

Frame Relay Commands

This section describes the function and displays the syntax of each Frame Relay command. For more information about defaults and usage guidelines, see the corresponding chapter of the *Router Products Command Reference* publication.

clear frame-relay-inarp

To clear dynamically created Frame Relay maps, which are created by the use of inverse ARP, use the **clear frame-relay-inarp** EXEC command.

[no] encapsulation frame-relay [ietf]

Use the **encapsulation frame-relay** interface configuration command to enable Frame Relay encapsulation. The **no** form of this command disables Frame Relay. If the **ietf** keyword is not specified, this command defaults to using Cisco's encapsulation, which is a four-byte header, with two bytes for the DLCI and two bytes to identify the packet type.

ietf (Optional) Sets the encapsulation method to comply with the IETF standard (RFC 1294). Use this keyword when connecting to another vendor's equipment across a Frame Relay network.

[no] frame-relay interface-dlci *dlci* [option]

Use the **frame-relay interface-dlci** interface configuration command to allow use of subinterfaces in the Frame Relay network. To remove this feature, use the **no** form of this command.

dlci DLCI number for the interface

option (Optional) Broadcast or encapsulation keyword, as defined in the Frame Relay subinterface configuration options table in the *Router Products Command Reference* publication

frame-relay intf-type [**dce** | **dte** | **nni**]
no frame-relay intf-type [**dce** | **dte**]

Use the **frame-relay intf-type** interface configuration command to configure a Frame Relay switch type. Use the **no** form of this command to disable the switch.

dce (Optional) Router functions as a switch connected to a router.

dte (Optional) Router is connected to a Frame Relay network. The default is DTE.

nni (Optional) Router functions as a switch connected to a switch (supports NNI connections).

[no] frame-relay inverse-arp *protocol dlc*

Use the **frame-relay inverse-arp** interface configuration command to enable the Inverse Address Resolution Protocol (Inverse ARP) on the router configured for Frame Relay. Use the **no** form of this command to disable this feature.

protocol Supported protocols: **appletalk**, **decnet**, **ip**, **ipx**, **vines**, and **xns**.

dlci DLCI number for the interface. Acceptable numbers are integers in the range 16 to 1007.

frame-relay keepalive *number*

no frame-relay keepalive

Use the **frame-relay keepalive** interface configuration command to enable the Local Management Interface (LMI) mechanism for serial lines using Frame Relay encapsulation. Use the **no** form of this command to disable this capability.

number An integer that defines the keepalive interval. The interval must be set and must be less than the interval set on the switch; see the **frame-relay lmi-t392dce** command description. The default is 10 seconds.

[no] frame-relay lmi-n391dte *keep-exchanges*

Use the **frame-relay lmi-n391dte** interface configuration command to set a full status polling interval. Use the **no** form of this command to restore the default interval value, assuming an LMI has been configured.

keep-exchanges Number of keep exchanges to be done before requesting a full status message. Acceptable value is a positive integer in the range 1 through 255. The default is 6.

[no] frame-relay lmi-n392dce *threshold*

Use the **frame-relay lmi-n392dce** interface configuration command to set the DCE and NNI error threshold. Use the **no** form of this command to remove the current setting.

threshold Error threshold value. Acceptable value is a positive integer in the range 1 through 10. The default is 2.

[no] frame-relay lmi-n392dte *threshold*

Use the **frame-relay lmi-n392dte** interface configuration command to set the error threshold on a DTE or NNI interface. Use the **no** form of this command to remove the current setting.

threshold Error threshold value. Acceptable value is a positive integer in the range 1 through 10. The default is 2.

[no] frame-relay lmi-n393dce *events*

Use the **frame-relay lmi-n393dce** interface configuration command to set the DCE and NNI monitored events count. Use the **no** form of this command to remove the current setting.

events Monitored events count value. Acceptable value is a positive integer in the range 1 through 10. The default is 2.

[no] frame-relay lmi-n393dte *events*

Use the **frame-relay lmi-n393dte** interface configuration command to set the monitored event count on a DTE or NNI interface. Use the **no** form of this command to remove the current setting.

events Monitored event count value. Acceptable value is a positive integer in the range 1 through 10. The default is 2.

