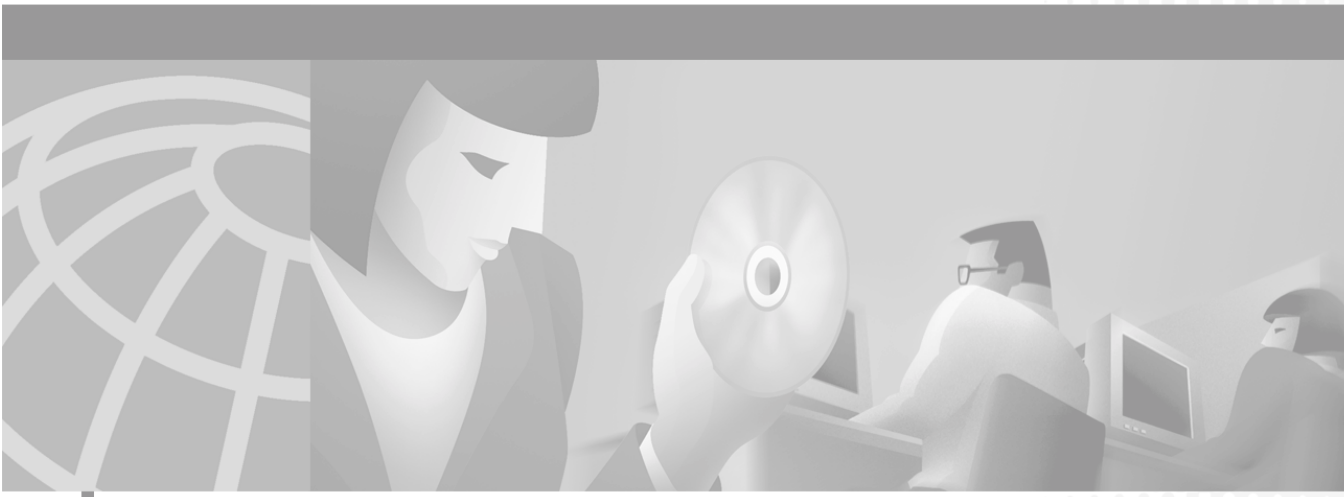

Cisco Conference Connection Administration Guide

Corporate Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
http://www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 526-4100

Customer Order Number: DOC-7812957=
Text Part Number: 78-12957-01

Cisco Conference Connection Administration Guide

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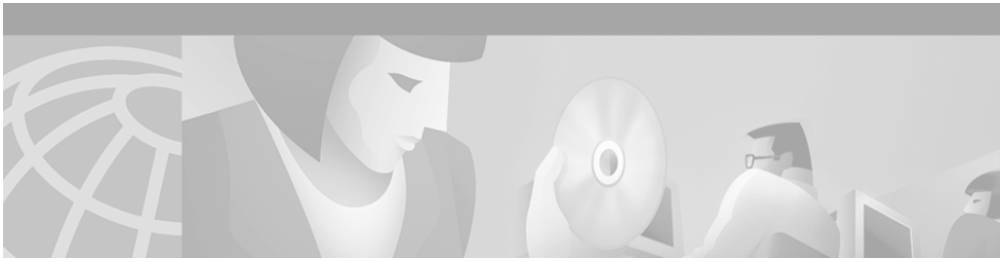


About This Guide

Overview

The Cisco Conference Connection Administration Guide provides you with the information you need to understand, install, configure, and manage Cisco Conference Connection on your network.

This section describes the audience, objectives, organization, and conventions of this guide, and provides information about how to obtain related documentation.

Audience

Network engineers, system administrators, or telecom engineers should review this guide to learn the steps required to properly set up Cisco Conference Connection on the network.

The tasks described in this guide are administration-level tasks and are not intended for end users of Cisco Conference Connection.

These tasks require familiarity with Cisco CallManager since there is interaction between Cisco Conference Connection and Cisco CallManager.

Objectives

This guide provides all the necessary steps to make the Cisco Conference Connection operational on the Voice over IP (VoIP) network.

How to Use This Guide

Locate the task you want to perform and then reference the corresponding chapter in this guide.

To do this	See
Learn about Cisco Conference Connection	Chapter 1, "Introduction to Cisco Conference Connection"
Install Cisco Conference Connection	Chapter 2, "Cisco Conference Connection Installation"
Configure Cisco CallManager for Cisco Conference Connection	Chapter 3, "Cisco CallManager Configuration for Cisco Conference Connection Server"
Administer Cisco Conference Connection	Chapter 4, "Cisco Conference Connection Administration"
Troubleshoot Cisco Conference Connection	Chapter 5, "Cisco Conference Connection Troubleshooting"

Related Documentation

For more information about the Cisco Conference Connection or Cisco CallManager, refer to these publications:

- *Cisco Conference Connection Quick Reference Guide*

  You can find these publications at this URL:
  http://www.cisco.com/univercd/cc/td/doc/product/voice/cccdocs/index.htm

- *Cisco CallManager documentation*

  You can find these publications at this URL:
  http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm

Document Conventions

This guide uses the following conventions.

Convention	Description
boldface font	Commands and keywords are in **boldface**.
italic font	Arguments for which you supply values are in *italics*.
[ ]	Elements in square brackets are optional.
{ x | y | z }	Alternative keywords are grouped in braces and separated by vertical bars.
[x | y | z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
`screen` font	Terminal sessions and information the system displays are in `screen` font.
`boldface screen` font	Information you must enter is in **`boldface screen`** font.
italic screen font	Arguments for which you supply values are in *italic screen* font.
^	The symbol ^ represents the key labeled Control—for example, the key combination ^D in a screen display means hold down the Control key while you press the D key.
< >	Nonprinting characters, such as passwords are in angle brackets.

Note Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the publication.

Caution Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

Warnings use the following conventions:

Warning **This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, you must be aware of the hazards involved with electrical circuitry and familiar with standard practices for preventing accidents.**

Obtaining Documentation

The following sections provide sources for obtaining documentation from Cisco Systems.

World Wide Web

You can access the most current Cisco documentation on the World Wide Web at the following sites:

- http://www.cisco.com
- http://www-china.cisco.com
- http://www-europe.cisco.com

Documentation CD-ROM

Cisco documentation and additional literature are available in a CD-ROM package. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or as an annual subscription.

Ordering Documentation

Cisco documentation is available in the following ways:

- Registered Cisco Direct Customers can order Cisco Product documentation from the Networking Products MarketPlace:

  http://www.cisco.com/cgi-bin/order/order_root.pl

- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:

  http://www.cisco.com/go/subscription

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco corporate headquarters (California, USA) at 408 526-7208 or, in North America, by calling 800 553-NETS(6387).

Documentation Feedback

If you are reading Cisco product documentation on the World Wide Web, you can submit technical comments electronically. Click **Feedback** in the toolbar and select **Documentation**. After you complete the form, click **Submit** to send it to Cisco.

You can e-mail your comments to bug-doc@cisco.com.

To submit your comments by mail, use the response card behind the front cover of your document, or write to the following address:

Attn Document Resource Connection
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

Obtaining Technical Assistance

Cisco provides Cisco.com as a starting point for all technical assistance. Customers and partners can obtain documentation, troubleshooting tips, and sample configurations from online tools. For Cisco.com registered users, additional troubleshooting tools are available from the TAC website.

Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information and resources at anytime, from anywhere in the world. This highly integrated Internet application is a powerful, easy-to-use tool for doing business with Cisco.

Cisco.com provides a broad range of features and services to help customers and partners streamline business processes and improve productivity. Through Cisco.com, you can find information about Cisco and our networking solutions, services, and programs. In addition, you can resolve technical issues with online technical support, download and test software packages, and order Cisco learning materials and merchandise. Valuable online skill assessment, training, and certification programs are also available.

Customers and partners can self-register on Cisco.com to obtain additional personalized information and services. Registered users can order products, check on the status of an order, access technical support, and view benefits specific to their relationships with Cisco.

To access Cisco.com, go to the following website:

http://www.cisco.com

Technical Assistance Center

The Cisco TAC website is available to all customers who need technical assistance with a Cisco product or technology that is under warranty or covered by a maintenance contract.

Contacting TAC by Using the Cisco TAC Website

If you have a priority level 3 (P3) or priority level 4 (P4) problem, contact TAC by going to the TAC website:

http://www.cisco.com/tac

P3 and P4 level problems are defined as follows:

- P3—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- P4—You need information or assistance on Cisco product capabilities, product installation, or basic product configuration.

