

Monitor, Reset, and Delete MGCP Gateways for Cisco CallManager

Document ID: 42103

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Introduction

This document explains how to set up Performance Monitor (PM) in order to monitor and report on Cisco Media Gateway Control Protocol (MGCP) gateways. The document also shows how to reset an MGCP gateway and, if necessary, to delete an MGCP gateway.

Note: You can also use the Cisco Administration Serviceability Tool (AST) to monitor these variables. You can launch AST with a web browser and without the need for Windows Terminal Services. For the AST procedure and windows, see Monitor MGCP Gateways with Cisco AST.

This document is Part 6 of a six-document set:

1. Configuring Cisco CallManager with IOS MGCP Gateways (Analog FXO, FXS Ports)
2. Configuring the Cisco IOS MGCP Gateway
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4. Verifying and Troubleshooting the Cisco IOS MGCP Gateway
5. Sample of Debug MGCP Packets
6. Monitor, Reset, and Delete MGCP Gateways for Cisco CallManager

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

This configuration was tested with:

- Cisco CallManager 3.0, 3.1, 3.2, and 4.0
- Various versions of Cisco IOS® Software 12.2 images
- Cisco IOS Software Release 12.3(4)T1

The screen shots and Cisco IOS configuration were captured with use of this software, hardware, and other equipment:

- 1 * Cisco VG200/2 X Foreign Exchange Station (FXS)/2 X Foreign Exchange Office (FXO)/1 FastEthernet 10/100 port; Cisco IOS Software Release 12.1(5)T
- 1 * Cisco CallManager 3.0(5a) that runs on Media Convergence Server (MCS) 7835
- 1 * Cisco CallManager 4.0 that runs on MCS 7835
- 2 * Analog handsets
- 2 * Cisco 7960 IP Phones

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Refer to the Cisco CallManager Compatibility Matrix for more information about software version recommendations for compatibility between Cisco CallManager and the Cisco IOS gateway.

Note: Use Cisco IOS Software Release 12.2(11)T or later because of the **ccm-manager** command enhancements. The **ccm-manager** command requires Cisco IOS Software Release 12.1(5)XM or later on the VG200 and on all routers, which include the Cisco 2600 and 3600.

Cisco 2600 and 3600 routers support MGCP if the routers run Cisco IOS Software Release 12.1(3)T or later. The release and version that you require is based on the features that you need to enable. The Cisco CallManager server must run version 3.0(5)a or later. The router configuration is the same for all types of routers. The Cisco CallManager configuration is also the same for all types of routers.

The VG200 is supported by Cisco IOS Software Release 12.1(5)XM1 and later. The release and version that you require is based on the features that you need to enable. Although the VG200 is supported in earlier releases of Cisco CallManager, use version 3.0(5)a or later.

Conventions

For more information on document conventions, refer to the Cisco Technical Tips Conventions.

Tasks to Perform

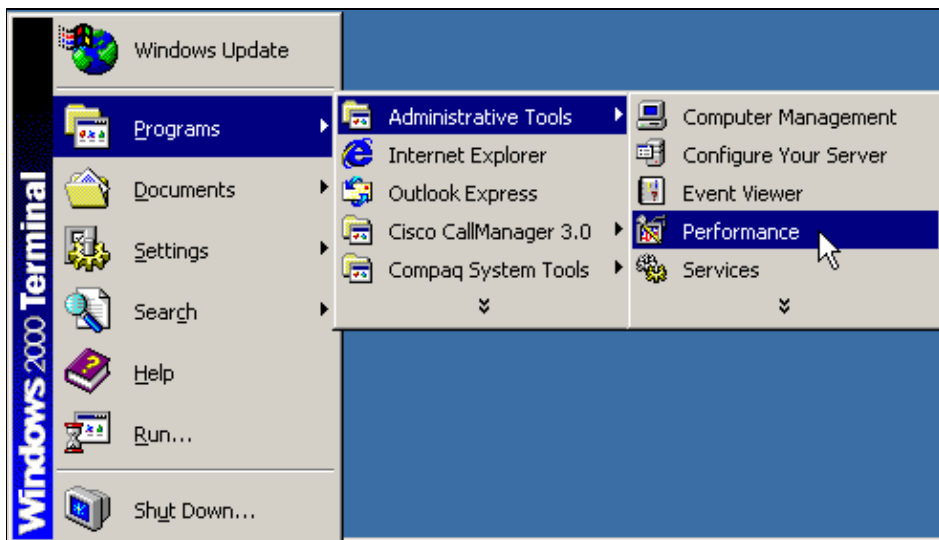
- **Task 1: Monitor the MGCP Gateway**
 - ◆ Set Up and Use Performance Monitor (for Cisco CallManager Version 3.2 and Earlier)
 - ◆ Set Up and Use Performance Monitor (for Cisco CallManager Version 4.0 and Later)
 - ◆ Monitor MGCP Gateways with Cisco AST for Cisco CallManager version 3.2 and earlier
 - ◆ Monitor MGCP Gateways with Cisco CallManager Serviceability Real-Time Monitoring Tool for Cisco CallManager version 3.3 and later
- **Task 2: Reset the MGCP Gateway**
- **Task 3: Delete the MGCP Gateway**

Task 1: Monitor the MGCP Gateway

Set Up and Use Performance Monitor (for Cisco CallManager Version 3.2 and Earlier)

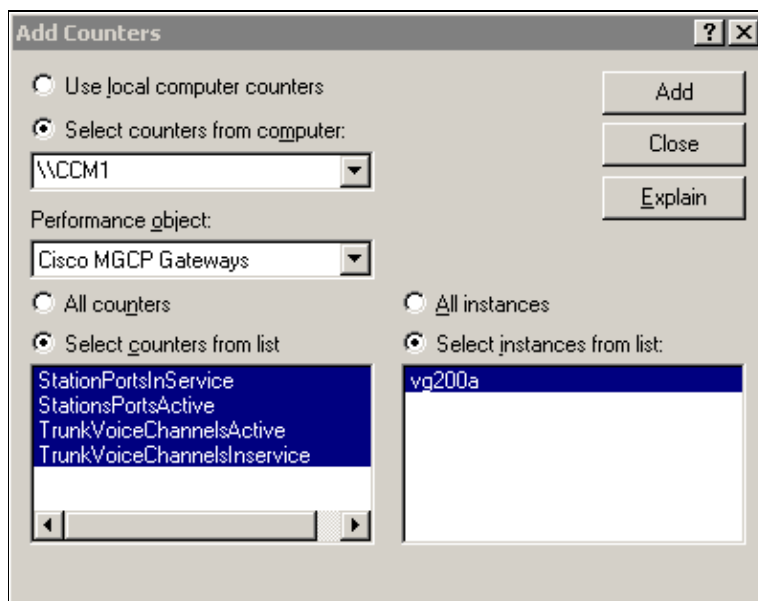
In this task, you configure PM to report on the current status of the MGCP gateway configuration of the Cisco CallManager server. PM shows the ports that the MGCP gateway has configured and the state of the ports.