[no] frame-relay lmi-t392dce *timer*

Use the **frame-relay lmi-t392dce** interface configuration command to set the polling verification timer on a DCE or NNI interface. Use the **no** form of this command to remove the current setting.

timer Polling verification timer value. Acceptable value is a positive integer in the range 5 through 30. The default is 15 seconds.

frame-relay lmi-type { **cisco** | **ansi** | **q933a** }
no frame-relay lmi-type { **ansi** | **q933a** }

Use the **frame-relay lmi-type** interface configuration command to select the Local Management Interface (LMI) type. Use the **no** form of this command to return to the default LMI type.

cisco	Group of 4 LMI. The default is Cisco LMI.
ansi	Annex D defined by ANSI standard T1.617.
q933a	International Telecommunication Union Telecommunication Standardization Sector (ITU-T, formerly called CCITT) Q.933 Annex A.

frame-relay local-dlci *number*
no frame-relay local-dlci

Use the **frame-relay local-dlci** interface configuration command to set the source DLCI for use when the LMI is not supported. Use the **no** form of this command to remove the DLCI number.

<i>number</i>	Local (source) data link connection identifier (DLCI) number for the interface.
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frame-relay map *protocol protocol-address dlci* [**broadcast**]
[**ietf** | **cisco**]
no frame-relay map *protocol protocol-address*

Use the **frame-relay map** interface configuration command to define the mapping between an address and the DLCI used to connect to the address. Use the **no** form of this command to delete the map entry.

<i>protocol</i>	Supported protocols: appletalk , decnet , ip , xns , ipx , and vines .
<i>protocol-address</i>	Address for the protocol.
<i>dlci</i>	DLCI number for the interface.

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broadcast	(Optional) Broadcasts should be forwarded to this address when multicast is not enabled (see the frame-relay multicast-dlci command for more information about multicasts). This keyword also simplifies the configuration of OSPF.
ietf	(Optional) IETF form of Frame Relay encapsulation. Use when the router is connected to another vendor's equipment across a Frame Relay network.
cisco	(Optional) Cisco encapsulation method.

frame-relay map bridge *dlci* [**broadcast**]
no frame-relay map bridge *dlci*

Use the **frame-relay map bridge** interface configuration command to specify that broadcasts should be forwarded when bridging. Use the **no** form of this command to delete the map entry.

dlci DLCI number for the interface.

broadcast (Optional) Broadcasts should be forwarded to this address when multicast is not enabled.

frame-relay map clns *dlci* [**broadcast**]
no frame-relay map clns *dlci*

Use the **frame-relay map clns** interface configuration command to specify that broadcasts should be forwarded when routing using ISO CLNS. Use the **no** form of this command to delete the map entry.

dlci DLCI number for the interface.

broadcast (Optional) Broadcasts should be forwarded to this address when multicast is not enabled.

frame-relay multicast-dlci *number*
no frame-relay multicast-dlci

Use the **frame-relay multicast-dlci** interface configuration command to define the DLCI to be used for multicasts. Use the **no** form of this command to remove the multicast group.

number Multicast DLCI. (Note that this is *not* the multicast group number, which is an entirely different value.)

[no] frame-relay route *in-dlci out-interface out-dlci*

Use the **frame-relay route** interface configuration command to specify the static route for PVC switching. Use the **no** form of this command to remove a static route.

in-dlci DLCI on which the packet is received on the interface.

out-interface Interface the router uses to transmit the packet.

out-dlci DLCI the router uses to transmit the packet over the specified *out-interface*.

[no] frame-relay switching

Use the **frame-relay switching** global configuration command to enable PVC switching on a Frame Relay DCE or an NNI. Use the **no** form of this command to disable switching.

show frame-relay lmi [*interface*]

Use the **show frame-relay lmi** EXEC command to display statistics about the Local Management Interface (LMI).

interface (Optional) LMI statistics for only the specified interface.

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show frame-relay map

Use the **show frame-relay map** EXEC command to display the current Frame Relay map entries and information about these connections.

show frame-relay pvc [*interface* [*dldci*]]

Use the **show frame-relay pvc** EXEC command to display statistics about PVCs for Frame Relay interfaces.

interface (Optional) PVC statistics display for only the specified interface display.

dldci (Optional) DLCI number for the interface. Statistics for the specified PVC display when a DLCI is also specified.

show frame-relay route

Use the **show frame-relay route** EXEC command to display all configured Frame Relay routes, along with their status.

show frame-relay traffic

Use the **show frame-relay traffic** EXEC command to display the router's global Frame Relay statistics since the last reload.

show interfaces serial *number*

Use the **show interfaces serial** EXEC command to display information about a serial interface. When using the Frame Relay encapsulation, use the **show interfaces serial** command to display information on the multicast DLCI, the DLCI of the interface, and the LMI DLCI used for the Local Management Interface.

The multicast DLCI and the local DLCI can be set using the **frame-relay multicast-dlci** and the **frame-relay local-dlci** commands, or provided through the Local Management Interface. The status information is taken from the LMI, when active.

number Interface number