In each of the above cases, use the Cisco TAC website to quickly find answers to your questions.

To register for Cisco.com, go to the following website:

http://www.cisco.com/register/

If you cannot resolve your technical issue by using the TAC online resources, Cisco.com registered users can open a case online by using the TAC Case Open tool at the following website:

http://www.cisco.com/tac/caseopen

Contacting TAC by Telephone

If you have a priority level 1(P1) or priority level 2 (P2) problem, contact TAC by telephone and immediately open a case. To obtain a directory of toll-free numbers for your country, go to the following website:

http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml

P1 and P2 level problems are defined as follows:

- P1—Your production network is down, causing a critical impact to business operations if service is not restored quickly. No workaround is available.
- P2—Your production network is severely degraded, affecting significant aspects of your business operations. No workaround is available.

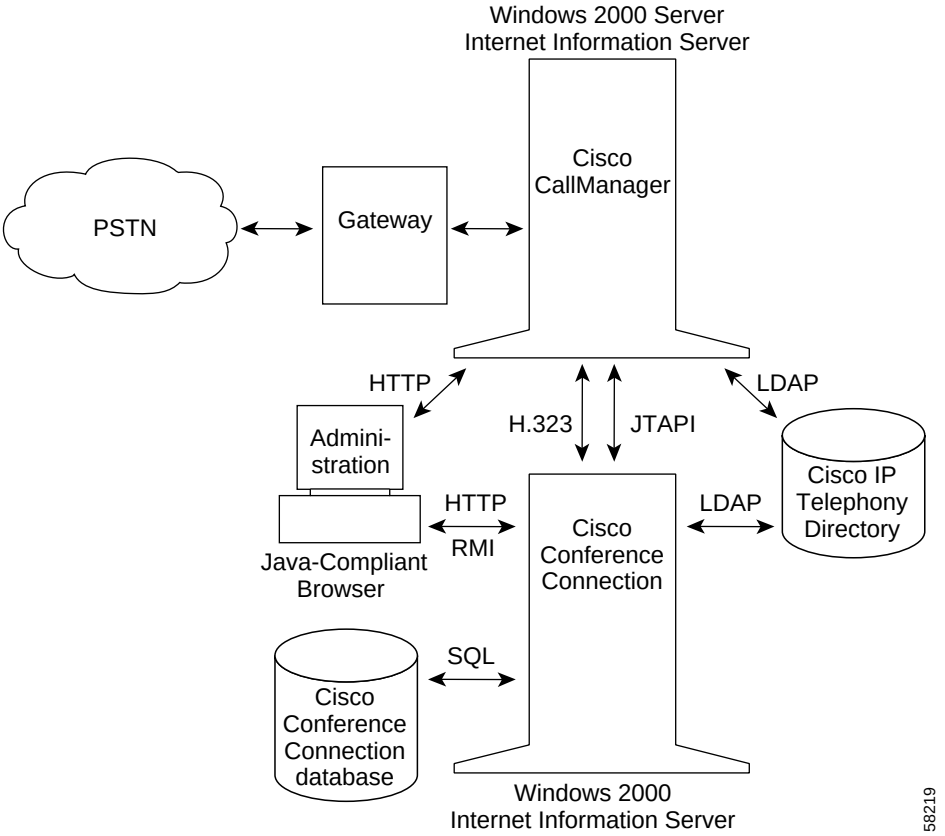
Introduction to Cisco Conference Connection

Cisco Conference Connection is an IP-based, voice conferencing solution that uses Voice over IP (VoIP) technology. To do this, Cisco Conference Connection interacts with several other key Cisco IP Telephony components, including Cisco CallManager.

The following topics in this chapter provide you with an understanding of Cisco Conference Connection and its interaction with other key components of the Voice over IP (VoIP) network.

Cisco IP Telephony Components

The Cisco IP Telephony solution provides the components required to design, deploy, and run Cisco voice processing applications. These components are depicted in the following illustration.



As depicted in this illustration, a Cisco IP Telephony system is built from four main components.

- Gateway—connects the enterprise IP telephony network to the Public Switched Telephone Network (PSTN) and to other private telephone systems such as Public Branch Exchange (PBX).
- Cisco CallManager—provides the features required to implement IP phones, manage gateways, and enable Cisco Conference Connection.

- Cisco Conference Connection—contains the application engine that runs the Cisco Conference Connection application.
- Cisco IP Telephony Directory—stores configuration information and Cisco Conference Connection application scripts in a Lightweight Directory Access Protocol (LDAP) directory. The subdirectory that stores Cisco Conference Connection scripts is called the repository.

Gateway

The gateway component of the Cisco IP Telephony solution integrates Voice over IP (VoIP) network resources with the Public Switched Telephone Network (PSTN). All voice gateways provide an Ethernet interface for connecting to the VoIP network and various voice interface cards to connect to telephony interfaces.

Ciscogateway products work with one or more of the following protocols:

- Skinny Client Control Protocol—A Cisco protocol used for communication between the gateway and the Cisco CallManager
- H.323—A public standard that allows the interconnection of telephony and other media devices over TCP/IP networks
- Media Gateway Control Protocol (MGCP)—A public standard that simplifies gateway configuration (compared to H.323), and that allows for advanced features, such as redundancy

Cisco CallManager

Cisco CallManager provides the features for which organizations have traditionally employed PBX systems, and uses open standards, such as TCP/IP, H.323, and MGCP. Because of its open architecture Cisco CallManager allows easy deployment of robust voice applications and the integration of telephony systems with intranet applications.

Cisco CallManager provides the basic services required for IP phones, such as mapping IP addresses to specific devices and extensions, and for managing Cisco Access gateways. Cisco CallManager supports Cisco Customer Response Applications (CRA) by providing services through the Java Telephony Application Programming Interface (JTAPI).

Cisco CallManager Administrator is implemented as a series of web pages on the Cisco CallManager server. You use the Cisco CallManager Administrator to administer and configure features for Cisco CallManager, such as adding users and configuring CTI route points and CTI ports.

Cisco Conference Connection Server

The Cisco Conference Connection Server executes the Cisco Conference Connection application. You deploy the Cisco Conference Connection on a separate server.

The Cisco Conference Connection Server uses JTAPI to request and receive services from Cisco CallManager. The Cisco Conference Connection Server is implemented as a Windows service comprised of multiple components.

The server includes six components: JTAPI, Call Control, Conference Mixer, Scheduling Engine plus Web Interface, Scheduling Database (Microsoft Data Engine (MSDE)), and the Conference Director.

Cisco IP Telephony Directory

The Cisco IP Telephony system uses an LDAP directory for storing Cisco Conference Connection application scripts, user profile information, and network-specific configuration information. Application scripts are stored in a subdirectory of the Cisco IP Telephony Directory called the repository. Storing application scripts and configuration information in an LDAP directory allows you to load application scripts on any application engine in the network. The repository keeps one backup version of each script for recovery purposes. You can revert to the previous version if necessary.