1. Open PM.



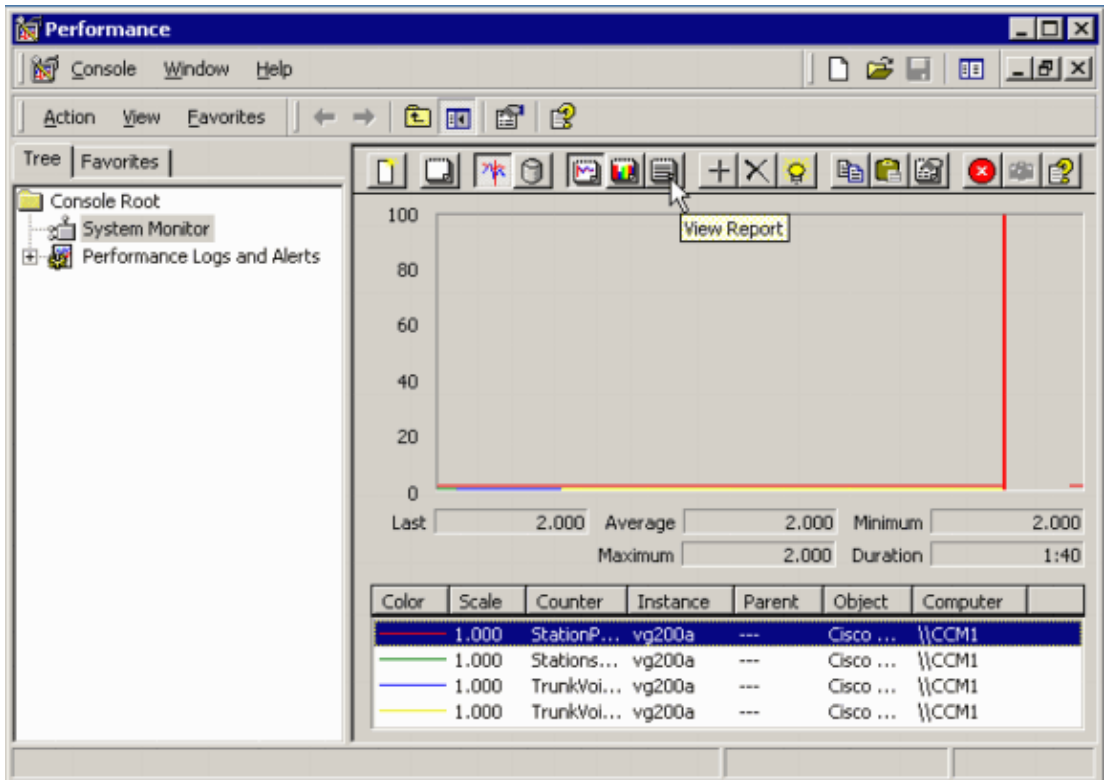
2. Choose **Add Counters**.
3. From the Performance Object menu, choose **Cisco MGCP Gateways** and select all the counters.

In order to select all the counters, you can either click them individually or click the **All counters** radio button.



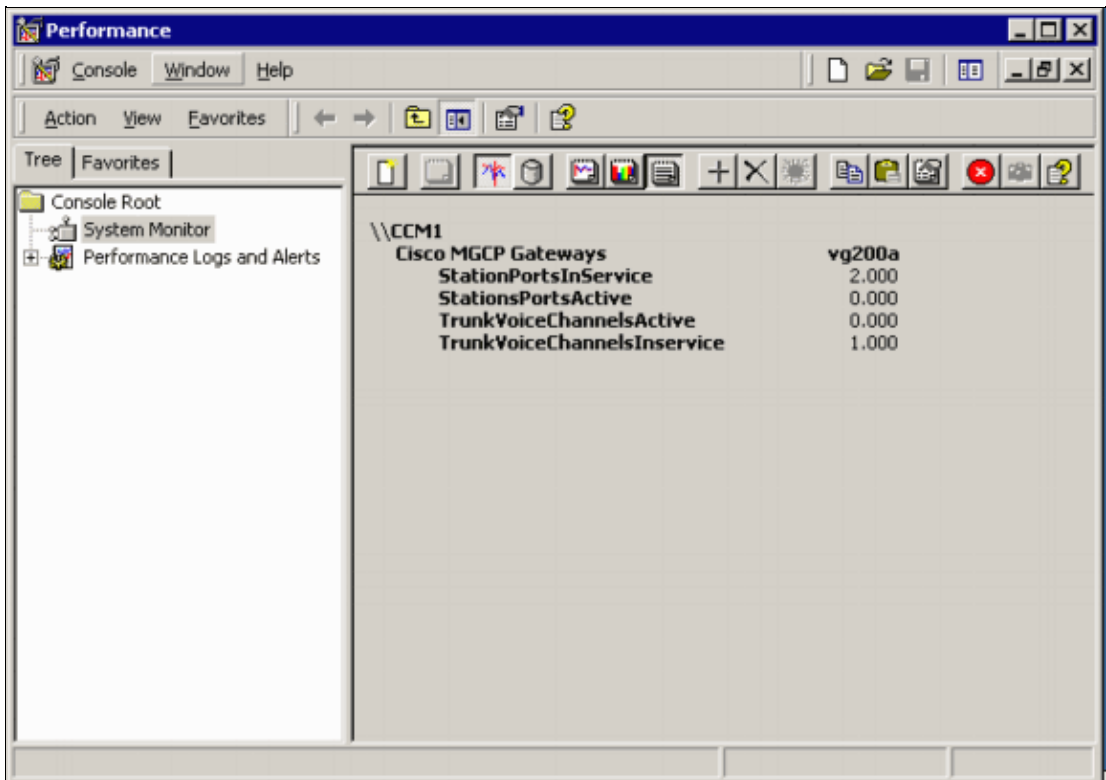
4. Click **Add**, and click **Close**.
5. Switch to report mode.

Click the **View Report** icon in order to switch to report mode.



