CHAPTER 5

Cisco Discovery Protocol MIB

The Cisco Discovery Protocol (CDP) is a protocol for discovering devices on a network. Each CDP-compatible device sends periodic messages to a well-known multicast address. Devices discover each other by listening at that address.

CDP operation can be enabled or disabled on the FastHub through the object cdpInterfaceEnable. When enabled, the network management module (NMM) SNMP agent discovers neighboring devices and builds its local cache with information about these devices. A management workstation can retrieve this cache by sending SNMP requests to access the CDP MIB.

The CDP MIB defines the following two groups:

- cdpInterface
- cdpCache

cdpInterface

This group contains a table of status information for FastHub interfaces that operate the CDP.

cdpInterfaceTable

The cdpInterface table contains MIB objects used to configure the CDP.

cdpInterfaceIfIndex (integer)

This read-only MIB object displays the ifIndex value of the local interface. This is the in-band management interface ifIndex.

cdpInterfaceEnable (integer)

This read-write MIB object indicates whether CDP is currently running on this interface. By default, if CDP is enabled, the FastHub sends and receives CDP messages to and from every enabled Ethernet interface. In this case, the FastHub returns true for cdpInterfaceEnable for every enabled Ethernet interface. This MIB object can be used to disable CDP for an interface with enabled status. As a result, no CDP message is sent out of the interface, and any incoming CDP message from the interface is ignored.

Default Value: true (1)

cdpInterfaceMessageInterval (integer [5 to 900])

This read-write MIB object specifies the interval in seconds at which CDP messages are generated on this interface.

Default Value: 60 seconds

cdpInterfaceGroup (integer)

This read-only MIB object is not applicable because CDP operates on the in-band management interface and not the individual repeater ports.

cdpInterfacePort (integer)

This read-only MIB object is not applicable because CDP operates on the in-band management interface and not the individual repeater ports.

cdpCache

This group consists of a single table, the cdpCacheTable, that contains information received through CDP on one interface from one device.

cdpCacheTable

cdpCacheIfIndex (integer)

This read-only MIB object displays a unique value for each interface. See the “cdpInterfaceIfIndex (integer) ” description for repeater-related information.

cdpCacheDeviceIndex (integer)

This read-only MIB object displays a unique value for each device from which CDP messages are being received.

cdpCacheAddressType (CiscoNetworkProtocol [integer])

This read-only MIB object displays the type of address contained in the corresponding instance of cdpCacheAddress. The FastHub always advertises IP address type in its outgoing CDP messages.

cdpCacheAddress (CiscoNetworkAddress [octet])

This read-only MIB object displays the first network layer address of the device’s SNMP agent as reported in the most recent CDP message. The FastHub only caches the first network layer address from each device and always advertises the IP address in its outgoing CDP messages.

cdpCacheVersion (DisplayString)

This read-only MIB object displays the Version string as reported in the most recent CDP message from the device described in this cache entry. A zero-length string indicates no version field (TLV) was reported in the most recent CDP message.

cdpCacheDeviceId (DisplayString)

This read-only MIB object displays the Device-ID as reported in the most recent CDP message from the device described in this cache entry. A zero-length string indicates no device-ID field (TLV) was reported in the most recent CDP message.

cdpCacheDevicePort (DisplayString)

This read-only MIB object displays the Port-ID string as reported in the most recent CDP message. This is typically the value of the ifName object. A zero-length string indicates no Port-ID field (TLV) was reported in the most recent CDP message.

cdpCachePlatform (DisplayString)

This read-only MIB object displays the device's hardware platform as reported in the most recent CDP message. A zero-length string indicates no platform field (TLV) was reported in the most recent CDP messages.

cdpCacheCapabilities (octet string [0 to 4])

This read-only MIB object displays the device's functional capabilities as reported in the most recent CDP message. A zero-length string indicates no capabilities field (TLV) was reported in the most recent CDP message.