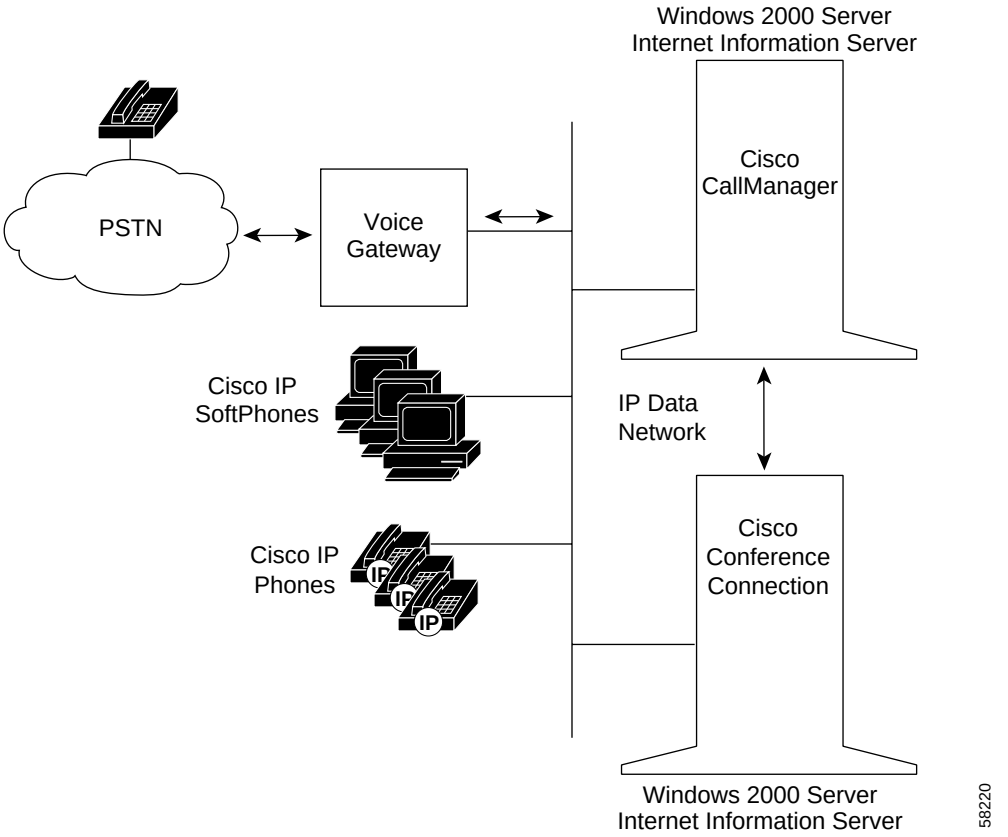
The Cisco IP Telephony system includes a default LDAP directory, which stores application configuration information for Cisco CallManager and the application framework. (The default directory is established as part of the Cisco CallManager installation and configuration.) You can use the default directory to manage your user profiles.

Note The only supported database directory is DC Directory.

Overview of Cisco Conference Connection

The Cisco Conference Connection works with Cisco CallManager and lets you join conferences and add and view conferences through the Web Interface.

The following illustration depicts the Cisco Conference Connection components.



The Conference Director (also known as the Application Engine) provides the following functionality:

- Answers a call
- Plays a Welcome prompt:
  - Welcome to Conference Connection
- Plays Main Menu prompts:
  - To join a conference enter the conference ID, followed by the # key.
  - Make sure you call during the time the conference is scheduled. Enter the conference ID, followed by the # key.
  - Contact the conference organizer for the conference ID. Or enter the conference ID followed by the # key.
  - Stay on the line to be connected to an operator, or to start over, press the * key.
  - If this is correct, press the # key. To re-enter the conference ID, press 1, otherwise press * for help.
  - Consult your conference organizer for the correct conference ID, and be sure to call during the time the conference is scheduled.
- When the caller has confirmed the conference ID, the system transfers the caller to the scheduled conference and plays an ascending tone or prompt.
- When the caller leaves a conference, the system plays a descending tone or prompt.

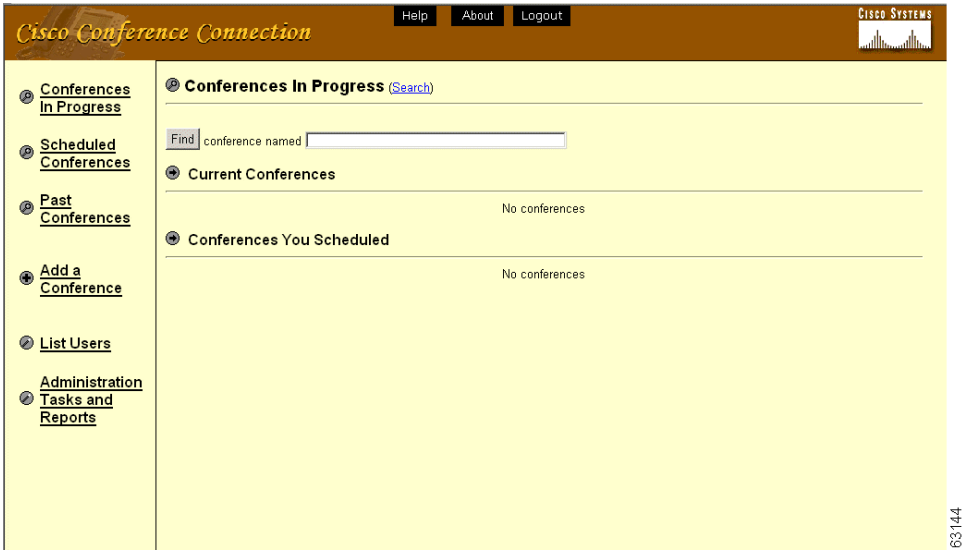
The Cisco Conference Connection provides functionality for:

- scheduling and viewing conferences
- administering users
- running administrative reports
- posting system information

Cisco Conference Connection Features

The Cisco Conference Connection voice conferencing solution lets you easily add and join conferences, as well as view current, scheduled, or past conferences.

The Cisco Conference Connection Web Interface for a system administrator is shown in the following picture.



The Cisco Conference Connection includes the following features.

Feature	Description
Add a conference	You can add new conferences, and change and delete conferences that you scheduled through the Cisco Conference Connection Web Interface.
Join a conference	You can call directly into a conference, or you can join a conference via the services button on your Cisco IP Phone 7960/7940.
View conferences in progress	You can view and search for current conferences and conferences that you scheduled through the Cisco Conference Connection Web Interface.
View scheduled conferences	You can view and search for the scheduled conferences through the Cisco Conference Connection Web Interface.
View past conferences	You can view and search for past conferences through the Cisco Conference Connection Web Interface.
View user list	You can view a list of users through the Cisco Conference Connection Web Interface. This list is refreshed from Cisco CallManager.
Perform administrative tasks and run reports	You can administer users and licenses, delete a group of past conferences, and run reports through the Cisco Conference Connection Web Interface.

CHAPTER 2

Cisco Conference Connection Installation

This chapter provides instructions for installing Cisco Conference Connection.

Refer to the appropriate topics in this chapter to understand how to install and configure Cisco Conference Connection.

Before You Begin

Before you begin the installation of Cisco Conference Connection, you must ensure that you have met hardware and software requirements and configured Windows 2000 components.

Refer to the following table for the tasks to perform before installing Cisco Conference Connection.

To do this task	See
Verify the proper hardware requirements	Hardware Requirements, page 2-2
Verify the proper software requirements	Software Requirements, page 2-2
Install Windows 2000	Installing Windows 2000, page 2-3

To do this task	See
Configure Windows 2000	Configuring Windows 2000, page 2-4
Configure Windows 2000 for event logging	Configuring Windows 2000 Event Logging, page 2-6

Hardware Requirements

The Cisco Conference Connection Server is supported on the following hardware platforms:

- Cisco Media Convergence Server (MCS) 7825-800
  - 200 MB free disk space minimum for installation
  - 512 MB RAM minimum
- Cisco Media Convergence Server (MCS) 7835-1000
  - 200 MB free disk space minimum for installation
  - 1GB RAM minimum
- Static IP address
- 100 MBps Ehternet connection

Software Requirements

The server on which you install Cisco Conference Connection requires that the following software components be pre-installed using the Cisco MCS Operating System Installation CD:

- Microsoft Windows 2000 SP1
- Microsoft Internet Information Server (IIS) 5.0

In addition, Cisco CallManager 3.1.x must be installed on a separate server on your network.

Installing Windows 2000

Before installing Cisco Conference Connection, you need to install and configure the Windows 2000 (Service Pack 1) operating system on the Cisco MCS using the Cisco MCS Operating System CD.

To install Windows 2000, perform the following steps.

Step 1 Note down the following product key: FVHD-IAZA-ROFJ-DERJ. You will need to enter this key during the installation.

Step 2 Turn on the Cisco MCS and insert the operating system installation CD-ROM # 1.

At this point, the MCS automatically restarts. After the MCS restarts, the Cisco AVVID welcome window appears. Next, the Media Convergence Server QuickBuilder window appears.

If you are performing the installation on a new MCS, or a server without an operating system installed, go to Step 8.

Step 3 At the Media Convergence Server QuickBuilder window, click **Next.**

Step 4 At the Type of Installation window, select the New Installation or Server Replacement option button and then click **Next**.

Step 5 At the Warning window, click **Next**.

After the system data is erased, a message appears advising you to turn off the server.

Step 6 Turn off the server.

Step 7 Wait 5 to 10 seconds, and turn the server back on.

After the system restarts, the Cisco AVVID welcome window appears, followed by the Configuring Hardware window.

Step 8 At the New Installation or Server Replacement window, click **Next** to start the installation.