6. Verify that the configured devices appear.

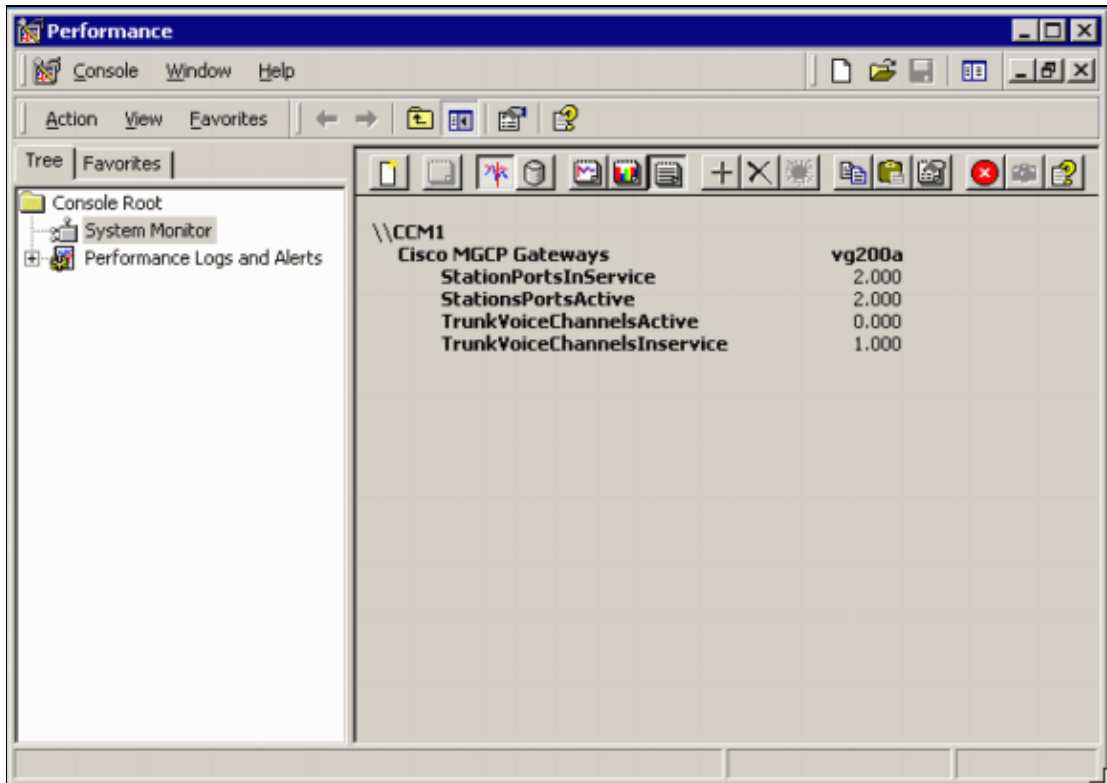
In this configuration, look for two FXS (station) ports in service and one FXO (trunk) channel in service. The report in this example confirms these devices. There are two StationPortsInService and one TrunkVoiceChannelsInService. These are the MGCP members that you configured in Cisco CallManager for the MGCP gateway with the name vg200a.



If the members that you configured do not appear in the report, make certain that you selected the correct gateway. If you selected the correct MGCP gateway, proceed to Task 2: Reset the MGCP Gateway.

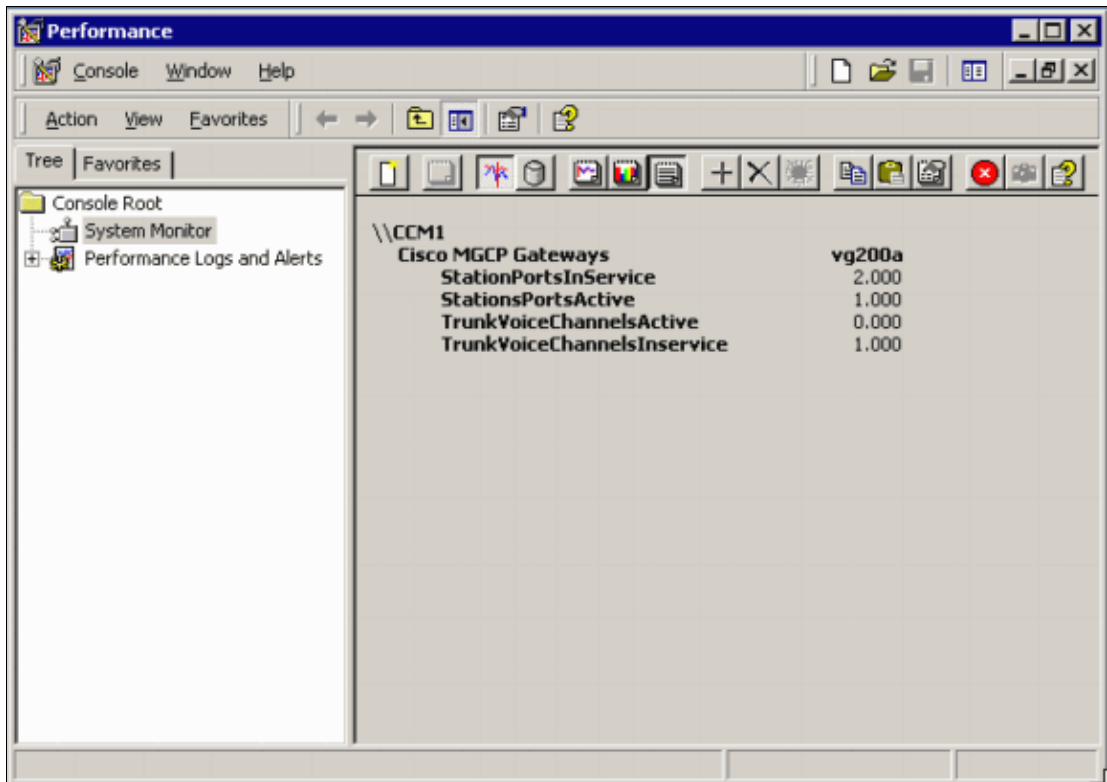
7. Make a call from FXS 1/1/0 to 1/1/1.

In this window, you can see that both station ports are active, which is the expected behavior:



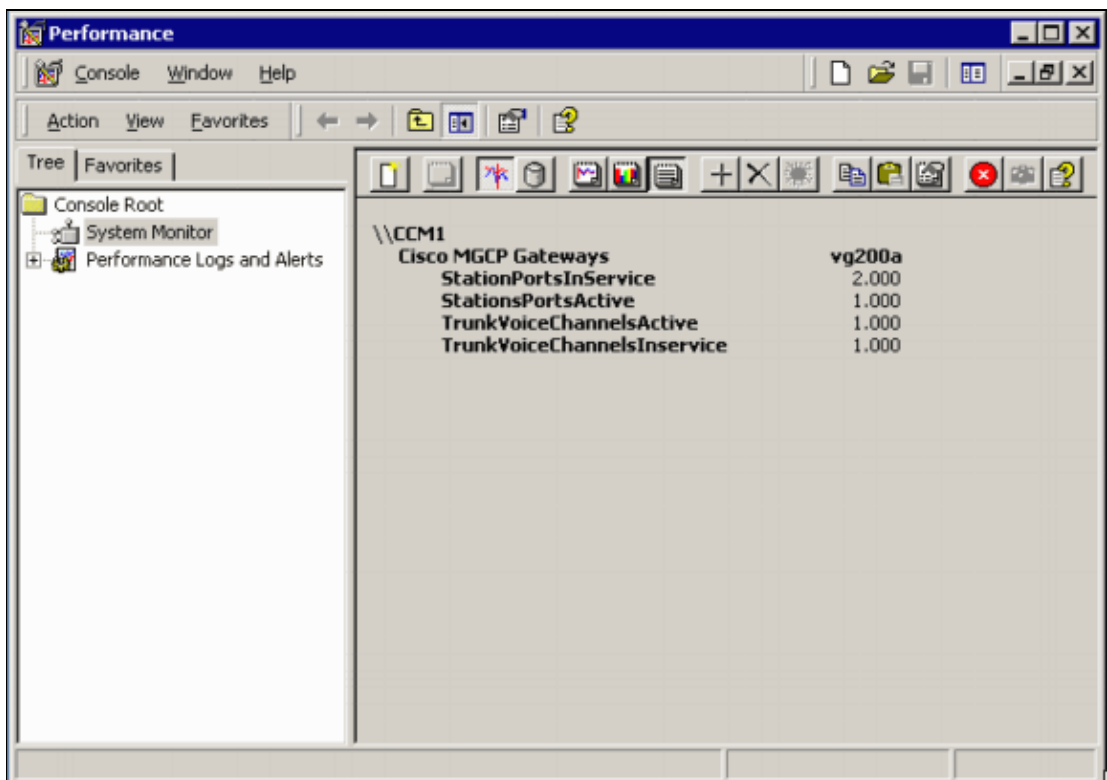
8. Make a call from an IP phone to FXS port 1/1/0.

