the configuration statements that apply specifically to hierarchical and recursive Border Gateway Protocol (BGP) and Multiprotocol Label Switching (MPLS) virtual private networks (VPNs).

### labeled-unicast

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<b>Syntax</b>	<pre>labeled-unicast {   per-group-label;   resolve-vpn;   traffic-statistics {     file <i>file-name</i> &lt;world-readable   no-world-readable&gt;;     interval <i>seconds</i>;   } }</pre>
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols bgp family inet], [edit logical-routers <i>logical-router-name</i> protocols bgp group <i>group-name</i> family inet], [edit protocols bgp family inet], [edit protocols bgp group <i>group-name</i> family inet]
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Advertise labeled routes from the <code>inet.0</code> VPN, and place labeled routes into the <code>inet.0</code> VPN. When the <code>labeled-unicast</code> statement is used, the local router automatically performs a next hop to self on all routes advertised into the external BGP (EBGP) from the internal BGP (IBGP) and from IBGP to EBGP.
<b>Options</b>	<code>resolve-vpn</code> —(Optional) Store labeled routes in the <code>inet.3</code> table to resolve routes for a provider edge (PE) router located in a different autonomous system (AS). For a PE router to install a route in the VPN routing and forwarding (VRF) table, the next hop must resolve to a route stored in the <code>inet.3</code> table.

The other statements are explained separately.

**Usage Guidelines** See “Configuring Interprovider and Carrier-of-Carriers VPNs” on page 433.

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

## per-group-label

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**Syntax** per-group-label;

**Hierarchy Level** [edit logical-routers *logical-router-name* protocols bgp family inet labeled-unicast],  
[edit logical-routers *logical-router-name* protocols bgp group *group-name* family inet labeled-unicast],  
[edit protocols bgp family inet labeled-unicast],  
[edit protocols bgp group *group-name* family inet labeled-unicast]

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

**Description** Account for traffic from each customer separately by advertising separate labels for the same prefix to the peer routers in the BGP groups.

**Usage Guidelines** See “Configuring BGP to Gather Interprovider and Carrier-of-Carriers VPNs Statistics” on page 455.

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

## traffic-statistics

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<b>Syntax</b>	<pre>traffic-statistics {     file <i>file-name</i> &lt;world-readable   no-world-readable&gt;;     interval <i>seconds</i>; }</pre>
<b>Hierarchy Level</b>	<pre>[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 protocols bgp family inet labeled-unicast], [edit protocols bgp group <i>group-name</i> family inet labeled-unicast]</pre>
<b>Release Information</b>	Statement introduced before JUNOS Release 7.4.
<b>Description</b>	Enable the collection of traffic statistics for interprovider or carrier-of-carriers VPNs.
<b>Options</b>	<p>file <i>file-name</i>—Specify a filename for the BGP labeled-unicast traffic statistics file. If you do not specify a filename, statistics are still collected but can only be viewed by using the <code>show bgp group traffic statistics <i>group-name</i></code> command.</p> <p>interval <i>seconds</i>—Specify how often BGP labeled-unicast traffic statistics are collected.</p>
<b>Usage Guidelines</b>	See “Configuring BGP to Gather Interprovider and Carrier-of-Carriers VPNs Statistics” on page 455.
<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>