Step 9 At the Configuration Process window, click **Next**.

The system runs some programs and then restarts.

Step 10 At the Configuration Process window, click **Next**.

Step 11 At the message to power off, turn off the server.

Step 12 Wait 5 to 10 seconds, and turn the server back on.

After the system restarts, the Cisco AVVID welcome window appears, followed by the Product Key window.

Step 13 At the Product Key window, enter the product key from Step 1.

Step 14 At the End User License Agreement screen, click **I Agree**.

Step 15 At the Server Replacement Option window, make sure that the "I am recovering a system from backup" option button is *not* selected, and click **Next**.

Note The Server Replacement Option window should not have anything selected, unless you are recovering a system from backup and have restoration information located on tape or on another network resource.

Step 16 At the Ready to Complete Installation window, click **Next**.

The system installs the operating system. When the installation is complete, a message appears advising you to eject the CD and press any key to restart the server.

Step 17 Eject the CD-ROM.

Step 18 Press **Enter** to restart the server.

When the system restarts, the Cisco MCS Configuration Wizard window appears.

Configuring Windows 2000

After the installation, you need to configure Windows 2000 using the Cisco MCS Configuration Wizard. The Configuration Wizard appears after the Cisco MCS restarts.

To configure Windows 2000, perform the following steps.

Step 1 At the introduction dialog box for the Cisco MCS Configuration Wizard, click **Next**.

Step 2 Enter the **User Name** and **Organization** for this system and click **Next**.

Step 3 Enter the **Computer Name**, **Workgroup** name, and **DNS Domain suffix** information for this system and click **Next**.

Step 4 Select the appropriate **Time Zone** and click **Next**.

Step 5 Select the correct **Date** and **Time** and click **Next**.

Step 6 Click the **Enter static IP information** option button and click **Next.**

Step 7 Enter the **IP address**, **Subnet mask,** and **Default Gateway** information to be used by the MCS, and click **Next**.

Step 8 If a DNS server and WINS server will be used, enter a primary and secondary **IP addresses** for these servers and click **Next**.

Step 9 At the SNMP community string window, accept the default community, "public," and click **Next**.

Step 10 Make sure the "Keep Telnet and Terminal Services Screen" option button is selected and click **Next**.

Step 11 At the Cisco MCS configuration Wizard window, click **Next** to enable the MCS Configuration Wizard to configure your Windows 2000 system and restart the server.

After the MCS restarts, it automatically completes the Windows 2000 Server Setup and restarts again.

Caution **Do not intervene** with the Windows 2000 Server Setup process. This process is completed automatically.

Step 12 At the Cisco Product Activation dialog box, click **OK**.

Step 13 Enter a new password (cannot contain spaces) and click **OK**.

Step 14 Click the "remain a workgroup member or join a domain" option button and click **OK.**

A message appears advising you that all products have been installed, and asks, you if you want to restart the server.

Step 15 Click **Yes**.

The system restarts. The operating system installation is now complete.

Configuring Windows 2000 Event Logging

Cisco Conference Connection Server writes events to the Windows 2000 Event logging application. By default, Windows 2000 stops recording new events when the event log becomes full. To avoid losing the most recent information, it is recommended that you change the Windows 2000 event log settings so that old events are overwritten once the event log is full.

To configure Windows 2000 event logging, perform the following steps.

Step 1 From the Windows 2000 Desktop, select **Start > Programs > Administrative Tools > Event Viewer**.

Step 2 Right-click on the Application Log item in the left pane and select **Properties**.

Step 3 In the Event Logging box, select the **Overwrite Events as Needed** option button.

Step 4 It is recommended that you increase the maximimum size of the log file to 10 MB or more, so that more entries are stored before overwriting is necessary.

- In the Maximum Log Size box, increase or decrease the log file size, as appropriate.

Step 5 Click **OK**.

Step 6 Close the Event Viewer window.

Installing Cisco Conference Connection

You can install the Cisco Conference Connection Server and client software from the Cisco Conference Connection CD delivered with your system.

Installing Cisco Conference Connection from the CD

To install Cisco Conference Connection from the Cisco Conference Connection CD, perform the following steps.

Note Do *not* use Windows Terminal Services Client to install the Cisco Conference Connection software. Doing so will result in an incomplete installation.

Step 1 Start the Cisco MCS and log in to Windows 2000.

Step 2 Insert the Cisco Conference Connection Installation CD. Open the IPRV folder and launch setup.exe.

Step 3 At the Cisco Extended Services Administrator window, Click **Next**.

Step 4 At the Software License Agreement window, click **Yes** twice.

Step 5 At the Choose Destination Folder for Cisco Extended Services Administration window, accept the default Destination folder and click **Next**.

Step 6 At the Choose Destination Folder for Administration Web pages window, accept the default Destination folder and click **Next**.

Step 7 At the Service Username and Password window, enter your NT administrator user ID and password. Re-enter the password to confirm and click **Next**.

Step 8 At the Select Program Folder window, accept the default program folder and click **Next**.

The installation program begins copying files.

Step 9 At the Welcome to JTAPI Client Setup window, click **Next**.

Step 10 At the JTAPI Destination window, accept the default Destination folder and click **Next**.

Step 11 At the Choose Destination Location window, accept the default Destination folder and click **Next**.

The installation program begins copying files.

Step 12 At the Maintenance Complete screen, select "Yes I want to view the Readme file," if you want to view the JTAPI readme file.

Step 13 Click **Finish**.

Step 14 At the Setup Complete window, select "No, I will restart my computer later" and click **Finish**.

Step 15 From the Cisco Conference Connection CD, open the CCC folder and launch the setup.exe file.

The Cisco Conference Connection Welcome window appears.

Step 16 Click **Next**.

Step 17 At the Software License Agreement window, click **Yes**.

Step 18 The system prompts you for the location of the Destination folder for the Microsoft Data Engine (MSDE) install. Accept the default location of the MSDE Destination folder and click **Next**.

Step 19 The system prompts you for an MSDE database user password. Enter a password and confirm. Click **Next**.

Step 20 At the Standards Based Conference Configuration window, accept the machine name for this Cisco MCS on the network if it is correct. Otherwise, enter the correct machine name.

Step 21 Click **Next**.

Step 22 Confirm the installation and click **Yes**.

The installation program begins copying files. The MSDE and Serviceability drivers and agents installation and may take some time.

Step 23 At the Setup Complete window, select "Yes I want to restart my computer now."

Step 24 Click **Finish** to complete the installation.

After the installation is completed, you need to configure Cisco CallManager for Cisco Conference Connection Server. See Chapter 3, "Cisco CallManager Configuration for Cisco Conference Connection Server."

CHAPTER 3

Cisco CallManager Configuration for Cisco Conference Connection Server

This chapter provides instructions for configuring Cisco CallManager for Cisco Conference Connection Server.

Refer to the appropriate topics in this chapter to understand how to configure Cisco CallManager for Cisco Conference Connection Server.

Adding the Cisco Conference Connection Server as an H.323 Gateway

To add the Cisco Conference Connection Server as an H.323 Gateway, perform the following steps.

Note If you need more information or if the information you see is not exactly the same as described here, see the *Cisco CallManager documentation*.

Step 1 On the Cisco CallManager server, choose

Start > Programs > Cisco CallManager3.1.x > CallManager Administration

You can also connect to the Cisco CallManager web server using any computer on your network by using the following URL:

http://*servername*/ccmAdmin

where *servername* is the DNS name or IP address of your Cisco CallManager server.

You will be prompted for a network username and password.

The Cisco CallManager Administration screen appears.

Step 2 Choose **Device > Add a New Devic**e.

The Add Device screen appears.

Step 3 From the Device type list box, choose **Gateway** .

The Add a New Gateway screen appears.

Step 4 From the Gateway Type list box, choose **H.323 Gateway** .

Step 5 From the **Device Protocol** list box, choose **H.225** (default).

Step 6 Click **Next**.

Step 7 Enter the appropriate settings as described in the following table.