In this screen, you can see that only one station port is active, which is the expected behavior. There is one StationsPortsActive:



9. Make a call from FXS 1/1/0 to an outside line with use of the Public Switched Telephone Network (PSTN).

In this window, you can see that one station port is active and one trunk port is active, which is the expected behavior. There is one StationsPortsActive and one TrunkVoiceChannelsActive:



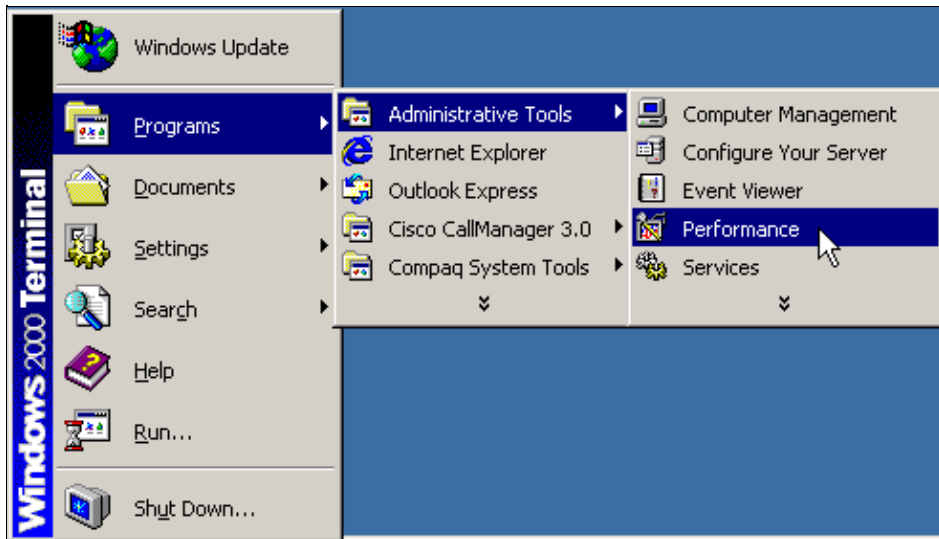
You have now completed setup of the PM. You can now start to use PM in order to troubleshoot your configuration.

In some cases, the report can fail to show all the stations, or MGCP members, that you believe you have configured. If this failure occurs, try to reset the MGCP gateway. In order to reset the gateway, complete the steps in Task 2: Reset the MGCP Gateway.

Set Up and Use Performance Monitor (for Cisco CallManager Version 4.0 and Later)

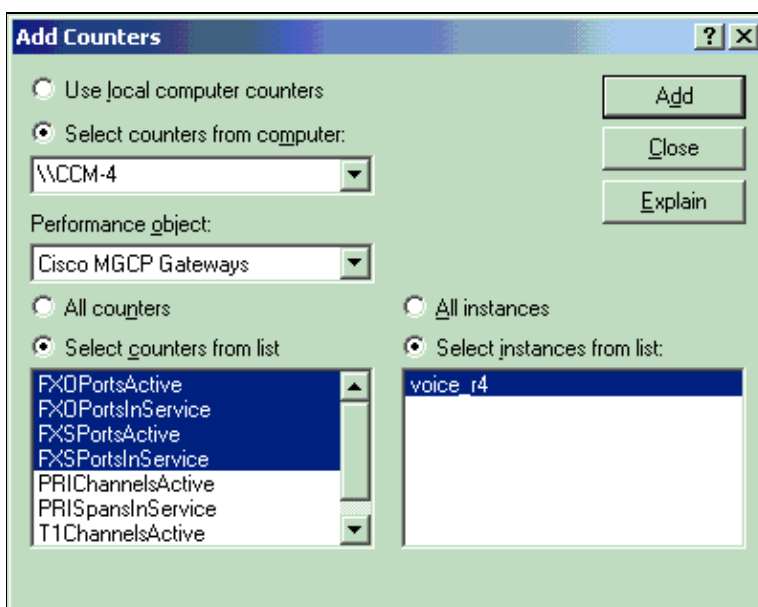
In this task, you configure PM to report on the current status of the MGCP gateway configuration of the Cisco CallManager server. PM shows the ports that the MGCP gateway has configured and the state of the ports.

