

## mpls-relay

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**Syntax** mpls-relay *remoteIpAddress* [ *vc-id* ] *vcidValue* [ *group-id* *groupIdValue* ]  
[ *control-word* | *no-control-word* ] [ *sequencing* | *no-sequencing* ]  
[ *relay-format* { *ethernet* | *frame-relay* | *ppp* | *vlan* | *ethernet-raw-mode* } ]  
  
no mpls-relay

**Release Information** Command introduced before JUNOS Release 7.1.0.  
**control-word**, **no-control-word**, **no-sequencing**, and **vlan** keywords added in JUNOS Release 7.1.0.  
**frame-relay** keyword added in JUNOS Release 9.1.0.  
**ethernet-raw-mode** keyword added in JUNOS Release 10.0.0.

**Description** Routes layer 2 traffic to the specified router by creating an MPLS shim interface on the layer 2 interface. The router can use any MPLS LSP to the remote destination address that you specify. You must issue this command in the virtual router where the remote address can be reached; that is, in the virtual router providing core connections. The **no** version removes the shim interface. See also the route interface command.



**NOTE:** This command is supported for configuration on an ATM port (ATM Adaptation Layer 5 [AAL5] over an ATM major interface). Before you can specify VPI/VCI ranges and cell concatenation parameters on the ATM port to enable transmission of multiple ATM virtual circuits over a single pseudowire, you must associate the ATM port with the corresponding pseudowire using the **mpls-relay** or **router interface tunnel** command. For more information about the support for multiple VCs over a single pseudowire, see *Multiple ATM Virtual Circuits over a Single Pseudowire Overview* in the *JUNOS BGP and MPLS Configuration Guide*

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**Options**

- *remoteIpAddress*—IP address of the router on the remote end of the layer 2 circuit
- *vcidValue*—Integer in the range 1–4294967295 that identifies the virtual connection; the two ends across the MPLS core must match inside each VC type



**NOTE:** The VLAN ID, DLCI, or ATM VPI/VCI are not related to the VC ID and can be different on each end of the connection.

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- *groupIdValue*—Integer in the range 0–4294967295 that identifies a group of virtual connections; not currently used
  - *control-word*—Indicates that the local preference is to use the control word for the layer 2 packets encapsulated in MPLS packets sent to the remote PE router. The default preference is determined by the interface stack on which the MPLS interface is stacked.

- **no-control-word**—Indicates that the local preference is to not use the control word for the layer 2 packets encapsulated in MPLS packets sent to the remote PE router. The default preference is determined by the interface stack on which the MPLS interface is stacked.
- **sequencing**—Specifies that the local preference is to include nonzero sequence numbers with the control word; enabling the remote PE to detect out-of-order packets; has no effect if no control word is sent in the packets. The router always accepts zero sequence numbers and checks the order of nonzero sequence numbers of MPLS packets received from the remote PE; any out of order packets are dropped, regardless of whether sequencing is configured.
- **no-sequencing**—Specifies that the sequencing number in the control word is set to zero, instructing the remote PE router to not attempt to detect out-of-order packets; has no effect if no control word is sent in the packets.
- **relay-format ethernet**—Specifies that the router uses Ethernet signaling and encapsulation, which causes the VLAN interface to appear as an Ethernet interface to the other side of the connection; enables a VLAN interface on one side of an MPLS tunnel to communicate with an Ethernet or a bridged Ethernet interface on the other side of an MPLS tunnel. The VLAN tag is not included in the MPLS encapsulation. This option is not available on serial or POS interfaces for HDLC layer 2 circuits. It is available only on VLAN interfaces
- **relay-format frame-relay**—Specifies that the router uses legacy (pre-RFC 4619) Frame Relay pseudowire type value for signaling and encapsulation. Enables a router running JUNOS software that supports the pseudowire type value defined in RFC 4619, Encapsulation methods for transport of Frame Relay over MPLS Networks, to interoperate with a router that uses the legacy (pre-RFC 4619) pseudowire type value. This option is available on serial or POS interfaces for Frame Relay layer 2 circuits. It is not supported on E120 and E320 routers.
- **relay-format ppp**—Specifies that the router uses VC-type PPP signaling and PPP encapsulation instead of VC-type HDLC signaling and HDLC encapsulation. The router uses VC-type HDLC signaling and HDLC encapsulation by default. This option is available only on serial and POS interfaces for HDLC layer 2 circuits.
- **relay-format vlan**—Specifies that the router uses VLAN signaling and encapsulation. This option is not available on serial or POS interfaces for HDLC layer 2 circuits. It is available for VLAN interfaces.
- **relay-format ethernet-raw-mode**—Specifies that the router uses Ethernet raw mode encapsulation for packets entering and leaving pseudowires. This service corresponds to PW type 0x0005 "Ethernet" [IANA]. When configured on an S-VLAN subinterface, enables the provider edge (PE) device to strip the S-VLAN tags from all packets entering the Martini circuit (MPLS packet switched network). It is supported on ES2 4G, ES2 10G, and ES2 10G Uplink LMs on E120 and E320 routers. You can enable the raw mode configuration only for MPLS shim interfaces stacked on SVLAN interfaces.



**NOTE:** The **relay-format** keyword determines the pseudowire PW Type value that is used in LDP protocol messages. For a complete list of pseudowire Type values, see <http://www.iana.org/assignments/pwe3-parameters>.

If you do not specify the **relay-format** keyword in the **mpls-relay** or **route interface** command, the pseudowire Type value is chosen based on the type of the interface. For Ethernet interfaces, the pseudowire Type value is chosen as Ethernet (0x0005). For VLAN interfaces, the pseudowire Type value is chosen as Ethernet Tagged Mode (0x0004).

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**Mode** Interface Configuration, Subinterface Configuration

**Related Topics** ■ *Configuring an MPLS Pseudowire with VCC Cell Relay, Configuring Ethernet/VLAN Layer 2 Services, Configuring Frame Relay Layer 2 Services, Configuring HDLC Layer 2 Services, Configuring Local ATM Cross-Connects Between Ethernet/VLAN Interfaces, Configuring Ethernet Raw Mode Encapsulation for Martini Layer 2 Transport, and Configuring S-VLAN Tunnels for Layer 2 Services in the JUNOS BGP and MPLS Configuration Guide*

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