Field	Description
Device Name	Enter the IP address or DNS name of the Cisco Conference Connection Server.
Description	Enter a description that clarifies the purpose of the device (for example, Conf Connection).
Device Pool	Choose the appropriate device pool from the list box. If no pool has been created, choose **Default**.
Media Resources Group List	Choose the appropriate group list if one has been created. Otherwise choose **None**.
Network Hold Audio Source	Choose the appropriate audio source if one has been created. Otherwise choose **None**.
User Hold Audio Source	Choose the appropriate audio source if one has been created. Otherwise choose **None**.
Calling Search Space	Choose the appropriate calling search space if one has been created. Otherwise, choose **None**.
Location	Choose the appropriate location if one has been created. Otherwise choose **None**.
Caller ID DN	Leave this field blank.
Calling Party Selection	Any outbound call on a gateway can send directory number information. This field determines which directory number is sent. Choose **Originator**.
Presentation Bit	Choose whether to transmit or block caller ID. Choose **Allowed**.
Display IE Delivery	Leave this check box unchecked.
Gatekeeper Name	You *must* choose **None**.
Media Termination Point Required	Leave this check box unchecked.
Num Digits	Choose **32**.
Sig Digits	Leave this check box unchecked.
Prefix DN	Leave this field blank.

Field	Description
Run H225D on Every Node	Leave this box checked.
Called Party IE Number Type	Choose Cisco CallManager.
Calling Party IE Number Type	Choose Cisco CallManager.
Called Numbering Plan	Choose Cisco CallManager.
Calling Numbering Plan	Choose Cisco CallManager.

Step 8 Click **Insert**.

Step 9 Click **Reset Gateway** to reset the gateway to apply the changes.

Step 10 Click **Reset** to initiate the reset, and then click **OK**.

Adding a Route Pattern

To add a Route Pattern, perform the following steps.

Note If you need more information or if the information you see is not exactly the same as described here, see the Cisco CallManager documentation.

Step 1 On the Cisco CallManager server, choose

Start > Programs > Cisco CallManager3.1.x > CallManager Administration

You can also connect to the Cisco CallManager web server using any computer on your network by using the following URL:

http**://***servername*/ccmAdmin

where *servername* is the DNS name or IP address of your Cisco CallManager server.

You will be prompted for a network username and password.

Step 2 Choose **Route Plan** > **Route Pattern**.

Step 3 Enter the appropriate settings as described in the following table.

Field	Description
Route Pattern	Enter the route pattern, including numbers and wildcards (do not use spaces). For Cisco Conference Connection the format is n.! (for example 5321.!). **Note** This must be an available route pattern string that is *not* being used any other configured device in Cisco CallManager.
Partition	Choose the appropriate partition from the list box. If no partition has been created, choose **None**.
Numbering Plan	Choose a numbering plan.
Route Filter	Choose **None**.
Gateway/Route List	Choose the H.323 Gateway device name you created in "Adding the Cisco Conference Connection Server as an H.323 Gateway".
Route Option	Choose the **Route this pattern** option button.
Provide Outside Dial Tone	Uncheck this check box.
Urgent Priority	Do not check this check box.
Use Calling Party's External Phone Number Mask	Do not check this check box.
Calling Party Transform Mask	Leave this field blank.
Prefix Digits (outgoing calls)	Leave this field blank.
Discard Digits	Choose **PreDot** from the list box.
Called Party Transform Mask	Leave this field blank.
Prefix Digits (Outgoing Calls)	Leave this field blank.

Step 4 Click **Insert**.

The route pattern appears in the list on the left side of the page.

Adding CTI Route Points in Cisco CallManager

To add a CTI route point in Cisco CallManager for Cisco Conference Connection, perform the following steps.

Note If you need more information or if the information you see is not exactly the same as described here, see the Cisco CallManager documentation.

Step 1 On the Cisco CallManager server, choose

Start > Programs > Cisco CallManager3.1.x > CallManager Administration

You can also connect to the Cisco CallManager web server using any computer on your network by using the following URL:

http**://***servername*/ccmAdmin

where *servername* is the DNS name or IP address of your Cisco CallManager server.

You will be prompted for a network username and password.

Step 2 Choose **Device > Add a New Device**

Step 3 Use the Device Type drop-down arrow to select **CTI Route Point**

Step 4 Click **Next**

Step 5 In the Device Name field, enter a name of your choice for the CTI route point. Choose a name that is descriptive, for example CCC_RP.

Step 6 In the Device pool field, select the device pool for this CTI route point. If no other pool has been created, select **Default**.

Step 7 In the Calling Search Space field, select the appropriate calling search space from the list. Otherwise, select **None**.

Step 8 In the Location field, select the appropriate location from the list. Otherwise select **None**.

Step 9 Click **Insert**.

Step 10 The following prompt appears: "CTI Route Point has been inserted into the database. Would you like to add a directory number for Line 1 of this CTI Route Point now?"
Click **OK**.

Step 11 In the Directory Number field, enter the directory number for this CTI route point. Users will dial this number to reach this CTI route point (for example, 5000).

Note This number must be an available number that is not used by any other configured device in Cisco CallManager.

Step 12 Click **Insert**. Now you need to add CTI ports to Cisco CallManager.

Adding CTI Ports in Cisco CallManager

CTI ports in a CTI port group must have consecutive directory numbers. For example, to add 10 CTI ports in a particular CTI port group, if the first is number 5001, the rest of the ports will be 5002 through 5010.

To add CTI ports in Cisco CallManager, perform the following steps.

Note If you need more information or if the information you see is not exactly the same as described here, see the Cisco CallManager documentation.

Step 1 On the Cisco CallManager server, choose
Start > Programs > Cisco CallManager3.1.x > CallManager Administration

You can also connect to the Cisco CallManager web server using any computer on your network by using the following URL:

http**://***servername*/ccmAdmin

where *servername* is the DNS name or IP address of your Cisco CallManager server.

Step 2 Choose **Device > Add a New Device**

Step 3 Use the Device Type drop-down arrow to select **Phone** and click **Next**.

Step 4 Use the Phone type drop-down arrow to select **CTI Port** and click **Next**.

Step 5 In the Device name field, enter a name for the device (for example, CTI_Port1).

Step 6 Use the Device Pool drop-down arrow to select the device pool for this CTI port. If there is no other pool, select **Default**.

Step 7 In the Calling Search Space field, select the appropriate calling search space from the list. Otherwise, select **None**.

Step 8 In the Media Resource Group List field, select the appropriate group list. Otherwise, select **None**.

Step 9 In the User Hold Audio Source field, select the appropriate audio source. Otherwise, select **None**.

Step 10 In the Network Hold Audio Source field, elect the appropriate audio source. Otherwise, select **None**.

Step 11 In the Location field, select the appropriate location from the list. Otherwise select **None**.

Step 12 Click **Insert**.

Step 13 The following prompt appears: "The Phone has been inserted in the database. Would you like to add a directory number for Line 1 of this phone now?" Click **OK**.

Step 14 In the Directory Number field, enter the directory number of this CTI port (for example, 5001).

Note This number must be an available number that is not used by any other configured device in Cisco CallManager. CTI port groups must contain sequential CTI port directory numbers.

Step 15 Click **Insert**.

You can continue to add ports using consecutive numbers. After you have added and configured CTI ports for Cisco Conference Connection, configure a Cisco CallManager JTAPI user for the Cisco Conference Connection.

Creating a Cisco CallManager JTAPI User for Cisco Conference Connection

To create a Cisco CallManager JTAPI user for use by the Conference Director component of Cisco Conference Connection, perform the following steps.

Note If you need more information or if the information you see is not exactly the same as described here, see the *Cisco CallManager documentation*.

Step 1 On the Cisco CallManager server, choose **Start > Programs > Cisco CallManager 3.1.x > CallManager Administration**

You can also connect to the Cisco CallManager web server by using the following URL:

http://*servername*/ccmAdmin

where *servername* is the DNS name or IP address of your Cisco CallManager server.

You will be prompted to enter the network password.

Step 2 Choose **User > Add a New User**.

Step 3 In the Add a New User screen, enter a first name(for example, conference), last name(for example, connection), and UserID (for example, confconn).

Step 4 Enter a password of your choice in the User Password and Confirm Password fields.

Step 5 Enter a PIN of your choice in the PIN and Confirm PIN fields.

Step 6 Make sure that the **Enable CTI Application Use** check box is checked.

Caution When you create a Cisco CallManager user for Cisco Conference Connection, you must click the **Enable CTI Application Use** check box on the Cisco CallManager Add a New User screen. If you do not click the **Enable CTI Application Use** check box, the application server will be unable to receive calls from Cisco CallManager.

The new configuration appears in the left pane on the page.

Step 7 In the left pane, click **Device Association**.

The User Information page appears.

Step 8 Click **Select Devices** and then click **OK**.