1. Open PM.



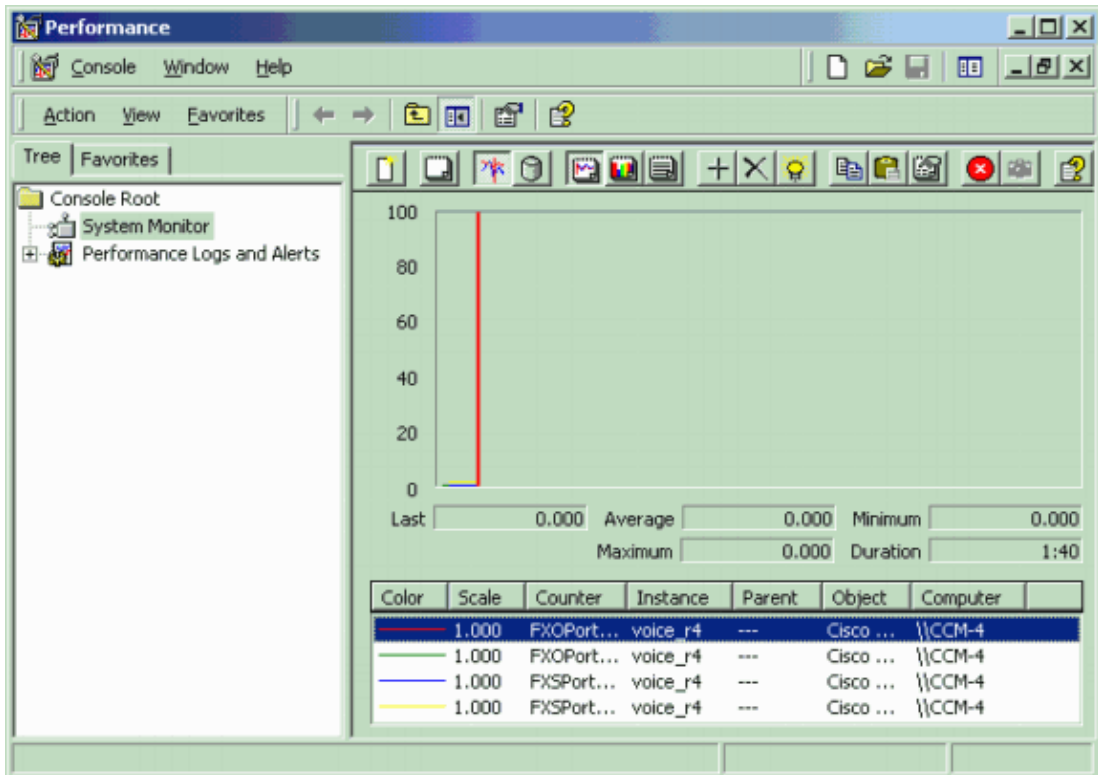
2. Choose **Add Counters**.
3. From the Performance Object menu, choose **Cisco MGCP Gateways** and select all the counters.

In order to select all the counters, you can either click them individually or click the **All counters** radio button.



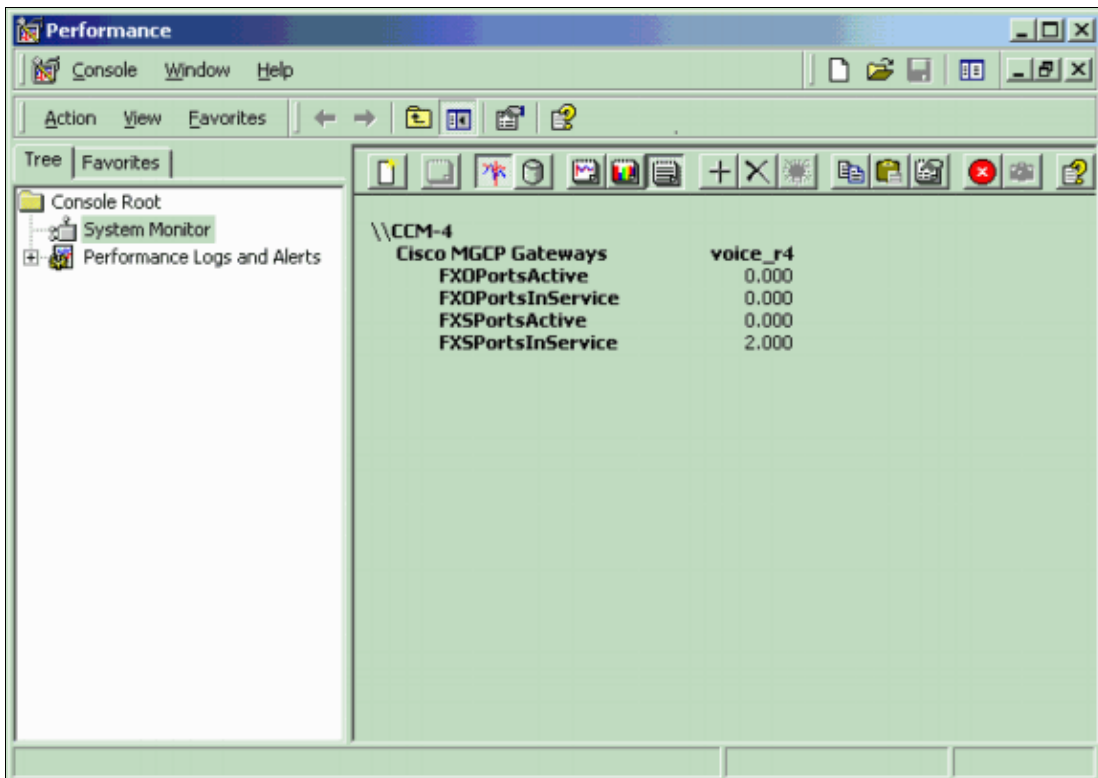
4. Click **Add** and click **Close**.
5. Switch to report mode.

Click the **View Report** icon in order to switch to report mode.



6. Verify that the configured devices appear.

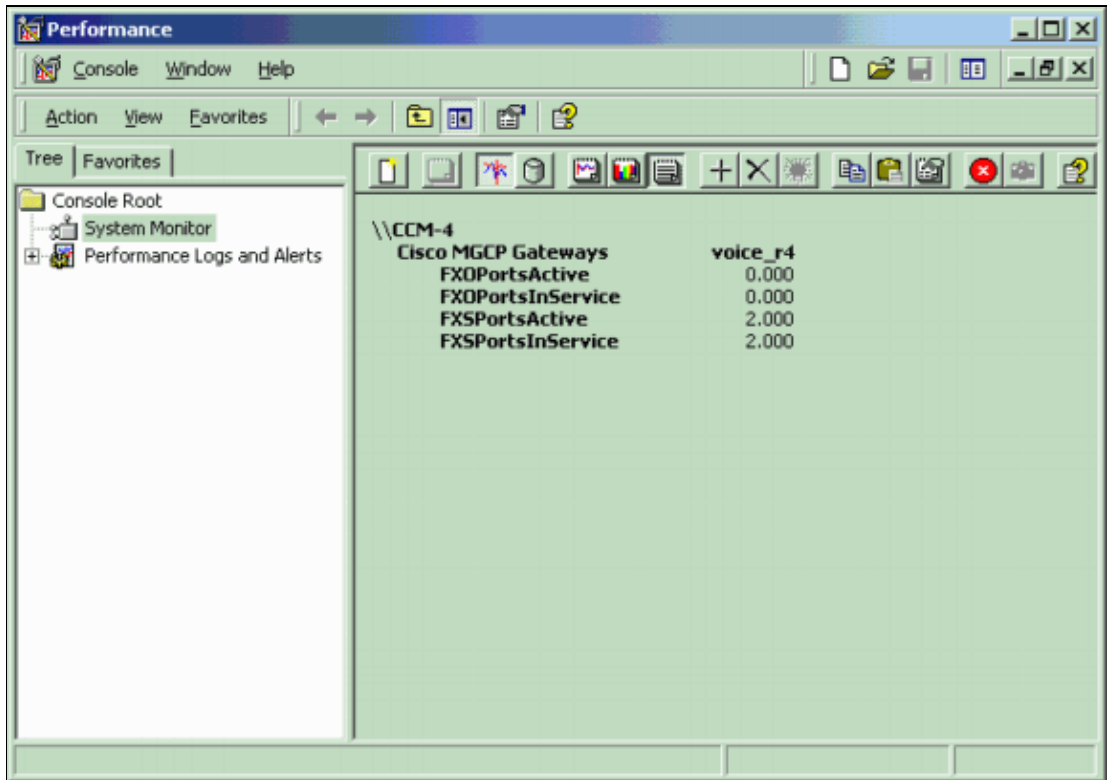
In this configuration, there are two FXS (station) ports in service. You see two FXSPortsInService. These are the MGCP members that are configured in Cisco CallManager for the MGCP gateway with the name `voice_r4`.



