



Simple Network Management Protocol Configuration

This chapter briefly describes Cisco CallManager using the Simple Network Management Protocol (SNMP) interface.

This chapter contains the following topics:

- [Configuring SNMP Security, page 28-2](#)
- [Setting the SNMP Trap Receiver, page 28-3](#)
- [Starting the Cisco CallManager SNMP Extension Agent, page 28-4](#)
- [Configuring the Cisco CallManager Traps, page 28-5](#)
- [Stopping the Cisco CallManager SNMP Extension Agent, page 28-7](#)
- [Understanding Cisco Real-Time Information Server Data Collector, page 28-8](#)
- [Updating the CISCO-CCM-MIB Information, page 28-10](#)

Related Topics

- [Chapter 11, “Real-Time Monitoring Configuration”](#)
- [Chapter 20, “Microsoft Performance”](#)

Configuring SNMP Security

This section describes how to set the SNMP agent community name.



Caution

The Windows 2000 SNMP agent provides security through the use of community names and authentication traps. You must configure the community name in order to access any MIB in a Cisco CallManager system. Change the community name to limit access to the Cisco CallManager system.



Note

Refer to the Microsoft Windows 2000 online help for SNMP configuration details.

Procedure

- Step 1** Choose **Start > Settings > Control Panel**.
- Step 2** Double-click **Administrative Tools**.
- Step 3** Double-click **Services**.
- Step 4** Right-click **SNMP Service**.
- Step 5** Choose **Properties**.
- Step 6** Click the **Security** tab.
- Step 7** In Accepted community names field, click the **Add** button.
- Step 8** In the Community name field, enter the name, and in the community rights field, choose either **READ-ONLY** or **READ-WRITE**.



Note

In order to change the Cisco CallManager trap configuration parameters, you need to use a community with READ-WRITE privileges.

- Step 9** Click the **Add** button.
- Step 10** Choose the Accept SNMP packets from these hosts option to allow only specific NMS hosts to query the SNMP extension agent.
- Step 11** Click the **Add** button.

- Step 12** Enter the IP address for the hosts that are allowed to query the SNMP extension agent.
- Step 13** Click the **Add** button.
- Step 14** Check the Send Authentication Trap check box if you want to receive SNMP authentication failure traps.
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Related Topics

- [Setting the SNMP Trap Receiver, page 28-3](#)
- [Starting the Cisco CallManager SNMP Extension Agent, page 28-4](#)
- [Stopping the Cisco CallManager SNMP Extension Agent, page 28-7](#)

Setting the SNMP Trap Receiver

This section describes how to set the SNMP trap receiver.



Note

Refer to the Microsoft Windows 2000 online help for SNMP configuration details.

Procedure

- Step 1** Choose **Start > Settings > Control Panel**.
- Step 2** Double-click **Administrative Tools**.
- Step 3** Double-click **Services**.
- Step 4** Right-click **SNMP Service**.
- Step 5** Choose **Properties**.
- Step 6** Click the **Traps** tab.
- Step 7** In the Community name field, enter the community name to be used in the trap messages generated from this host.
- Step 8** Click the **Add to list** button.
- Step 9** In the Trap destinations field, click the **Add** button.

- Step 10** In the Trap destinations field, enter the IP address or hostname of the trap destination.
- Step 11** Click the **Add** button.
Repeat Steps 9 through 11 for each trap destination required.
- Step 12** Click the **OK** button.
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Related Topics

- [Configuring SNMP Security, page 28-2](#)
- [Starting the Cisco CallManager SNMP Extension Agent, page 28-4](#)
- [Stopping the Cisco CallManager SNMP Extension Agent, page 28-7](#)

Starting the Cisco CallManager SNMP Extension Agent

This section describes how to start the Cisco CallManager SNMP extension agent.



Note The SNMP service should start *automatically* when the system boots. Start the SNMP service only if it does not start automatically.

Procedure

- Step 1** Choose **Start > Settings > Control Panel**.
- Step 2** Double-click **Administrative Tools**.
- Step 3** Double-click **Services**.
- Step 4** Right-click **SNMP Service**.
- Step 5** From the toolbar, choose **Start Service**.



Note Note, the dynamic tables such as phoneTable, gatewayTable, etc. will be populated only if the local CCM service is up and running. The static tables such as region, time zone, device pool, etc., in the CCM MIB, will be populated only if the local RIS Data Collector is up and running.

Related Topics

- [Configuring SNMP Security, page 28-2](#)
- [Setting the SNMP Trap Receiver, page 28-3](#)
- [Stopping the Cisco CallManager SNMP Extension Agent, page 28-7](#)

Configuring the Cisco CallManager Traps

This section describes how to configure Cisco CallManager SNMP traps.



Note

Make sure to start the SNMP service before configuring traps. Refer to the “[Starting the Cisco CallManager SNMP Extension Agent](#)” section on page 28-4 to start SNMP. Also, make sure that you have configured the SNMP READ-WRITE community name correctly. Refer to the “[Configuring SNMP Security](#)” section on page 28-2.

