

## Chapter 22

# Summary of GMPLS Configuration Statements

This chapter provides a reference for each Generalized Multiprotocol Label Switching (GMPLS) configuration statement. The statements are organized alphabetically.

### address

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<b>Syntax</b>	<code>address ip-address;</code>
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols link-management peer <i>peer-name</i> ], [edit protocols link-management peer <i>peer-name</i> ]
<b>Description</b>	The ID of the peer.
<b>Options</b>	<i>ip-address</i> —The IP address of the peer.
<b>Default</b>	The loopback address is advertised.
<b>Usage Guidelines</b>	See “Configure the LMP Peer ID” on page 365.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

### control-channel

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<b>Syntax</b>	<code>control-channel control-channel-interface;</code>
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols link-management peer <i>peer-name</i> ], [edit protocols link-management peer <i>peer-name</i> ]
<b>Description</b>	Specify the control channel interface for the peer.
<b>Options</b>	<i>control-channel-interface</i> —Name of the control channel interface.
<b>Usage Guidelines</b>	See “Configure LMP Peers” on page 365.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## dead-interval

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<b>Syntax</b>	dead-interval <i>seconds</i> ;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols ospf area <i>area-number</i> peer-interface <i>peer-interface-name</i> ], [edit protocols ospf area <i>area-number</i> peer-interface <i>peer-interface-name</i> ]
<b>Description</b>	Specify how long OSPF and OSPFv3 wait before declaring that a neighboring router is unavailable. This is an interval during which the router receives no hello packets from the neighbor.
<b>Options</b>	<i>seconds</i> —Interval to wait. <b>Range:</b> 1 through 65,535 <b>Default:</b> 40 seconds (four times the hello interval)
<b>Usage Guidelines</b>	See “Configure Peer Interfaces in RSVP and OSPF” on page 366.
<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>	hello-interval on page 375

## disable

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<b>Syntax</b>	disable;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols ospf area <i>area-number</i> peer-interface <i>peer-interface-name</i> ], [edit protocols ospf area <i>area-number</i> peer-interface <i>peer-interface-name</i> ]
<b>Description</b>	Disable an OSPF peer interface.
<b>Default</b>	The configured object is enabled (operational) unless explicitly disabled.
<b>Usage Guidelines</b>	See “Configure Peer Interfaces in RSVP and OSPF” on page 366.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## hello-interval

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<b>Syntax</b>	hello-interval <i>seconds</i> ;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols ospf area <i>area-number</i> peer-interface <i>peer-interface-name</i> ], [edit protocols ospf area <i>area-number</i> peer-interface <i>peer-interface-name</i> ]
<b>Description</b>	Specify how often the router sends hello packets out the peer interface. The hello interval must be the same for all routers on a shared logical IP network.
<b>Options</b>	<i>seconds</i> —Length of time between hello packets. <b>Range:</b> 1 through 255 <b>Default:</b> 10 seconds; 120 seconds (nonbroadcast networks)
<b>Usage Guidelines</b>	See “Configure Peer Interfaces in RSVP and OSPF” on page 366.
<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>	dead-interval on page 374

## interface

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<b>Syntax</b>	interface <i>interface-name</i> ;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols link-management te-link <i>te-link-name</i> ], [edit protocols link-management te-link <i>te-link-name</i> ]
<b>Description</b>	Specify the egress router interface.
<b>Options</b>	<i>interface-name</i> —Name of the interface to the egress router.
<b>Usage Guidelines</b>	See “Configure LMP” on page 362.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## link-management

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<b>Syntax</b>	link-management { ... }
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols], [edit protocols]
<b>Description</b>	Enable the Link Management Protocol (LMP) on the router.
<b>Usage Guidelines</b>	See “Configure LMP” on page 362.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## local-address

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<b>Syntax</b>	<code>local-address ip-address;</code>
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols link-management te-link <i>te-link-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols link-management te-link <i>te-link-name</i> interface <i>interface-name</i> ], [edit protocols link-management te-link <i>te-link-name</i> ] [edit protocols link-management te-link <i>te-link-name</i> interface <i>interface-name</i> ]
<b>Description</b>	Specify the local IP address associated with the TE link.
<b>Options</b>	<i>local-address</i> —Local IP address of the TE link.
<b>Usage Guidelines</b>	See “Configure the Local IP Address for the TE Link” on page 363.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## peer

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<b>Syntax</b>	<code>peer peer-name {     address ip-address;     control-channel interface;     te-link te-link-name; }</code>
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols link-management], [edit protocols link-management]
<b>Description</b>	Configure a network peer.
<b>Options</b>	<i>peer-name</i> —Name of the network peer.  The remaining statements are described separately in this chapter.
<b>Usage Guidelines</b>	See “Configure LMP Peers” on page 365.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## peer-interface

