

Link Efficiency Mechanisms Overview

Cisco IOS software offers a number of link-layer efficiency mechanisms or features (listed below) designed to reduce latency and jitter for network traffic. These mechanisms work with queuing and fragmentation to improve the efficiency and predictability of the application service levels.

This chapter gives a brief introduction to these link-layer efficiency mechanisms described in the following sections:

- Multilink PPP, on page 1
- Header Compression, on page 1

Multilink PPP

At the top level, Multilink PPP (also known as MLP or simply Multilink) provides packet interleaving, packet fragmentation, and packet resequencing across multiple logical data links. The packet interleaving, packet fragmentation, and packet resequencing are used to accommodate the fast transmission times required for sending real-time packets (for example, voice packets) across the network links. Multilink is especially useful over slow network links (that is, a network link with a link speed less than or equal to 768 kbps).

For more information about the functionality of Multilink when providing quality of service (QoS) on your network, see the "Reducing Latency and Jitter for Real-Time Traffic Using Multilink PPP" module.

Header Compression

Header compression is a mechanism that compresses the IP header in a packet before the packet is transmitted. Header compression reduces network overhead and speeds up the transmission of Real-Time Transport Protocol (RTP) and Transmission Control Protocol (TCP) packets. Header compression also reduces the amount of bandwidth consumed when the RTP or TCP packets are transmitted.

Cisco provides two basic types of header compression: RTP header compression (used for RTP packets) and TCP header compression (used for TCP packets).

For more information about header compression, see the "Header Compression" module.