Step 9 From the list of available devices, select all of the devices created earlier (for example, CCC_RP and all of the CTI ports you created).

Step 10 Click **Update**.

Creating a Cisco CallManager IP Phone Service for Cisco Conference Connection

You can configure the Cisco Conference Connection as an IP Phone service so that users can join conferences from a Cisco IP Phone 7960/7940.

Configuring Cisco Conference Connection as an IP Phone service is done through the Cisco CallManager Administration application. Once Cisco Conference Connection is configured as an IP Phone service, users need to subscribe to the service through the IP Phone Configuration Web page. Alternatively, the Cisco CallManager administrator can give default access to the Conference Connection IP Phone service to some or all users.

To configure Cisco Conference Connection as an IP Phone service, follow these steps.

Step 1 Start Cisco CallManager and log in using your Cisco CallManager administrator user name and password.

The Cisco CallManager Administration page appears.

Step 2 From the menu, choose **Feature > Cisco IP Phone Services**.

The Cisco IP Phone Services Configuration page appears.

Step 3 Enter a service name (for example, ConferenceConnection) and service description (for example Audio Conference Service).

Step 4 Enter a service URL (URL of the server that provides the service), as follows:

http://*CCC_server_IP_addr*/servlet/DCL.MeetingServer.Admin.DCMSAdmin ?Template=telecastfindmeet&DialPrefix=*Number*, where

CCC_server_IP_addr = the IP address of the Cisco Conference Connection server

Number = the route pattern created in the "Adding a Route Pattern" section on page 3-4.

Note For more information, refer to the Cisco CallManager Administration online help, or the Cisco CallManager documentation.

Step 5 Click **Insert**.

The Service page redisplays.

Step 6 Click **New** to add the UserName parameter.

a. In the Parameter Name field, enter "UserName".

b. In the Parameter Display Name field, enter "UserName".

c. For the default value, enter "guest".

d. In the Parameter Description field, type "Enter Conference Connection user name."

e. Select the **Parameter is Required** check box.

Step 7 Click **Insert**.

The Service page redisplays.

Step 8 Click **New** to add the Password Parameter.

a. In the Parameter Name field, enter "Password".

b. In the Parameter Display Name field, enter "Password".

c. Leave the default value blank.

d. In the Parameter Description field, type "Enter Conference Connection user password."

e. Select the **Parameter is a Password (mask contents)** check box.

Step 9 Click **Insert and Close**.

Step 10 Click **Update Subscriptions**.

The new service appears in the list of Cisco IP Phone Services.

Note Make sure you tell your users how to access their IP Phone User Options Web pages so that they can subscribe to the Conference Connection Service and join conferences from their Cisco IP Phones 7960/7940.

Creating a Cisco CallManager Guest User for Cisco Conference Connection

In Cisco CallManager you can define a "guest" user for the Cisco Conference Connection service. A "guest" user could access the Cisco Conference Connection service from a Cisco IP Phone 7960/7940 to view scheduled conferences. It is also possible to set up a number of Cisco IP Phones 7960/7940 with the Cisco Conference Connection service (including phones in conference rooms) so that "guest" users can view scheduled conferences.

To add a "guest" user to Cisco CallManager, perform these steps.

Step 1 Start Cisco CallManager and log in using your Cisco CallManager administrator user name and password.

The Cisco CallManager Administration page appears.

Step 2 From the menu, choose **User > Add a New User**.

The User: New User page appears.

Fill in the fields and use “guest” as the UserID and password.

Note For more information, refer to the Cisco CallManager Administration online help, or the Cisco CallManager documentation.

Step 3 Click **Insert**.

You may also want to create other “guest” accounts within Cisco CallManager for non-Cisco CallManager users. These “guest” users could use the Cisco Conference Connection Web Interface to schedule and view conferences.

By default, all users have “regular” permissions. You may wish to change the guest account to “guest” permissions. See the “Administering Users in Cisco Conference Connection” section on page 4-7.

Configuring the Cisco Conference Connection Server

After you have configured Cisco CallManager for Cisco Conference Connection Server, the Cisco Conference Connection Server must be configured to communicate with Cisco CallManager and the Cisco IP Telephony Directory.

Refer to the appropriate topics in this section to configure the Cisco Conference Connection Server.

Configuring Directory Information

To configure Directory information on the Cisco Conference Connection Server, perform the following steps.

Step 1 Connect to the Application Administration web server by using the following URL:

http://*servername*/AppAdmin

where *servername* is the DNS name or IP address of your Cisco Conference Connection server.

If you are using the computer that is running the Cisco Conference Connection server, you can connect to the web pages by choosing:

Start > Programs > Cisco CRA Administrator> Application Administrator.

You will be prompted to enter the network username and password.

Step 2 At the Cisco CRA Setup screen, click **Setup**.

Step 3 Use the following table to fill in the fields.

Field	Description	Default for DC Directory
Directory hostname	Hostname or IP address of the Cisco IP Telephony Directory server used by the current Application Engine profile. (Typically, this would be the Publisher Cisco CallManager.)	
Directory port number	The port number of the Cisco IP Telephony Directory.	8404
Directory user (DN)	The user name (called the distinguished name) configured on the directory server for the user that has permission to modify the Cisco IP Telephony tree and object entries.	cn=Directory Manager, o=cisco.com
Directory password	The password for the Directory user.	ciscocisco

Field	Description	Default for DC Directory
Base Context	The branch of the Cisco IP Telephony Directory tree that contains the Cisco configuration information.	o=cisco.com
Server Type	The type of LDAP directory—DC Directory.	DC Directory
Configuration Profile Name	The profile name that identifies this engine configuration.	

Step 4 Click **OK**.

Step 5 At the Install Application Scripts Installation completed prompt, click **Main Menu**.

Step 6 It is recommended that you leave the **use a different repository profile** check box unchecked.

Note By default, the Cisco Conference Connection server will use the directory configuration information to build the application repository configuration.

If you want to maintain separate profiles for your directory and repository configurations, click the **use a different repository profile** check box.

Note If you clicked the use a **different repository profile** check box, the Repository configuration window appears. Complete these fields with the configuration information appropriate for your repository directory.

Step 7 Click **Update** to save your changes.

Configuring the JTAPI Component on the Cisco Conference Connection Server

After you complete the directory configuration, you must configure the JTAPI component on the Cisco Conference Connection Server. The Cisco Conference Connection Server uses the JTAPI component to receive calls from Cisco CallManager.

To configure the JTAPI component, perfom the following steps.

Step 1 At the Application Administration Main Menu, click the **JTAPI** link in the Option column.

Step 2 In the JTAPI Provider field, enter the IP address or DNS name of the Cisco MCS running both the Cisco CallManager and the CTI Manager.

Step 3 In the Username field, enter the Cisco CallManager UserID you defined in "Creating a Cisco CallManager JTAPI User for Cisco Conference Connection" section on page 3-9.

Step 4 Enter the password you defined for this UserID in the Password field.

Step 5 Click **Update** to save your changes.

Adding a CTI Port Group

To add a CTI Port Group, perform the following steps.

Step 1 On the JTAPI configuration page, click the **Add new CTI Port Group** link.

Step 2 On the Add a new CTI Port Group page, use the Type drop-down arrow to select **Applications** and click **Next**.

Step 3 On the CTI Port Group Configuration page, enter **1** in the Number field.

Step 4 In the Initial CTI Port field, enter the first CTI Port directory number you established in Step 9 of the "Adding CTI Ports in Cisco CallManager" section on page 3-7. If you are using the provided sample values, enter **5001**.

Step 5 In the Last CTI Port field, enter the CTI Port directory number of the last CTI port you defined in Cisco CallManager. If you are using the provided sample values, enter **5010**.

Note CTI port groups must contain sequential CTI port directory numbers.

Step 6 Click **Update**.

Adding a New Cisco Conference Connection Application

When you have configured the appropriate subsystem on the Cisco Conference Connection Server, you can use the conference.aef script to create an application and start the Cisco Conference Connection.

To add a new Cisco Conference Connection application, perform the following steps.

Step 1 Connect to the Application Administration web server by using the following URL:

http**://***servername*/AppAdmin

where *servername* is the DNS name or IP address of your application server.

Step 2 Click the **Telephony Application** link on the Application page.

Step 3 On the Application page, click the **Add new application** link.

Step 4 At the Application Configuration page, select the conference.aef script. The system populates the Script Name field with “conference.aef.”