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<b>Syntax</b>	<code>peer-interface <i>peer-interface-name</i>;</code>
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols ospf area <i>area-name</i> ], [edit protocols ospf area <i>area-name</i> ]
<b>Description</b>	Configure the control channel. The peer interface name is the same as the peer interface name configured under LMP.
<b>Usage Guidelines</b>	See “Configure Peer Interfaces in RSVP and OSPF” on page 366.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## remote-address

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<b>Syntax</b>	<code>remote-address <i>ip-address</i>;</code>
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols link-management te-link <i>te-link-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols link-management te-link <i>te-link-name</i> interface <i>interface-name</i> ], [edit protocols link-management te-link <i>te-link-name</i> ] [edit protocols link-management te-link <i>te-link-name</i> interface <i>interface-name</i> ]
<b>Description</b>	Specify the remote IP address for the TE link.
<b>Options</b>	<i>ip-address</i> —Remote IP address mapped to the TE link.
<b>Usage Guidelines</b>	See “Configure the Remote IP Address for the TE Link” on page 364.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## remote-id

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<b>Syntax</b>	<code>remote-id <i>id-number</i>;</code>
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols link-management te-link <i>te-link-name</i> ], [edit logical-routers <i>logical-router-name</i> protocols link-management te-link <i>te-link-name</i> interface <i>interface-name</i> ], [edit protocols link-management te-link <i>te-link-name</i> ] [edit protocols link-management te-link <i>te-link-name</i> interface <i>interface-name</i> ]
<b>Description</b>	Specify the ID assigned to a TE link or an interface (resource) on the peer node.
<b>Options</b>	<i>id-number</i> —ID number for the remote device.
<b>Usage Guidelines</b>	See “Configure the Remote ID for the TE Link” on page 364.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## retransmit-interval

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<b>Syntax</b>	retransmit-interval <i>seconds</i> ;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols ospf area <i>area-number</i> peer-interface <i>peer-interface-name</i> ], [edit protocols ospf area <i>area-number</i> peer-interface <i>peer-interface-name</i> ]
<b>Description</b>	Specify how long the router waits to receive a link-state acknowledgment packet before retransmitting link-state advertisements to a peer interface's neighbors.
<b>Options</b>	<i>seconds</i> —Interval to wait. <b>Range:</b> 1 through 65,535 <b>Default:</b> 5 seconds
<b>Usage Guidelines</b>	See “Configure Peer Interfaces in RSVP and OSPF” on page 366.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## te-link

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<b>Syntax</b>	te-link <i>te-link-name</i> { interface <i>interface-name</i> { local-address <i>ip-address</i> ; remote-address <i>ip-address</i> ; remote-id <i>id-number</i> ; } local-address <i>ip-address</i> ; remote-address <i>ip-address</i> ; remote-id <i>id-number</i> ; }
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols link-management], [edit logical-routers <i>logical-router-name</i> protocols link-management peer <i>peer-name</i> ], [edit protocols link-management], [edit protocols link-management peer <i>peer-name</i> ]
<b>Description</b>	Represent a collection of physical ports or time slots. Assign a TE link to the specified network peer.
<b>Options</b>	<i>te-link-name</i> —Name of the collection of physical ports or the name of the time slots.  The other statements are described separately in this chapter.
<b>Usage Guidelines</b>	See “Configure LMP TE Links” on page 363.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## traceoptions

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

**Hierarchy Level** [edit logical-routers *logical-router-name* protocols link-management],  
 [edit protocols link-management]

**Description** Trace options for the LMP protocol.

**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`.

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

**Range:** 2 through 1000

**Default:** 2 files

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

all—Trace all available operations

init—Output from the initialization messages

parse—Operation of the parser

process—Operation of the general configuration

route-socket—Operation of route socket events

routing—Operation of the routing protocols

server—Server processing operations

show—Show command servicing operations

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

detail—Provide detailed trace information

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 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:** 1 MB

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

**Usage Guidelines** See “Trace LMP Traffic” on page 368 and the *JUNOS Internet Software 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.

## transit-delay

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<b>Syntax</b>	transit-delay <i>seconds</i> ;
<b>Hierarchy Level</b>	[edit logical-routers <i>logical-router-name</i> protocols ospf area <i>area-number</i> peer-interface <i>peer-interface-name</i> ], [edit protocols ospf area <i>area-number</i> peer-interface <i>peer-interface-name</i> ]
<b>Description</b>	Set the estimated time required to transmit a link-state update on the peer interface. When calculating this time, you should account for transmission and propagation delays.
<b>Options</b>	<i>seconds</i> —Estimated time. <b>Range:</b> 1 through 65,535 <b>Default:</b> 1 second
<b>Usage Guidelines</b>	See “Configure Peer Interfaces in RSVP and OSPF” on page 366.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