If the members that you configured do not appear in the report, make certain that you selected the correct gateway. If you selected the correct MGCP gateway, proceed to Task 2: Reset the MGCP Gateway.

7. Make a call from FXS 1/1/0 to 1/1/1.

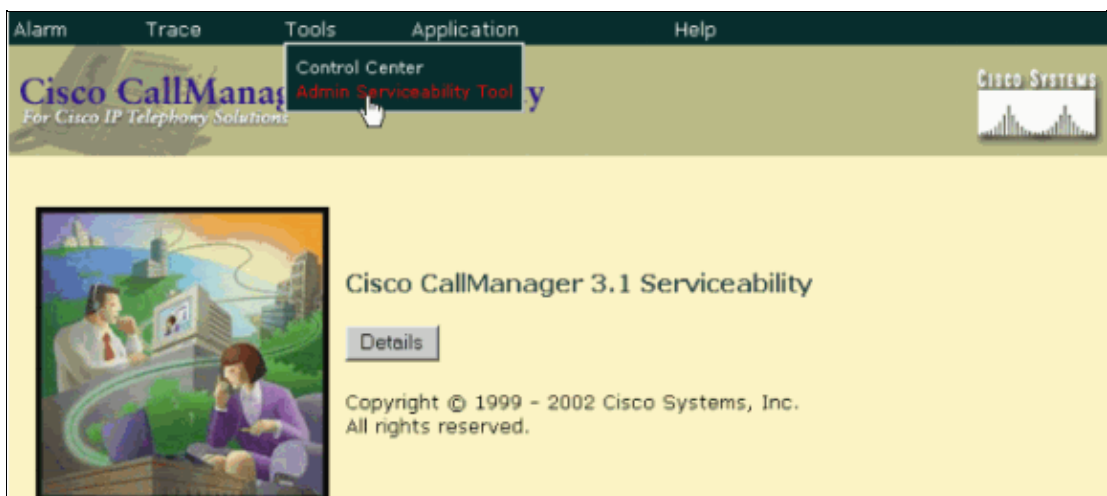
In this window, you can see that both station ports are active, which is the expected behavior:



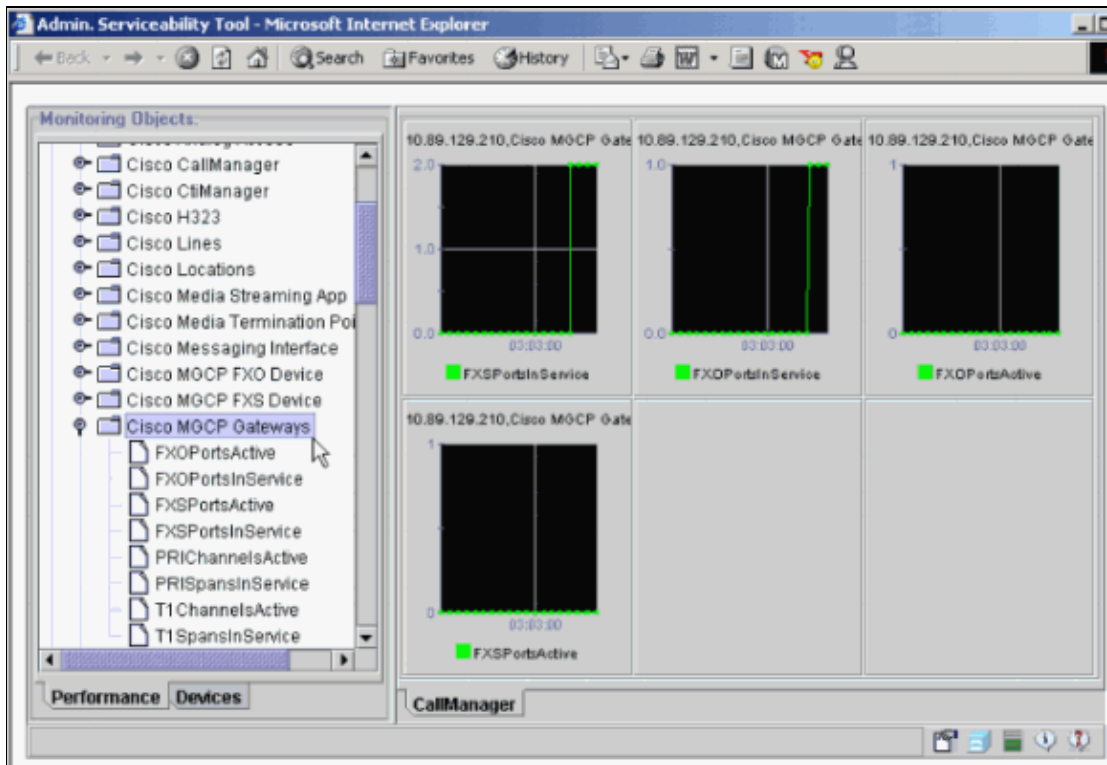
Monitor MGCP Gateways with Cisco AST

You can also use the Cisco AST in order to monitor these variables. This section provides the procedure:

1. Choose **Tools > Admin Serviceability Tool**, as this window shows:



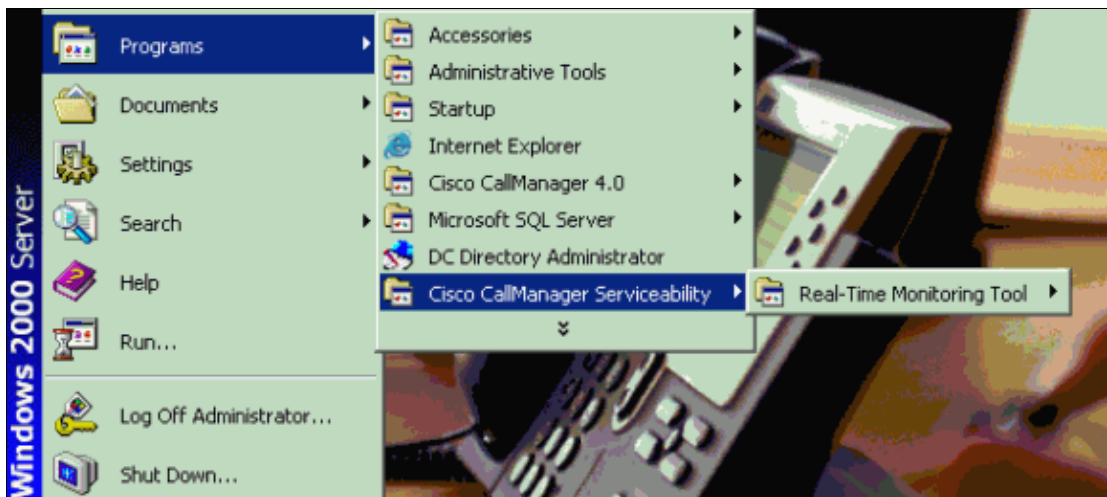
2. Choose **Cisco MGCP Gateways** under the Performance tab.



