CHAPTER 3

Monitoring WAAS Using SNMP

This chapter describes how to use Simple Network Management Protocol (SNMP) to monitor your WAAS devices. SNMP is an interoperable standards-based protocol that allows for external monitoring of WAAS devices through an SNMP agent.

For more information about using and configuring SNMP, see the "Configuring SNMP Monitoring" chapter in the *Cisco Wide Area Application Services Configuration Guide*.

This chapter contains the following sections:

Information About Supported MIBs

This section describes the Cisco-specific MIBs that are supported by WAAS as follows:

MIB	Description
ACTONA-ACTASTOR-MIB	Provides statistics for the CIFS transparent accelerator and statistics and log traps for the legacy mode WAFS component in WAAS.
CISCO-CDP-MIB	Displays the ifIndex value of the local interface. For 802.3 repeaters on which the repeater ports do not have ifIndex values assigned, this value is a unique value for the port and is greater than any ifIndex value supported by the repeater. In this example, the specific port is indicated by the corresponding values of cdpInterfaceGroup and cdpInterfacePort, where these values correspond to the group number and the port number values of RFC 1516.

MIB	Description
CISCO-CONFIG-MAN-MIB	Represents a model of configuration data that exists in various locations: • running—In use by the running system • terminal—Attached hardware • local—Saved locally in NVRAM or in flash memory • remote—Saved to a server on the network This MIB includes only operations that are specifically related to configuration, although some of the system functions can be used for general file storage and transfer.
CISCO-CONTENT-ENGINE-MIB	MIB module for the Cisco WAAS device from Cisco Systems. The following objects from this MIB are supported: • cceAlarmCriticalCount • cceAlarmMajorCount • cceAlarmMinorCount • cceAlarmHistTableSize
EVENT-MIB	Defines event triggers and actions for network management purposes. The MIB is published as RFC 2981.
HOST-RESOURCES-MIB	Manages host systems. The term *host* implies any computer that communicates with other similar computers connected to the Internet. The HOST-RESOURCES-MIB does not necessarily apply to devices whose primary function is communications services (terminal servers, routers, bridges, monitoring equipment). This MIB provides attributes that are common to all Internet hosts, for example, personal computers and systems that run variants of UNIX.
MIB-II	Internet Standard MIB that is documented in RFC 1213 and is for use with network management protocols in TCP/IP-based Internets. This MIB is found in the RFC1213-MIB file in the v1 directory on the download site (other MIBs are in the v2 directory).
SNMP-COMMUNITY-MIB	Documented in RFC 2576.
SNMP-FRAMEWORK-MIB	Documented in RFC 2571.
SNMP-NOTIFICATION-MIB	Documented in RFC 3413.
SNMP-TARGET-MIB	Documented in RFC 3413.
SNMP-USM-MIB	Documented in RFC 2574.
SNMPv2-MIB	Documented in RFC 1907. This MIB supports the following notifications: • coldStart • linkUp • linkDown • authenticationFailure
SNMP-VACM-MIB	Documented in RFC 2575.

Downloading Supported MIBs

All supported MIB files can be downloaded from the following Cisco FTP locations:

