

Chapter 15

Summary of LDP Configuration Statements

This chapter provides a reference for each Label Distribution Protocol (LDP) configuration statement. The statements are organized alphabetically.

authentication-key

Syntax	authentication-key <i>md5-authentication-key</i> ;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp session <i>address</i>], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp session <i>address</i>], [edit protocols ldp session <i>address</i>], [edit routing-instances <i>routing-instance-name</i> protocols ldp session <i>address</i>]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Configure the MD5 authentication signature. The maximum length of the authentication signature is 69 characters.
Usage Guidelines	See “Configuring the TCP MD5 Signature for an LDP Session” on page 385.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

bfd-liveness-detection

Syntax	<pre> bfd-liveness-detection { minimum-interval <i>milliseconds</i>; minimum-receive-interval <i>milliseconds</i>; minimum-transmit-interval <i>milliseconds</i>; multiplier <i>detection-time-multiplier</i>; } </pre>
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp oam], [edit protocols ldp oam]
Release Information	Statement introduced in JUNOS Release 7.6.
Description	Enable Bidirectional Forwarding Detection (BFD) for all MPLS LSPs or for just a specific LSP.
Options	<p>minimum-interval—Minimum transmit and receive interval. Range—50 through 255,000 milliseconds Default—50</p> <p>minimum-receive-interval—Minimum receive interval. Range—50 through 255,000 milliseconds Default—50</p> <p>minimum-transmit-interval—Minimum transmit interval. Range—50 through 255,000 milliseconds Default—50</p> <p>multiplier—Detection time multiplier. Range—50 through 255 Default—3</p>
Usage Guidelines	See “Configuring BFD for LDP LSPs” on page 375.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

deaggregate

Syntax	deaggregate no-deaggregate;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp], [edit protocols ldp], [edit routing-instances <i>routing-instance-name</i> protocols ldp]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Control forwarding equivalence class (FEC) deaggregation on the router.
Default	Deaggregation is disabled on the router.
Options	deaggregate—Deaggregate FECs. no-deaggregate—Aggregate FECs.
Usage Guidelines	See “Configuring FEC Deaggregation” on page 373.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

disable

Syntax	disable;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp graceful-restart], [edit logical-routers <i>logical-router-name</i> protocols ldp interface <i>interface-name</i>], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp interface <i>interface-name</i>], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> routing-options graceful-restart], [edit protocols ldp graceful-restart], [edit protocols ldp interface <i>interface-name</i>], [edit routing-instances <i>routing-instance-name</i> protocols ldp interface <i>interface-name</i>], [edit routing-instances <i>routing-instance-name</i> routing-options graceful-restart],
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Explicitly disable LDP on an interface, or explicitly disable LDP graceful restart.
Default	LDP is enabled on interfaces configured with the LDP interface statement. LDP graceful restart is automatically enabled when graceful restart is enabled under the [edit routing-options] hierarchy level.
Usage Guidelines	See “Enabling and Disabling LDP” on page 361 and “Configuring LDP Graceful Restart” on page 364.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

egress-policy

Syntax	<code>egress-policy [policy-name]</code>
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp], [edit protocols ldp], [edit routing-instances <i>routing-instance-name</i> protocols ldp]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Control the prefixes advertised into LDP.
Default	Only the loopback address is advertised.
Options	<i>policy-name</i> —Name of one or more routing policies.
Usage Guidelines	See “Configuring the LDP Egress Policy” on page 372.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

explicit-null

Syntax	<code>explicit-null;</code>
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp], [edit protocols ldp], [edit routing-instances <i>routing-instance-name</i> protocols ldp]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Advertise label 0 to the egress router of a label-switched path (LSP).
Default	If you do not include the <code>explicit-null</code> statement in the Multiprotocol Label Switching (MPLS) configuration, label 3 (implicit null) is advertised.
Usage Guidelines	See “Configuring MPLS and LDP to Pop the Label on the Ultimate-Hop Router” on page 383.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

export

Syntax	export [<i>policy-name</i>];
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp], [edit protocols ldp], [edit routing-instances <i>routing-instance-name</i> protocols ldp]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Apply policy filters to outbound LDP label bindings. Filters are applied to all label bindings from all neighbors.
Options	<i>policy-name</i> —Name of one or more routing policies.
Usage Guidelines	See “Configuring LDP Outbound-Label Filtering” on page 369.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

graceful-restart

Syntax	graceful-restart { disable; helper-disable; maximum-recovery-time <i>value</i> ; recovery-time <i>value</i> ; }
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp], [edit protocols ldp], [edit routing-instances <i>routing-instance-name</i> protocols ldp]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Enable LDP graceful restart on the LDP master protocol instance or for a specific routing instance.
Usage Guidelines	See “Configuring LDP Graceful Restart” on page 364.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