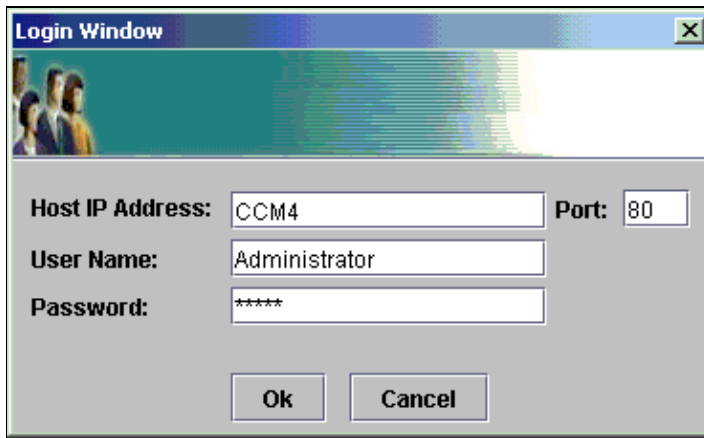
Monitor MGCP Gateways with Cisco CallManager Serviceability Real-Time Monitoring Tool

You can use the Cisco CallManager Serviceability Real-Time Monitoring Tool (RTMT) in order to monitor the variables. This section provides the procedure:

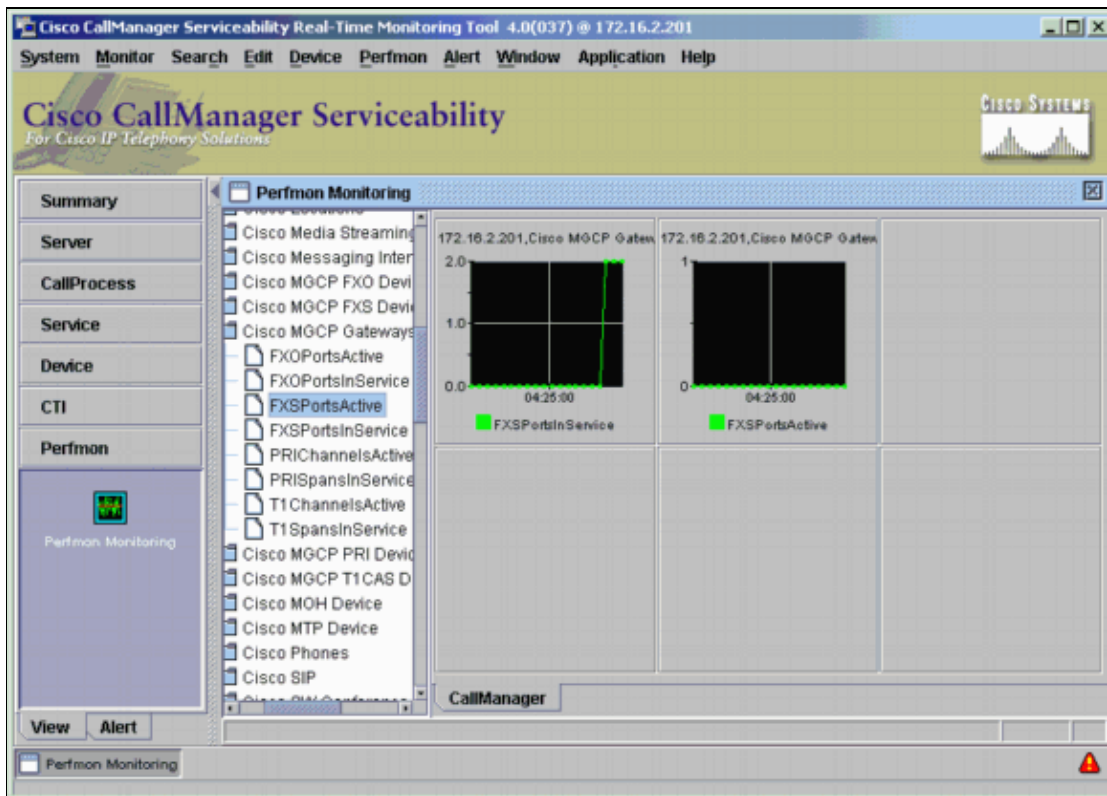
1. Open RTMT.



2. Log in to the tool.



3. Choose **Perfmon > Open Perfmon Monitoring**.
4. Choose **Cisco MGCP Gateways** and select the variable that you want to monitor.



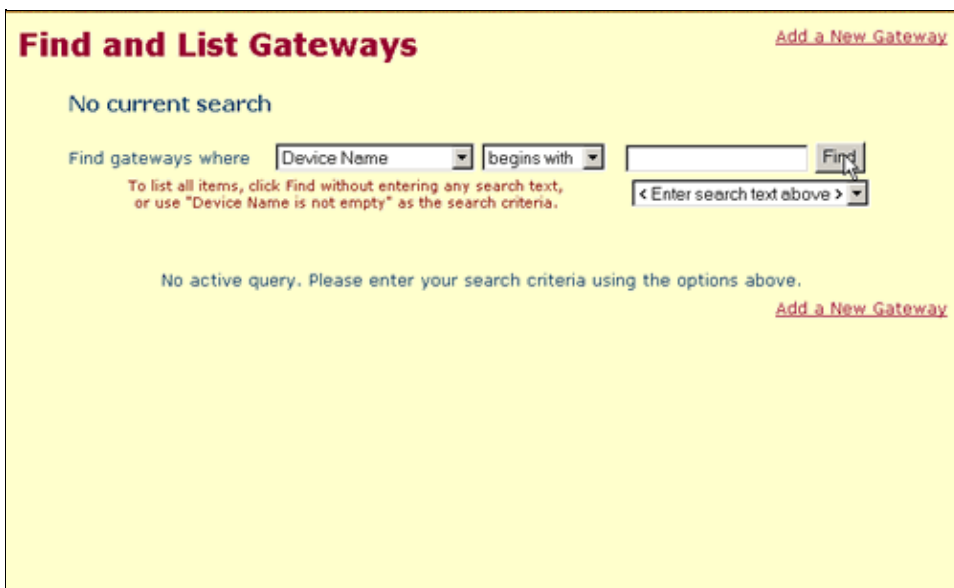
Task 2: Reset the MGCP Gateway

If the members that you configured in the MGCP gateway did not appear in PM, try to reset the MGCP gateway. Complete the steps in this section, and then repeat Task 1: Monitor the MGCP Gateway.