Step 5 Provide a name for the application by entering it in the Application Name field and click **Next**.

Step 6 At the Application Parameters Configuration page, provide the CTI route point for this Application. If you are using the provided sample values, enter 5000.

Step 7 In the Maximum Number of Sessions field, enter the number of CTI ports you added in Cisco CallManager. If you are using the provided sample values, enter 10.

Step 8 Set the Enabled option to **Yes**.

Step 9 In the GW Prefix field, enter the digits of the route pattern string you created in the "Adding a Route Pattern" section on page 3-4 (for example 5321).

Step 10 In the OperExtn field, enter the extension of the phone that will be used by the human operator.

Step 11 Click **Update**.

Step 12 Select **Main Menu** > **Engine**.

Step 13 On the Engine page, click **Start**.

When the Engine status is "running" and the subsystems indicate they are "in service", you can call into the Cisco Conference Connection by dialing the directory number of the CTI route point you added to Cisco CallManager. If you are using the provided sample values, dial 5000.

Setting Up Cisco Conference Connection Users

The Cisco Conference Connection user profiles are set up from the user profiles in the Cisco CallManager directory. To set up Cisco Conference Connection users, you need to start the synchronization process between the Cisco CallManager directory and the Cisco Conference Connection database.

Starting the Synchronization Process

To set up Cisco Conference Connection users and start the synchronization process, perform the following steps on the Cisco CallManager server.

Step 1 Configure an ODBC data source on the Cisco CallManager directory machine as follows:

a. From Windows 2000 desktop, select **Start > Programs >Administrative Tools > Data Sources (ODBC)**.

b. Select the **System DSN** tab and click **Add**.

c. Select **SQL Server** from the list of drivers, and click **Finish**.

d. At the next screen, enter DCMS in the Name field, and optionally enter a description.

e. In the Server field, select the name of the server on which you have installed Cisco Conference Connection and click **Next**.

f. At the next screen, select **SQL Server authentication**.

g. Enter 'sa' in the Login ID field and the password that you set during the installation.

h. Click **Next**.

If you receive this error: "Connection failed.... client unable to establish connection", then you will need to do the following:

- Click **OK**.
- To change network library used to communicate with SQL Server, click **Client Configuration**.
- Select the appropriate network library; generally this would be Named Pipes or TCP/IP.
- Click **OK**.
- Click **Next**.

i. At the next screen, select "Change the default database to", and select **DCMS** from the list as the default database.

j. Uncheck "Use ANSI nulls, paddings and warnings" and click **Next**.

k. At the next screen, select "Use regional settings when outputting..." and click **Finish**.

The ODBC data source is created.

l. At the next screen, click **Test Data Source**.

A screen pop-up should display "Tests Completed Successfully."

m. Click **OK**.

n. At the next screen, click **OK** again.

Step 2 Copy ConvEmail.dll from the ccc\LDAPSync directory on the Cisco Conference Connection CD to the $DCDSRVR\lib directory on the Cisco CallManager directory machine (where $DCDSRVR is typically C:\dcdsrvr).

Step 3 Copy odbcagr.txt, odbcdcms.cfg, and delete.txt from the ccc\LDAPSync directory on the Cisco Conference Connection CD to the $DCDCONFIG directory on the Cisco CallManager directory machine (where $DCDCONFIG is typically C:\dcdsrvr\run\dcx500\config).

Step 4 Edit the odbcagr.txt file and verify the values of the following parameters:

- configfile: check that the drive letter and path are correct
- suspensepath: enter the path to the suspense files (these are the files that contain information about any synchronization problems)
- password: enter the password for the default database user that you set during the installation (see Step 19 in the "Installing Cisco Conference Connection from the CD" section on page 2-7).
- agreementID: enter the ID of ODBC Live Sync agreement (pick a random number that is less than 10,000,000, which does not conflict with any existing agreement IDs)
- TimeInterval: enter an interval (frequency of updates in seconds) that satisfies your requirements. A typical interval is 600 (seconds).

Step 5 Make sure that the Metalink server is running. At the command prompt, enter the following command:

dcdmlkag $DCDSRVR\run\dcx500\config\odbcagr.txt
(where $DCDSRVR is the directory path, normally C:\dcdsrvr)

Changing the Synchronization Process TimeInterval Parameter

To change the TimeInterval parameter, follow these steps.

Note You do not have to stop the synchronization process before you change the TimeInterval parameter.

Step 1 Locate the odbcagr.txt file.

Step 2 Open the file and change the TimeInterval parameter to set it to the new value (in seconds).

Step 3 Save and close the file.

Note The new TimeInterval will take effect approximately 5 minutes from the time you saved and closed the odbcagr.txt file.

Stopping the Synchronization Process

Normally, after the synchronization process is started, you will not need to stop it. However, you may want to stop the synchronization process if:

- you are having problems
- you do not want any more changes in your Cisco CallManager user profiles to be synchronized with the Cisco Conference Connection database

Warning **Stopping the synchronization process might create inconsistencies and users might have difficulties logging in to the Cisco Conference Connection Web Interface.**

To stop the synchronization process, perform these steps on the Cisco CallManager directory machine:

Step 1 Locate C:\$DCDSRVR\run\dcx500\config\delete.txt.

Step 2 In the delete.txt file, change the agreementID parameter so that it is the same as the one in odbcagr.txt.

Step 3 At the command prompt, enter the following command:

dcdmlkag $DCDSRVR\run\dcx500\config\delete.txt
(where $DCDSRVR is the directory path, normally C:\dcdsrvr)

Step 4 At the command prompt, enter the following command:

dcdexprt ALL export.gen /o=cisco.com/ou=Users

Step 5 At the command prompt, enter the following command to delete all the entries under this subtree:

dcddel /o=cisco.com/ou=Users

Step 6 At the command prompt, enter the following command to re-import the exported data:

dcdimprt POPULATE export.gen

This will stop the synchronization between the Cisco CallManager directory machine and the Cisco Conference Connection server.

To restart the synchronization process, see the "Starting the Synchronization Process" section on page 3-18 and perform Steps 4 and 5.

For more information on managing user accounts, see the "Managing Accounts" section on page 4-5.

CHAPTER 4

Cisco Conference Connection Administration

This chapter provides instructions for administering Cisco Conference Connection.

Refer to the appropriate topics in this chapter to understand how to administer Cisco Conference Connection.

Starting and Stopping the Cisco Conference Connection Server

This section provides instructions for starting and stopping the Cisco Conference Connection Server. You must first start the Cisco Conference Connection Server before users can log in.

To start the Cisco Conference Connection Server, perform these steps.

- From the Windows 2000 desktop, select **Start > Programs > Cisco Conference Connection > Start Cisco Conference Connection**.

To stop the Cisco Conference Connection Server, perform these steps.

- From the Windows 2000 desktop, select **Start > Programs > Cisco Conference Connection > Stop Cisco Conference Connection**.

Logging In and Logging Out

To log in to Cisco Conference Connection, perform these steps:

Step 1 Start Cisco Conference Connection.

a. Open your Web browser.

b. In the Location or Address field (depending on your browser), enter the following:

http://*servername*

where servername is the name or IP address of the Cisco Conference Connection server.

The Login Window appears.

Step 2 In the Username field, enter your administrator user name (the default is Administrator).

Step 3 In the Password field, enter your password (the default is no password).

Note It is recommended that you change the default administrator password.

Step 4 Click **Login**.

The Cisco Conference Connection Web Interface appears.

To log out of the Cisco Conference Connection:

- Click **Logout**.

Licensing Setup

After the Cisco Conference Connection is installed, you need to set up the number of ports for which you purchased a license.

To set up the ports, perform these steps.

Step 1 Log in to the Cisco Conference Connection Web Interface.

Step 2 In the left navigation pane, click **Administraton Tasks and Reports**.

The Administration Tasks and Reports page appears.

Step 3 In the right pane, under Administration Tasks, select **Administer Licenses**.

The Licensing Settings for Cisco Conference Connection page appears.

Step 4 In the Enter License Key field, enter the license key specified in your license certificate.

Step 5 Click **Update**.

The License Settings Updated page appears confirming the license update. If you are entering additional license keys in sequence, click **Enter additional License Keys**.

Step 6 Click **Logout** to log out of the Cisco Conference Connection Web Interface.

You need to stop and then restart the Cisco Conference Connection Server.