hello-interval

Syntax	hello-interval <i>seconds</i> ;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp interface <i>interface-name</i>], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp interface <i>interface-name</i>], [edit protocols ldp interface <i>interface-name</i>], [edit routing-instances <i>routing-instance-name</i> protocols ldp interface <i>interface-name</i>]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Control the rate at which hello messages are sent on the interface.
Options	<i>seconds</i> —Length of time between hello packets. Range: 1 through 65,535 seconds Default: 5 seconds for link hello messages, 15 seconds for targeted hello messages
Usage Guidelines	See “Configuring the LDP Hello Interval” on page 362.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

helper-disable

Syntax	helper-disable;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp graceful-restart], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp graceful-restart], [edit protocols ldp graceful-restart], [edit routing-instances <i>routing-instance-name</i> protocols ldp graceful-restart]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Disable helper mode for LDP graceful restart. When helper mode is disabled, a router cannot help a neighboring router that is attempting to restart LDP.
Default	Helper mode is enabled by default on all routing protocols (including LDP) that support graceful restart.
Usage Guidelines	See “Configuring LDP Graceful Restart” on page 364.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

hold-time

Syntax	hold-time <i>seconds</i> ;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp interface <i>interface-name</i>], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp interface <i>interface-name</i>], [edit protocols ldp interface <i>interface-name</i>], [edit routing-instances <i>routing-instance-name</i> protocols ldp interface <i>interface-name</i>]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Specify how long an LDP node should wait for a hello message before declaring a neighbor to be down. This value is sent as part of a hello message so that each LDP node tells its neighbors how long to wait.
Options	<i>seconds</i> —Hold-time value. Range: 1 through 65,535 Default: 15 seconds for link hello messages, 45 seconds for targeted hello messages
Usage Guidelines	See “Configuring the LDP Hold Time” on page 362.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

ignore-lsp-metrics

	ignore-lsp-metrics;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ospf traffic-engineering shortcuts], [edit protocols ospf traffic-engineering shortcuts]
Release Information	Statement introduced in JUNOS Release 7.5.
Description	Cause OSPF to ignore the RSVP LSP metric. Some other vendors use an OSPF metric of 1 for the loopback address. Juniper Networks routers use an OSPF metric of 0 for the loopback address. This can cause interoperability problems when you configure LDP tunneling over RSVP LSPs in heterogeneous networks.
Usage Guidelines	See “Enabling LDP over RSVP-Established LSPs in Heterogeneous Networks” on page 384.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

import

Syntax	import [<i>policy-name</i>];
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp], [edit protocols ldp], [edit routing-instances <i>routing-instance-name</i> protocols ldp]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Apply policy filters to received LDP label bindings. Filters are applied to all label bindings from all neighbors.
Options	<i>policy-name</i> —Name of one or more routing policies.
Usage Guidelines	See “Configuring LDP Received-Label Filtering” on page 367.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

interface

Syntax	interface <i>interface-name</i> { disable; hello-interval <i>seconds</i> ; hold-time <i>seconds</i> ; transport-address (interface loopback); }
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp], [edit protocols ldp], [edit routing-instances <i>routing-instance-name</i> protocols ldp]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Enable LDP on one or more router interfaces.
Default	LDP is disabled on all interfaces.
Options	<i>interface-name</i> —Name of an interface. To configure all interfaces, specify all. The remaining statements are explained separately.
Usage Guidelines	See “Enabling and Disabling LDP” on page 361.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

keepalive-interval

Syntax	keepalive-interval <i>seconds</i> ;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp], [edit protocols ldp], [edit routing-instances <i>routing-instance-name</i> protocols ldp]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Set the keepalive interval value.
Options	<i>seconds</i> —Keepalive value. Range: 1 through 65,535 Default: 10 seconds
Usage Guidelines	See “Configuring the LDP Keepalive Interval” on page 363.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

keepalive-timeout

Syntax	keepalive-timeout <i>seconds</i> ;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp], [edit protocols ldp], [edit routing-instances <i>routing-instance-name</i> protocols ldp]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Set the keepalive timeout value. The keepalive timeout defines the amount of time that the neighbor LDP node waits before determining that the session has failed.
Options	<i>seconds</i> —Keepalive timeout value. Range: 1 through 65,535 Default: 30 seconds
Usage Guidelines	See “Configuring the LDP Keepalive Timeout” on page 363.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