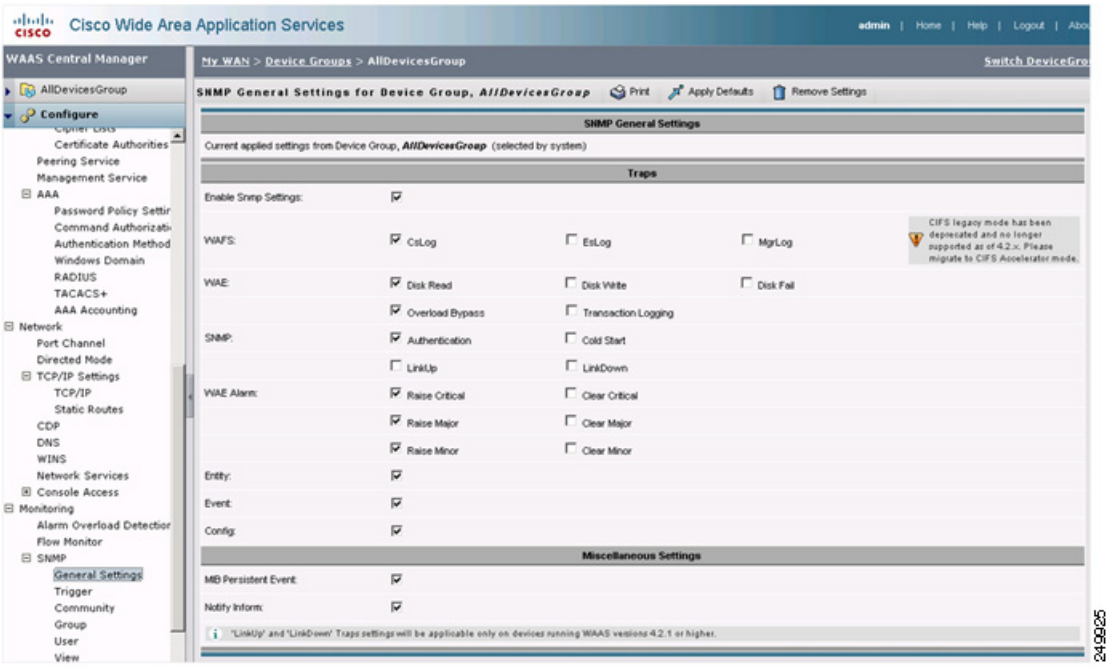
- ftp://ftp.cisco.com/pub/mibs/v2
- ftp://ftp.cisco.com/pub/mibs/v1

The MIB objects that are defined in each MIB are described in the MIB files and are self-explanatory.

Viewing and Enabling SNMP Traps

You can view the SNMP traps options available on the WAAS system by choosing My WAN > Device Group > AllDevicesGroup > Configure > Monitoring > SNMP > General Settings. The SNMP General Settings window appears (see Figure 3-1).

Figure 3-1 SNMP General Settings Window



For information about enabling SNMP traps from the SNMP General Settings window, see the "Configuring SNMP Monitoring" chapter in the *Cisco Wide Area Application Services Configuration Guide*.

Information About Common SNMP MIB OIDS

This section describes the common SNMP trap OIDs.

Object	**cceAlarmCriticalRaised**
OID	**1.3.6.1.4.1.9.9.178.2.0.7**
Status	**current**
MIB	**CISCO-CONTENT-ENGINE-MIB**; View Supporting Images
Trap Components	**cceAlarmHistId** **cceAlarmHistModuleId** **cceAlarmHistCategory** **cceAlarmHistInfo** **cceAlarmHistTimeStamp**
Description	A module has raised a Critical alarm.

Object	**coldStart**
OID	**1.3.6.1.6.3.1.1.5.1**
Status	**current**
MIB	**SNMPv2-MIB**; View Supporting Images
Description	The SNMP entity, supporting a notification originator application, is reinitializing itself and that its configuration may have been altered.

Object	**cceAlarmCriticalCleared**
OID	**1.3.6.1.4.1.9.9.178.2.0.8**
Status	**current**
MIB	**CISCO-CONTENT-ENGINE-MIB**; View Supporting Images
Trap Components	**cceAlarmHistId** **cceAlarmHistModuleId** **cceAlarmHistCategory** **cceAlarmHistInfo** **cceAlarmHistTimeStamp**
Description	A module has cleared a Critical alarm.

Object	**cceFailedDiskName**
OID	**1.3.6.1.4.1.9.9.178.1.5.1**
Type	**OCTET STRING**
Permission	**accessible-for-notify**
Status	**current**
MIB	**CISCO-CONTENT-ENGINE-MIB**; View Supporting Images
Description	The name of the disk on which disk-failure event occurred.

Object	**ciscoContentEngineDiskFailed**
OID	**1.3.6.1.4.1.9.9.178.2.0.6**
Status	**current**
MIB	**CISCO-CONTENT-ENGINE-MIB**; View Supporting Images
Trap Components	**cceFailedDiskName**
Description	A Content Engine data drive failed. This object supersedes ciscoContentEngineDataDiskFailed. Additional information about the error is logged to syslog.

