

Supported Protocols and MIBs

This appendix describes the various protocols and Management Information Bases (MIBs) supported by the Catalyst 1200 series switch.

Following are the standard Internet protocols supported by the switch:

- ARP—Address Resolution Protocol (ARP) is used to determine the destination MAC address of a host using its known IP address.
- BOOTP—BootP uses connectionless transport-layer User Datagram Protocol (UDP). BootP allows the switch (BOOTP client) to get its IP address from a BootP server.
- ICMP—Internet Control Message Protocol (ICMP) allows hosts to send error or control messages to other hosts. ICMP is a required part of IP. For example, the **ping** command uses ICMP echo requests to test whether a destination is alive and reachable.
- IP—The IP suite is used to send IP datagram packets between nodes on the Internet.
- Ping—Packet internet groper (ping) is used to test the ability to reach destinations by sending them an ICMP echo request and waiting for a reply.
- RARP—Reverse Address Resolution Protocol (RARP) is used to determine an IP address knowing only a MAC address. For example, BOOTP and RARP broadcast requests are used to get IP addresses from a BootP server.
- SLIP—Serial Line Internet Protocol (SLIP) is a version of IP that runs over serial links, allowing IP communications over the admin. interface.
- SNMP—Simple Network Management Protocol (SNMP) agents process requests for network management stations and report exception conditions when they occur. This requires access to information stored in a MIB. (Refer to the following section, “MIBs Supported.”)

Following are basic functions supported by Catalyst switch SNMP agents:

- Accessing a MIB variable using Get or Get Next—This function is initiated by the SNMP agent as a result of a request for the value of a MIB variable from a network management station. The SNMP agent gets the value of a MIB variable by accessing information stored in a MIB and then responds.
- Setting a MIB variable—This function is also initiated by the SNMP agent as a result of a message from a network management station. The SNMP agent requests that the value of a MIB variable be changed.
- SNMP trap—This function is used to notify a network management station that an extraordinary event has occurred at an agent. When a trap condition occurs, the SNMP agent sends an SNMP agent trap message to each of the network management stations as specified in the trap receiver table.
- TCP—Transmission Control Protocol (TCP) is a reliable, full-duplex, connection-oriented, end-to-end transport protocol running on top of IP. For example, the Telnet protocol uses the TCP/IP protocol suite.
- Telnet—A terminal-emulation protocol, which allows you to remotely access the admin. interface of a switch over the network (in band).
- TFTP—Trivial File Transfer Protocol (TFTP) is used for downloading software updates (for example, Flash code) for Catalyst switch products.
- UDP—This protocol allows an application such as an SNMP agent on one machine to send a datagram to an application (a network management station using SNMP) on another machine. UDP uses IP to deliver datagrams. UDP/IP protocol suites are used by TFTP.
- DHCP—Dynamic Host Configuration Protocol (DHCP) provides a mechanism for DHCP servers to transmit dynamically configured parameters to the host that is allocating and leasing IP addresses to DHCP client. The format of DHCP messages is the same as for BOOTP. DHCP also provides a superset of functions provided by BOOTP. The DHCP client can obtain configuration information and IP addresses for DHCP servers across VLAN groups.

MIBs Supported

The Catalyst 1200 series switch SNMP agent supports the following MIBs:

- Extensions to the interface table MIB (RFC 1573)
- SNMP MIB II (RFC 1213)
- MIB for the Ethernet interface (RFC 1643)
- MIB for bridges (RFC 1493)
- FDDI MIB (RFC 1512)
- Workgroup MIB extensions (a Cisco proprietary MIB)
- RMON MIB (RFC 1271)

MIBs Supported