ldp

Syntax	ldp { ... }
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols], [edit protocols], [edit routing-instances <i>routing-instance-name</i> protocols]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Enable LDP routing on the router. You must include the <code>ldp</code> statement in the configuration to enable LDP on the router.
Default	LDP is disabled on the router.
Usage Guidelines	See “Enabling and Disabling LDP” on page 361.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

ldp-synchronization

Syntax	ldp-synchronization { disable; hold-time <i>seconds</i> ; }
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ospf interface <i>interface-name</i>], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ospf interface <i>interface-name</i>], [edit protocols ospf interface <i>interface-name</i>], [edit routing-instances <i>routing-instance-name</i> protocols ospf interface <i>interface-name</i>]
Release Information	Statement introduced in Release 7.5.
Description	Enable synchronization by advertising the maximum cost metric until LDP is operational on the link.
Options	The other statements are explained separately.
Usage Guidelines	“Configuring LDP Synchronization with the IGP” on page 386
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

log-updown

Syntax	log-updown { trap disable; }
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp], [edit protocols ldp], [edit routing-instances <i>routing-instance-name</i> protocols ldp]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Disable LDP traps on the router, logical router, or routing instance.
Option	trap disable—Disable LDP traps. Default: LDP traps are enabled on the router.
Usage Guidelines	See “Disabling SNMP Traps for LDP” on page 385.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

maximum-recovery-time

Syntax	maximum-recovery-time <i>seconds</i> ;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp graceful-restart], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp graceful-restart], [edit protocols ldp graceful-restart], [edit routing-instances <i>routing-instance-name</i> protocols ldp graceful-restart]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Specify the maximum amount of time to wait before giving up an attempt to gracefully restart.
Options	<i>seconds</i> —Configure the maximum recovery time, in seconds. Range: 120 through 1800 seconds Default: 140 seconds
Usage Guidelines	See “Configuring Recovery Time and Maximum Recovery Time” on page 366.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

no-deaggregate

See deaggregate on page 389.

no-forwarding

Syntax	no-forwarding;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp], [edit protocols ldp], [edit routing-instances <i>routing-instance-name</i> protocols ldp]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Do not add ingress routes to the inet.0 routing table even if traffic-engineering bgp-igp (configured at the [edit protocols mpls] hierarchy level) is enabled.
Default	The no-forwarding statement is disabled. Ingress routes are added to the inet.0 routing table instead of the inet.3 routing table when traffic-engineering bgp-igp is enabled.
Usage Guidelines	See “Preventing Ingress Routes from Being Added to inet.0” on page 383.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

oam

Syntax	oam { bfd-liveness-detection { minimum-interval; minimum-receive-interval; minimum-transmit-interval; multiplier; } fec fec-address; }
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp], [edit protocols ldp]
Release Information	Statement introduced in JUNOS Release 7.6.
Description	Enable OAM for all of the LDP LSPs or for a specific LDP LSP.
Options	fec—Specify the forwarding equivalence class (FEC) address. The remaining statements are explained separately.
Usage Guidelines	See “Configuring BFD for LDP LSPs” on page 375.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

policing

Syntax	<pre> policing { fec <i>fec-address</i> { ingress-traffic <i>filter-name</i>; transit-traffic <i>filter-name</i>; } } </pre>
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp], [edit protocols ldp], [edit routing-instances <i>routing-instance-name</i> protocols ldp]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Enable policing of forwarding equivalence classes (FECs) for LDP.
Options	fec—Specify the address for the FEC. ingress-traffic—Specify the name of the filter for policing ingress FEC traffic. transit-traffic—Specify the name of the filter for policing transit FEC traffic.
Usage Guidelines	See “Configuring Policers for LDP FECs” on page 374.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

preference

Syntax	<pre> preference <i>preference</i>; </pre>
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp], [edit protocols ldp interface <i>interface-name</i>], [edit routing-instances <i>routing-instance-name</i> protocols ldp interface <i>interface-name</i>]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Set the route preference level for LDP routes.
Options	<i>preference</i> —Preferred value. Range: 0 through 255 Default: 9
Usage Guidelines	See “Configuring LDP Route Preferences” on page 363.
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

recovery-time

Syntax	recovery-time <i>seconds</i> ;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp graceful-restart], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp graceful-restart], [edit protocols ldp graceful-restart], [edit routing-instances <i>routing-instance-name</i> protocols ldp graceful-restart]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Specify the amount of time a router waits for LDP to restart gracefully.
Options	<i>seconds</i> —Configure the recovery time, in seconds. Range: 120 through 1800 seconds Default: 140 seconds
Usage Guidelines	See “Configuring Recovery Time and Maximum Recovery Time” on page 366.
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