The CISCO-CCM-MIB supports the following traps:

- ccmCallManagerFailed
- ccmPhoneFailed
- ccmPhoneStatusUpdate
- ccmGatewayFailed
- ccmMediaResourceListExhausted
- ccmRouteListExhausted
- ccmGatewayLayer2Change

The configuration parameters related to these traps are defined in the “ccmAlarmConfigInfo” group in the CISCO-CCM-MIB. Refer to the CISCO-CCM-MIB document for more details about these configuration parameters. The CISCO-CCM-MIB is available at the following link:

<ftp://ftp.cisco.com/pub/mibs/supportlists/1/callmanager/callmanager-supportlist.html>

Table 28-1 comprises information about how to configure Cisco CallManager trap parameters.


Note

There have been some changes in the default values for some parameters in the ccmAlarmConfigInfo group in the CCM MIB from the earlier releases of Cisco CallManager. Refer to the CISCO-CCM-MIB for more details.

Table 28-1 Cisco CallManager Trap Configuration Parameters

Configuration Parameter Name	Default Value	Related Traps	Configuration Steps
ccmCallManagerAlarmEnable	True	ccmCallManagerFailed ccmMediaResourceListExhausted ccmRouteListExhausted	None, as these traps are enabled by default.
ccmGatewayAlarmEnable	True	ccmGatewayFailed ccmGatewayLayer2Change	None, as these traps are enabled by default.
ccmPhoneStatusUpdateStorePeriod ccmPhoneStatusUpdateAlarmInterval	1800 0	ccmPhoneStatusUpdate	Set the ccmPhoneStatusUpdateAlarmInterval to a value between 30 and 3600.
ccmPhoneFailedStorePeriod ccmPhoneFailedAlarmInterval	1800 0	ccmPhoneFailed	Set the ccmPhoneFailedAlarmInterval to a value between 30 and 3600.

Related Topics

- [Setting the SNMP Trap Receiver, page 28-3](#)
- [Starting the Cisco CallManager SNMP Extension Agent, page 28-4](#)
- [Updating the CISCO-CCM-MIB Information, page 28-10](#)

Stopping the Cisco CallManager SNMP Extension Agent

This section describes how to stop the Cisco CallManager SNMP extension agent.

**Caution**

Stopping the SNMP service results in loss of data; the network management system no longer monitors the Cisco CallManager network. *Do not stop the service except in an emergency.*

Procedure

-
- Step 1** Choose **Start > Settings > Control Panel**.
 - Step 2** Double-click **Administrative Tools**.
 - Step 3** Double-click **Services**.
 - Step 4** Right-click **SNMP Service**.
 - Step 5** From the toolbar, choose **Stop Service**.

The SNMP Service stops, and the Cisco CallManager SNMP extension agent no longer functions.

Related Topics

- [Configuring SNMP Security, page 28-2](#)
- [Setting the SNMP Trap Receiver, page 28-3](#)
- [Starting the Cisco CallManager SNMP Extension Agent, page 28-4](#)

Understanding Cisco Real-Time Information Server Data Collector

Cisco Real-Time Information Server (RIS) data collector runs on Microsoft Windows 2000 and has responsibility for sending the configured information from the Cisco CallManager database into the RIS database. Cisco CallManager sends all the dynamic information to the RIS database through the alarm interface.

Starting the Cisco RIS Data Collector

This section describes how to start the Cisco RIS Data Collector.



Note The Cisco RIS Data Collector service should start *automatically* when the system boots. Start the Cisco RIS Data Collector service only if it does not start automatically.

Procedure

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- Step 1** Choose **Start > Settings > Control Panel**.
 - Step 2** Double-click **Administrative Tools**.
 - Step 3** Double-click **Services**.
 - Step 4** Choose **Cisco RIS DC Service**.
 - Step 5** From the toolbar, choose **Start Service**.

The Cisco RIS Data Collector service starts, and all the static tables in the CISCO-CCM-MIB are populated with configuration data from the Cisco CallManager database.



Note Note, the dynamic tables such as phoneTable, gatewayTable, etc. will be populated only if the local CCM service is up and running.

Related Topics

- [Understanding Cisco Real-Time Information Server Data Collector, page 28-8](#)
- [Stopping Cisco RIS Data Collector, page 28-9](#)

Stopping Cisco RIS Data Collector

This section describes how to stop the Cisco RIS Data Collector.

**Caution**

Stopping the Cisco RIS Data Collector service results in loss of static information in the CISCO-CCM-MIB. *Do not stop the service except in an emergency.*

Procedure

-
- Step 1** Choose **Start > Settings > Control Panel**.
 - Step 2** Double-click **Administrative Tools**.
 - Step 3** Double-click **Services**.
 - Step 4** Choose **Cisco RIS DC Service**.
 - Step 5** From the toolbar, choose **Stop Service**.

The Cisco RIS Data Collector service stops, and the Cisco CallManager SNMP extension agent loses the static information in the CCM MIB; the dynamic tables will still contain valid data as long as the local Cisco CallManager service is running.

Related Topics

- [Understanding Cisco Real-Time Information Server Data Collector, page 28-8](#)
- [Stopping Cisco RIS Data Collector, page 28-9](#)

Updating the CISCO-CCM-MIB Information

The CISCO-CCM-MIB contains both dynamic and configured (static) information related to a Cisco CallManager system. At startup, the Cisco RIS data collector service updates the RIS database with all the configured information from the Cisco CallManager database. It also updates the RIS static data when configuration data changes are made in the Cisco CallManager database. When the status of a device changes, Cisco CallManager sends all the dynamic information to the RIS database through the alarm interface.