

## Chapter 33

# Real-Time Performance Monitoring Services Overview

Real-Time Performance Monitoring (RPM) enables you to configure active probes to track and monitor traffic. Probes collect packets per destination and per application, including PING Internet Control Message Protocol (ICMP) packets, User Datagram Protocol and Transmission Control Protocol (UDP/TCP) packets with user-configured ports, user-configured Differentiated Services code point (DSCP) type-of-service (ToS) packets, and Web Hypertext Transfer Protocol (HTTP) packets. RPM provides MIB support with extensions for the following standard:

*RFC 2925, Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations*

Probe configuration and probe results are supported by the command-line interface (CLI) and Simple Network Management Protocol (SNMP).

The following probe types are supported with DSCP marking:

ICMP echo

ICMP timestamp

HTTP get

UDP echo

TCP connection

With probes, you can monitor the following:

Minimum round-trip time

Maximum round-trip time

Average round-trip time

Standard deviation of the round-trip time

Jitter of the round-trip time—the difference between the minimum and maximum round-trip time

One-way measurements for ICMP timestamp probes include the following:

Minimum, maximum, standard deviation, and jitter measurements for egress and ingress times

Number of probes sent

Number of probe responses received

Percentage of lost probes

You can configure the following RPM thresholds:

round-trip time

Ingress/egress delay

Standard deviation

Jitter

Successive lost probes

Total lost probes (per test)