session

Syntax	session <i>address</i> { authentication-key <i>authentication-key</i> ; }
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp], [edit protocols ldp], [edit routing-instances <i>routing-instance-name</i> protocols ldp]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Specify the LDP session to which you want to attach the Transmission Control Protocol (TCP) MD5 signature. Configure the <i>address</i> for the remote end of the LDP session. The remaining statement is explained separately.
Usage Guidelines	See “Configuring the TCP MD5 Signature for an LDP Session” on page 385.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

strict-targeted-hellos

Syntax	strict-targeted-hellos;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols ldp], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols ldp], [edit protocols ldp], [edit routing-instances <i>routing-instance-name</i> protocols ldp]
Release Information	Statement introduced before JUNOS Release 7.4.
Description	Prevents LDP sessions from being established with remote neighbors that have not been specifically configured. LDP peers will not respond to targeted hellos coming from a source that is not one of the configured remote neighbors.
Usage Guidelines	See “Enabling Strict Targeted Hellos” on page 386.
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

traceoptions

Syntax traceoptions {
 file *filename* <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 ldp],
 [edit logical-routers *logical-router-name* routing-instances *routing-instance-name*
 protocols ldp],
 [edit protocols ldp],
 [edit routing-instances *routing-instance-name* protocols ldp]

Release Information Statement introduced before JUNOS Release 7.4.

Description LDP protocol-level trace options.

Default The default LDP protocol-level trace options are inherited from the routing protocols traceoptions statement included at the [edit routing-options] hierarchy level.

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

filename—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 LDP tracing output in the file `ldp-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 also must specify a maximum file size with the `size` option.

Range: 2 to 1000

Default: 2 files

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

- *address*—Operation of address and address withdrawal messages
- *binding*—Label-binding operations
- *error*—Error conditions
- *event*—Protocol events
- *initialization*—Operation of initialization messages
- *label*—Operation of label request, label map, label withdrawal, and label release messages
- *notification*—Operation of notification messages
- *packets*—Equivalent to setting *address*, *initialization*, *label*, *notification*, and *periodic* flags
- *path*—Label-switched path operations
- *periodic*—Operation of hello and keepalive messages
- *route*—Operation of route messages
- *state*—Protocol state transitions

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

- *detail*—Provide detailed trace information.
- *disable*—Disable this trace flag.
- *filter*—Filter to apply to this flag. The *filter* flag modifier can be applied only to the *route*, *path*, and *binding* flags. This flag modifier has the following options:
 - *match-on*—Match on argument specified. The *match-on* option has the following suboption: *fec*, a filter based on the FEC associated with the traced object.
 - *policy policy-name*—Specify the filter policy.
- *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 *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: 1 MB

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

Usage Guidelines See “Tracing LDP Protocol Traffic” on page 379 and the *JUNOS Network Management Configuration Guide*.

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.

track-igp-metric

Syntax track-igp-metric;

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

Release Information Statement introduced before JUNOS Release 7.4.

Description Cause the IGP route metric to be used for the LDP routes instead of the default LDP route metric (the default LDP route metric is 1).

Usage Guidelines See “Configuring LDP to Use the IGP Route Metric” on page 382.

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

traffic-statistics

Syntax traffic-statistics {
 file *filename* <replace> <size *size*> <files *number*>
 <world-readable | no-world-readable>;
 interval *interval*;
 no-penultimate-hop;
 }

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

Release Information Statement introduced before JUNOS Release 7.4.

Description LDP traffic statistics display the amount of traffic passed through a router for a particular FEC.

Options file *filename*—Name of the file to receive the output of the LDP statistics operation. Enclose the name within quotation marks. All files are placed in the directory `/var/log`.

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

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

Range: 2 to 1000

Default: 2 files

no-penultimate-hop—(Optional) Do not collect traffic statistics on the penultimate hop router.

no-world-readable—(Optional) Prevents all users from reading the log file.

replace—(Optional) Replace an existing statistics file, if there is one.

Default: If you do not include this option, LDP statistics output is appended to an existing statistics file.

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

world-readable—(Optional) Enables log file access for all users.

interval interval—(Optional) Specifies the interval at which the statistics are polled and written to the file.

Default: 300 seconds (5 minutes)

Usage Guidelines See “Collecting LDP Statistics” on page 376.

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

transport-address

Syntax transport-address (router-id | interface);

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

Release Information Statement introduced before JUNOS Release 7.4.

Description Allow control of the transport address used by LDP.

Options router-id—The router identifier is used as the transport address.

interface—The first IP address on the interface is used as the transport address.

Default router-id

Usage Guidelines See “Configuring LDP Transport Address Control” on page 371.

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