CHAPTER 4

Remote Monitoring

Remote Monitoring (RMON) is a standard monitoring specification that allows various network monitors and console systems to exchange network monitoring data. Catalyst 2820 and Catalyst 1900 switches provide support for the RMON of Ethernet and Fast Ethernet ports. RMON provides you with visibility into network activity. It enables you to access and remotely monitor the RMON specification RFC-1757 groupings of statistics, historical information, alarms, and events for any port through SNMP or the TrafficDirector management application.

RMON is enabled by default and is not displayed on the console. The Catalyst 2820 and Catalyst 1900 switches support the statistics, history, alarm, and event groups.

Concepts About RMON

The RMON feature monitors network traffic at the link layer of the OSI model without requiring a dedicated monitoring probe or network analyzer. You can analyze network traffic patterns, set up proactive alarms to detect problems before they affect users, identify heavy network users as candidates to move to dedicated or higher speed ports, and do trend analysis for long-term planning.

RMON Groups

The Catalyst 2820 and Catalyst 1900 switches support the following four RMON groups:

- Segment statistics
- Short- and long-term history
- Alarms
- Events

The statistics group of the RMON specification maintains utilization and error statistics for the monitored switch. Statistics include information about collisions, cyclic redundancy checks (CRCs) and alignment; undersized or oversized packets, jabber, fragments, broadcast, multicast, and unicast messages; and bandwidth utilization.

The history group takes periodic samples from the statistics section and stores them for later retrieval. This sampling includes information such as utilization, error counts, and packet counts.

You can use the alarm group to set a sampling interval and threshold for any RMON recorded item. Examples of alarm settings include absolute or relative values, rising or falling thresholds of utilization, packet counts, and CRC errors.

The events group allows events (generated traps) to be logged and provided to a network manager. The time and date are recorded with each logged event. You can use the events group to create customized reports that are based on alarm types.

With RMON enabled, Catalyst 2820 and Catalyst 1900 switches collect and forward comprehensive network traffic information from multiple Ethernet segments simultaneously. This capability allows you to obtain information to help tune or troubleshoot a switched LAN.

Extended RMON capabilities are provided through the use of a Cisco SwitchProbe connected to the switch Switched Port Analyzer (SPAN) port.