1. Choose **Device > Gateway**.



You see a window that is similar to this:



2. Click **Find**.

You see a window that is similar to this:



3. Choose the gateway that you created.

In this case, the gateway is VG200A.



Caution: The Reset option in this window does not work in some versions of Cisco

CallManager. If the Reset option does not work, use the Reset Gateway option, which the window in Step 4 shows.

4. Click **Reset Gateway**.

MGCP Configuration [Back to Find/List Gateways](#)

MGCP: VG200A

Status: Ready

New Update Delete **Reset Gateway** Cancel

MGCP Domain Name* VG200A

Description VG200A

Module in Slot 1	Endpoint Identifiers
NM-2V	
VIC in Sub-Unit 0	VIC-2FXO (1/0/0) (1/0/1)
VIC in Sub-Unit 1	VIC-2FXS (1/1/0) (1/1/1)

* indicates required item

[Back to Find/List Gateways](#)

Note: This window shows that FXO port 1/0/1 on the VG200 has been configured. The system has this configuration in order to create documentation on a different topic. But this document does not use this port.

5. Choose **Reset Gateway**.

Reset Device

Selected Device: VG200A (VG200A)

To restart a device without shutting it down, click the **Restart** button. To shut down a device and bring it back up, click the **Reset** button. Click **Close** to return to the previous window without resetting/restarting the device.

Note:

Restarting or resetting a gateway drops any calls in progress using that gateway. Other devices wait until calls are complete before restarting or resetting.

Restart Reset Close

6. Click **Reset**.

7. Return to Task 1: Monitor the MGCP Gateway in order to complete the steps again.

If you are still unsuccessful with the completion of Task 1, refer to the document Verifying and Troubleshooting the Cisco IOS MGCP Gateway. If the MGCP gateway configuration appears to be correct, proceed to Task 3: Delete the MGCP Gateway.

Task 3: Delete the MGCP Gateway

In some cases, after you verify the MGCP gateway configuration, PM can still fail to display the MGCP members that you configured. Delete the entire MGCP gateway and recreate it. This action solves the problem.

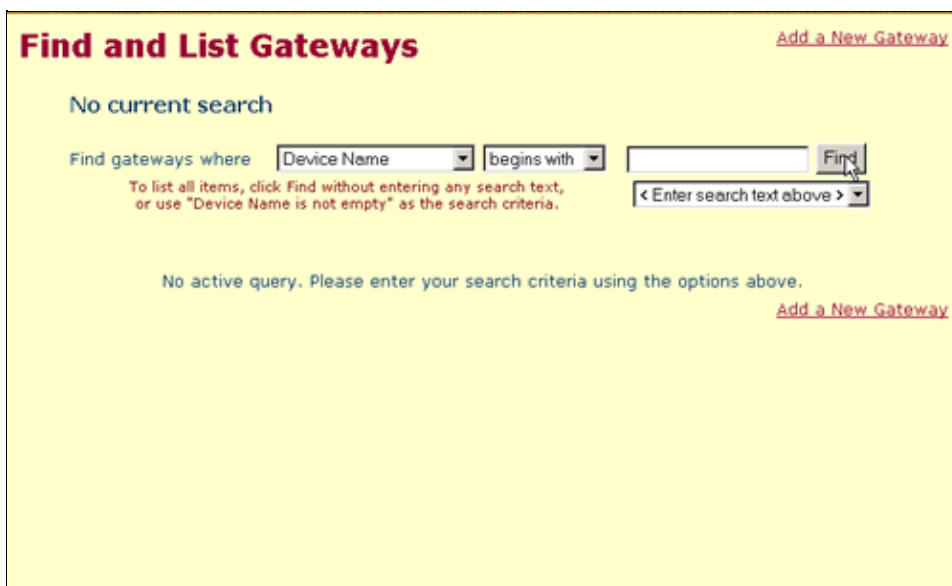


Caution: You cannot undo this step. Before you delete the MGCP gateway, make certain that you have all the information necessary to recreate the gateway. Only use Task 3 as a last resort.

1. Choose **Device > Gateway**.



You see a window that is similar to this:



2. Click **Find**.

You see a window that is similar to this:

Find and List Gateways [Add a New Gateway](#)

2 matching record(s) for Device Name begins with ""

Find gateways where begins with

To list all items, click Find without entering any search text, or use "Device Name is not empty" as the search criteria.

Matching record(s) 1 to 2 of 2

Device Name	Description	Device Pool	Delete	Reset
172.16.1.205	2651 Router	Default		
VG200A	VG200A			

First Previous Next Last Page 1 of 1 [Add a New Gateway](#)

3. Choose the gateway that you created.

In this case, the gateway is VG200A.

You see a window that is similar to this:

MGCP Configuration [Back to Find/List Gateways](#)

MGCP: VG200A

Status: Ready

MGCP Domain Name*

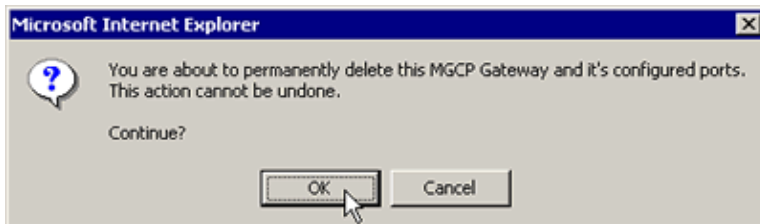
Description

Installed Voice Interface Cards	Endpoint Identifiers
Module in Slot 1 <input type="text" value="NM-2V"/>	
VIC in Sub-Unit 0 <input type="text" value="VIC-2FXO"/>	<input type="text" value="(1/0/0)"/> <input type="text" value="(1/0/1)"/>
VIC in Sub-Unit 1 <input type="text" value="VIC-2FXS"/>	<input type="text" value="(1/1/0)"/> <input type="text" value="(1/1/1)"/>

* indicates required item [Back to Find/List Gateways](#)

4. Click **Delete**.

You see this dialog box:



5. Click **OK**.

6. Repeat the steps necessary in order to create the MGCP gateway.

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Voice & Video: Voice over IP
Voice & Video: IP Telephony
Voice & Video: IP Phone Services for End Users
Voice & Video: Unified Communications
Voice & Video: IP Phone Services for Developers
Voice & Video: General

Related Information

- [How to Configure MGCP with Digital PRI and Cisco CallManager](#)
- [Verifying and Troubleshooting the Cisco IOS MGCP Gateway](#)
- [Understanding MGCP Interactions with Cisco CallManager](#)
- [Hookflash Transfer in MGCP](#)
- [Voice Technology Support](#)
- [Voice and Unified Communications Product Support](#)
- [Recommended Reading: Troubleshooting Cisco IP Telephony](#)
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Updated: Jan 17, 2006

Document ID: 42103