



Configuring Compressed Real-Time Protocol

This chapter describes how to configure Compressed Real-Time Protocol (CRTP) header.

For complete conceptual information, see the section “Compressed Real-Time Protocol Header” in the chapter “Link Efficiency Mechanisms Overview” in this book.

For a complete description of the CRTP commands in this chapter, refer to the *Cisco IOS IP and IP Routing Command Reference*. To locate documentation of other commands that appear in this chapter, use the command reference master index, or search online.

Compressed Real-Time Protocol Configuration Task List

To configure CRTP header, perform the tasks in the following sections. Either one of the first two sections is required; the remaining sections are optional.

- Enabling CRTP on a Serial Interface (Required)
- Enabling CRTP with Frame Relay Encapsulation (Required)
- Changing the Number of Header Compression Connections (Optional)
- Displaying System and Network Statistics (Optional)



Note

You must enable compression on both ends of a serial connection.

See the end of this chapter for “CRTP Configuration Examples.”

Before You Configure CRTP

CRTP is supported on serial lines using Frame Relay, High-Level Data Link Control (HDLC), or PPP encapsulation. It is also supported over ISDN interfaces.

You should configure CRTP if the following conditions exist in your network:

- Slow links
- The need to save bandwidth



Note

CRTP should not be used on links greater than 2 Mbps.

Enabling compression on both ends of a low-bandwidth serial link can greatly reduce the network overhead if it carries a substantial amount of RTP traffic. Although the multicast backbone (MBONE)-style RTP traffic has higher payload sizes, compact encodings such as Compressed Encoding for Linear Prediction (CELP) can also help considerably.

Before you can enable RTP header compression, you must have configured a serial line that uses either Frame Relay, HDLC, or PPP encapsulation, or an ISDN interface. To configure RTP header compression, perform the tasks in the following sections.

Enabling CRTP on a Serial Interface

To enable CRTP header for serial encapsulations HDLC or PPP, use the following command in interface configuration mode (you must enable compression on both ends of a serial connection):

Command	Purpose
<code>ip rtp header-compression [passive]</code>	Enables RTP header compression.

If you include the **passive** keyword, the Cisco IOS software compresses outgoing RTP packets only if incoming RTP packets on the same interface are compressed. If you use the command without the **passive** keyword, the software compresses all RTP traffic.

Enabling CRTP with Frame Relay Encapsulation

To enable CRTP header with Frame Relay encapsulation, use one of the following commands in interface configuration mode:

Command	Purpose
<code>frame-relay ip rtp header-compression [passive]</code>	Enables RTP header compression on the physical interface and all the interface maps will inherit it. Subsequently, all maps will perform RTP/IP header compression.
<code>frame-relay map ip ip-address dlci [broadcast] rtp header-compression [active passive]</code>	Enables RTP header compression only on the particular map specified.
<code>frame-relay map ip ip-address dlci [broadcast] compress</code>	Enables both RTP and TCP header compression on this link.

Changing the Number of Header Compression Connections

By default, the software supports a total of 16 RTP header compression connections on an interface. To change that number, use the following command in interface configuration mode:

Command	Purpose
<code>ip rtp compression-connections number</code>	Specifies the total number of RTP header compression connections supported on an interface.

Displaying System and Network Statistics

You can display specific statistics such as the contents of IP routing tables, caches, and databases. Information provided can be used to determine resource utilization and solve network problems. You can also display information about node reachability and discover the routing path your device's packets are taking through the network.

To display various routing statistics, use the following commands in EXEC mode:

Command	Purpose
<code>show frame-relay ip rtp header-compression</code> <code>[interface type number]</code>	Displays Frame Relay RTP header compression statistics.
<code>show ip rtp header-compression</code> <code>[type number]</code> <code>[detail]</code>	Displays RTP header compression statistics.

CRTP Configuration Examples

The following example enables RTP header compression for a serial, ISDN, or asynchronous interface. For ISDN, you also need a broadcast dialer map.

```
interface serial 0 :or interface bri 0
 ip rtp header-compression
 encapsulation ppp
 ip rtp compression-connections 25
```

The following example for Frame Relay encapsulation enables RTP header compression on the specified map:

```
interface serial 0
 ip address 1.0.0.2 255.0.0.0
 encapsulation frame-relay
 no keepalive
 clockrate 64000
 frame-relay map ip 1.0.0.1 17 broadcast rtp header-compression
```