Viewing and Configuring SNMP Triggers

You can view and configure SNMP triggers on the WAAS system. You can configure custom triggers to generate additional SNMP traps for other MIB objects of interest to your particular configuration.

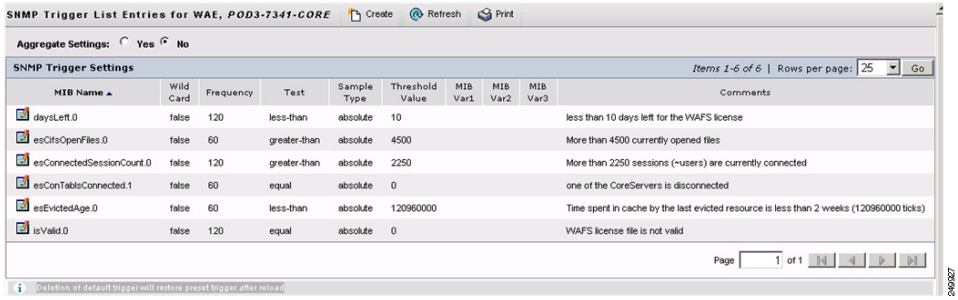
There are six default triggers on the WAE. When default triggers are deleted and the configuration is saved, reloading the device brings them back. Figure 3-2 shows the default triggers.

Procedure

Step 1 Choose **My WAN > Device Group > AllDevicesGroup > Configure > Monitoring > SNMP > Trigger**.

The Trigger List Entries window appears, displaying the list of default and configured triggers (Figure 3-2).

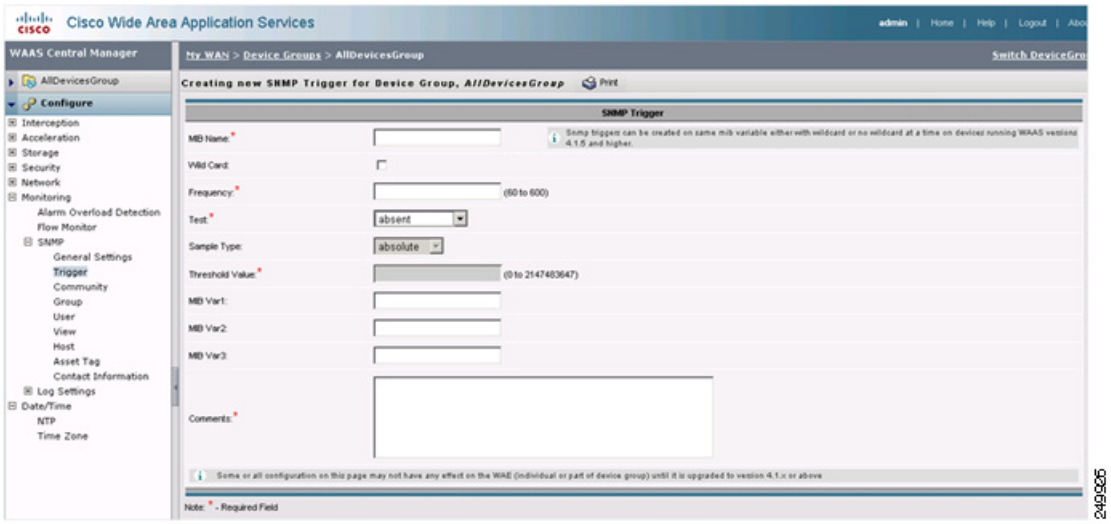
Figure 3-2 SNMP Trigger List



Step 2 To create a trigger, from the Trigger List Entries window, click the create icon.

The Create new SNMP Trigger window appears (Figure 3-3).

Figure 3-3 Create SNMP Trigger



Step 3 Configure the new SNMP trigger.

For information about configuring an SNMP trigger, see the see the "Configuring SNMP Monitoring" chapter in the *Cisco Wide Area Application Services Configuration Guide*.