



SNMP MIB and Trap Information

This appendix describes the Simple Network Management Protocol (SNMP) traps sent by the CDS. The topics covered in this appendix include:

- [Overview, page B-1](#)
- [SNMP Management Objects and Traps, page B-2](#)
- [RFC Compliance, page B-3](#)

Overview

You can manage the servers by way of SNMP from a Network Management System (NMS). To implement SNMP management, the servers must be configured with a management IP address, SNMP community strings, and contact information. For more information about configuring the server for SNMP communication, see the [“Configuring the SNMP Agent” section on page 4-64](#).



Note

We recommend configuring a VLAN for management traffic.

SNMP management features on the servers include:

- SNMP version 1 or version 2c
- Standard MIBs

SNMP Agent

The server’s SNMP agent uses certain variables that are included in a Cisco Management Information Base (MIB) file. By default, the SNMP agent is not started automatically. To start the SNMP agent, login to the server as *root* and enter the following command:

```
# nice -n 19 /usr/local/sbin/snmpd
```

To have the SNMP agent start automatically after a reboot, use the Linux vi editor to add the following to the `/etc/rc.local` file:

```
nice -n 19 /usr/local/sbin/snmpd
```

To verify the SNMP agent has started, enter the `ps -ef | grep snmpd` command.

SNMP Management Objects and Traps

The CDS SNMP agent and Management Information Base (MIB) file are compliant with the Internet Engineering Task Force (IETF) standards for SNMP v1 and SNMP v2c. For a list of SNMP-associated Request For Comment (RFC) specifications, see the “RFC Compliance” section on page B-3.

The CISCO-CDS-TV-MIB.txt MIB file is available through the CDSM, and is dependent on the following MIBs distributed on Cisco.com:

- <ftp://ftp.cisco.com/pub/mibs/v2/CISCO-SMI.my>
- <ftp://ftp.cisco.com/pub/mibs/v2/CISCO-TC.my>
- <ftp://ftp.cisco.com/pub/mibs/v2/CISCO-PRODUCTS-MIB.my>

You can download the MIBs by doing the following:

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- Step 1** Choose **Configure > Server Level > SNMP Agent**. The SNMP Agent page is displayed with a list of the MIB files at the bottom of the page.
- Step 2** To save the file locally, right-click the MIB filename, and choose “Save As,” “Save Target As,” or a similar save command.

To view the file, click the MIB filename.

The CISCO-CDS-TV-MIB.txt file has the following MIB nodes:

- `cdstvConfigObjects`—Configuration of servers
- `cdstvMonitorObjects`—Monitoring of cache-fill, streaming, disk states, and services running
- `cdstvNotifyObjects`—Objects specific to traps (notifications), for example, Managed Services Architecture (MSA) event objects

Table B-1 describes the traps in the CISCO-CDS-TV-MIB.

Table B-1 Cisco TV CDS Traps

Trap	Description
<code>cdstvDiskHealthUp</code>	Signifies that the previously inactive disk is now active and ready, that is, the disk has returned to the OK (0) state.
<code>cdstvDiskHealthDown</code>	Signifies that the active disk is now inactive, that is, it has left the PK (0) state.
<code>cdstvMSAEvent</code>	Signifies that an MSA event (error) has occurred.

RFC Compliance

Table B-2 is a list of SNMP RFC standards.

Table B-2 *SNMP RFC Standards*

RFC Standard	Title
RFC 1155 (STD0016)	Structure and Identification of Management Information for TCP/IP-based Internets
RFC 1157 (STD0015)	Simple Network Management Protocol (SNMP)
RFC 1212 (STD0016)	Concise MIB Definitions
RFC 1213 (STD0017)	Management Information Base for Network Management of TCP/IP-based internets:MIB-II
RFC 2790 (Draft Standard)	Host Resources MIB
RFC 1901(Historic)	Introduction to Community-based SNMPv2
RFC 1902 (Draft Standard)	Structure of Management Information for Version 2 of the Simple Network Management Protocol (SNMPv2)
RFC 1903 (Draft Standard)	Textual Conventions for Version 2 of the Simple Network Management Protocol (SNMPv2)
RFC 1904 (Draft Standard)	Conformance Statements for Version 2 of the Simple Network Management Protocol (SNMPv2)
RFC 1905 (Draft Standard)	Protocol Operations for Version 2 of the Simple Network Management Protocol (SNMPv2)
RFC 1906 (Draft Standard)	Transport Mappings for Version 2 of the Simple Network Management Protocol (SNMPv2)
RFC 1910 (Historic)	User-based Security Model for SNMPv2
RFC 2011(Proposed Standard - Updates RFC 1213)	SNMPv2 Management Information Base for the Internet Protocol using SMIV2
RFC 2012 (Proposed Standard)	SNMPv2 Management Information Base for the Transmission Control Protocol using SMIV2
RFC 2013 (Proposed Standard)	SNMPv2 Management Information Base for the User Datagram Protocol using SMIV2
RFC 2096 (Proposed Standard)	IP Forwarding Table MIB
RFC 2863 (Draft Standard)	The Interfaces Group MIB
RFC 3410 (Informational)	Introduction and Applicability Statements for Internet-Standard Management Framework
RFC 3411 (STD0062)	An Architecture for Describing Simple Network Management Protocol (SNMP) Management Frameworks
RFC 3412 (STD0062)	Message Processing and Dispatching for the Simple Network Management Protocol (SNMP)

Table B-2 *SNMP RFC Standards (continued)*

RFC Standard	Title
RFC 3413 (STD0062)	Simple Network Management Protocol (SNMP) Applications
RFC 3414 (STD0062)	User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)
RFC 3415 (STD0062)	View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)
RFC 3416 (STD0062)	Version 2 of the Protocol Operations for the Simple Network Management Protocol (SNMP)
RFC 3417 (STD0062)	Transport Mappings for the Simple Network Management Protocol (SNMP)
RFC 3418 (STD0062)	Management Information Base (MIB) for the Simple Network Management Protocol (SNMP)
RFC 2570 (Informational)	Introduction to Version 3 of the Internet-standard Network Management Framework
RFC 2571 (Draft Standard)	An Architecture for Describing SNMP Management Frameworks
RFC 2572 (Draft Standard)	Message Processing and Dispatching for the Simple Network Management Protocol (SNMP)
RFC 2573 (Draft Standard)	SNMP Applications
RFC 2574 (Draft Standard)	User-based Security Model (USM) for Version 3 of the Simple Network Management Protocol (SNMPv3)
RFC 2575 (Draft Standard)	View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)
RFC 2576 (Proposed Standard)	Coexistence between Version 1, Version 2, and Version 3 of the Internet-standard Network Management Framework
RFC 2578 (STD0058)	Structure of Management Information Version 2 (SMIV2)
RFC 2579 (STD0058)	Textual Conventions for SMIV2
RFC 2580 (STD0058)	Conformance Statements for SMIV2