Step 7 From the Windows 2000 desktop, select **Start > Programs > Cisco Conference Connection > Stop Cisco Conference Connection**.

Wait for the Cisco Conference Connection to completely stop before you perform Step 8.

Step 8 From the Windows 2000 desktop, select **Start > Programs > Cisco Conference Connection > Start Cisco Conference Connection**.

Licensing Update

If you purchased a license upgrade for additional conference ports, you need to update the license in Cisco Conference Connection.

Perform steps 1 - 8 in the "Licensing Setup" section on page 4-3.

Managing Accounts

All Cisco Conference Connection user accounts are managed through Cisco CallManager, except the Cisco Conference Connection system administrator account. You can add and delete Cisco Conference Connection users through the Cisco CallManager administration application.

Administrator Account

The Cisco Conference Connection system administrator account has a separate user ID and password than the Cisco CallManager system administrator account. The Cisco Conference Connection system administrator account is created during the installation of the Cisco Conference Connection software. The default administrator user name is Administrator and there is no default password. The system administrator account password can be changed through the Administer users – User list page. The administrator account can also be deleted through the Administer users – User list page.

For increased security, you can create another user account as the "system administrator" account, for example, the system administrator's Full name account. Once the new system administrator account is created, you can delete the Administrator account created during the installation of the Cisco Conference Connection software.

The Cisco Conference Connection system administrator account lets you manage all conferences, and change the permissions (Type) of any user. All user accounts are created with "regular" permissions (Type), meaning that these users can add and view conferences. You can change the permission of a user as needed. See the "Administering Users in Cisco Conference Connection" section on page 4-7.

Modifying the Cisco Conference Connection Administrator Account

To modify the Administrator account, perform these steps.

Step 1 Log in to the Cisco Conference Connection Web Interface.

Step 2 In the left navigation pane, click **List Users**.

The Administer users – User list page appears.

Step 3 Select the Cisco Conference Connection Administrator user (named "Administrator").

The Modify User page appears.

Step 4 You can change any of the following:

- Full name
- Email address
- Password

Step 5 Make the changes you want and then click **Modify**.

Deleting the Cisco Conference Connection Administrator Account

To delete the Administrator account, perform these steps.

Caution You should only delete the Administrator account if you have already assigned another user account with the "Administrator" User Type.

Step 1 Log in to the Cisco Conference Connection Web Interface.

Step 2 In the left navigation pane, click **List Users**.

The Administer users – User list page appears.

Step 3 Select the Cisco Conference Connection Administrator user.

The Modify User page appears.

Step 4 To delete the account, click **Delete Account**.

User Accounts

All Cisco Conference Connection user accounts are created from the Cisco CallManager directory (see the "Setting Up Cisco Conference Connection Users" section on page 3-18). Cisco Conference Connection user accounts allow individual users to access the Cisco Conference Connection application to add, join, modify, and view scheduled conferences. You add and delete user accounts, and change user passwords, for Cisco Conference Connection users only through the Cisco CallManager administration applicaton. Refer to the Cisco CallManager administration documentation for more information.

All user accounts are created with "regular" permissions (Type), meaning that these users can add and view conferences. You can change the permission of a user as needed. See the "Administering Users in Cisco Conference Connection" section on page 4-7

Note Make sure that you tell each user his or her user name and password.

Administering Users in Cisco Conference Connection

An administrator can view a list of all users and change any user's permissions Type) through the Cisco Conference Connection administration pages.

Viewing the User List

To view a list of all Cisco Conference Connection users, perform these steps.

Step 1 Log in to the Cisco Conference Connection Web Interface.

Step 2 In the left navigation pane, click **List Users**.

The Administer users – User list page appears. The list provides the following information:

- Full name: First and last name of the user
- User name: user's login name
- Email address: user's email address
- User Type: user's permissions

Note Clicking on a user's Full name brings up the Modify User page. See "Changing the User Type" section on page 4-8.

Searching for a User

Within the Administer users – User list, you can search for a particular user.

To search for a user, follow these steps.

Step 1 On the Administer users – User list page, click **Search**.

The Search – Users page appears.

Step 2 Enter any or all of the fields (Full name, Username, Email address).

Step 3 Click **Search**.

The Administer users – User list page reappears with a list according to the search criteria you specifed.

Changing the User Type

The User Type identifies the permissions that a user has when using Cisco Conference Connection. When the user accounts are created, all users are assigned the User Type "Regular".

The following table describes the User Types.

User Type	Description
Guest	A guest user can only view conferences.
Regular	A regular user can add ,modify, and view conferences, and delete conferences that he or she has scheduled.
Administrator	An administrator user can: • schedule conferences • view all conferences • modify or delete any conference • change the duration of any conference • change any user's Type

To change the User Type for a user, perform these steps:

Step 1 Log in to the Cisco Conference Connection Web Interface.

Step 2 In the left navigation pane, click **List Users**.

The Administer users – User list page appears.

Step 3 Select a user from the user list.

The Modify User page appears

Step 4 From the Type drop-down list box, select the Type you want to assign to the user.

Step 5 Click **Modify**.

Managing Conferences

As a system administrator, you can manage conferences through the Cisco Conference Connection Web Interface. This includes adding, modifying, stopping, and deleting conferences, including conferences with the "hidden" attribute.

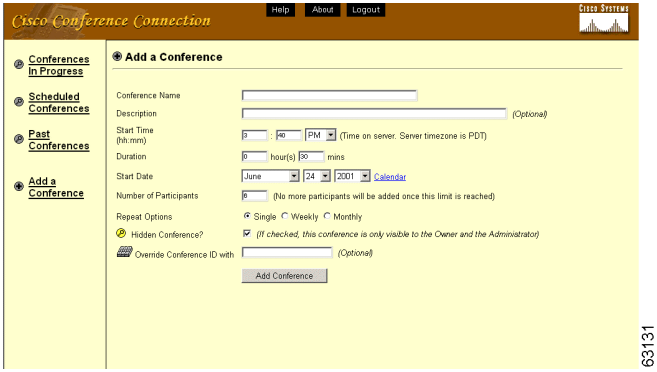
Refer to the appropriate topics in this section to manage conferences.

Scheduling Conferences

To schedule a conference, follow these steps.

Step 1 In the left pane of the Cisco Conference Connection Web Interface, click **Add a Conference**.

The Add a conference page appears.



Step 2 Enter all of the information for your conference:

- Conference Name (This must be a unique name; there is a 27- character limit. Valid characters include: A-Z, 0-9, spaces, hyphens and parentheses.)
- An optional description of the conference
- Conference Start Time, Duration, and Start Date

Note that the start time is in the time zone indicated.

- Number of Participants in the conference
- Repeat Options (Single, Weekly, Monthly)

Note To set up a daily conference, select Weekly, and then choose the day(s) on which you want to schedule the conference.

- Hidden Conference: this option is selected by default. The conference is only visible to the system administrator and the conference owner. If you want the conference to be visible to any user, uncheck this option. If the conference is visible to all users, then it appears in the list of conferences accessed from the services button on a Cisco IP Phone 7960/7940.
- Override Conference ID with: optionally, enter a specific conference ID number (this ID must be unique). Otherwise the conference ID number is automatically generated. You will be prompted to enter the conference ID when you join a conference.

Step 3 After you have entered all of the conference information, click **Add Conference**.

The Conference Confirmation page appears to confirm your conference, and your conference appears in the list of scheduled conferences. Note that hidden conferences are marked with a special icon.

Modifying Conferences

You can modify a conference in progress, or modify a conference scheduled at a future date.

Modifying Conferences in Progress

When a conference is in progress, you can stop the conference or modify its duration.

Stopping a Conference

To stop a conference in progress, follow these steps.

Step 1 In the left pane of the Cisco Conference Connection Web Interface, click **Conferences in Progress**.

The Conferences in Progress page appears.

Step 2 On the Conferences in Progress page, click the conference that you want to stop.

The Conference Information page appears.

Step 3 To stop the conference, click **Stop this conference**.

Step 4 Click **OK** to confirm that you want to stop the conference.

Note When you do this, conference participants are not warned and they will simply be dropped from the conference.

The Conferences in Progress page redisplays, with a message indicating that your conference has been successfully stopped.

Note You may need to select the **click here** link so that the list of conferences in progress no longer shows the conference you stopped.

Modifying the Conference Duration

To modify the duration of a conference in progress, follow these steps.

Note If participants remain in a conference past the scheduled end time, Cisco Conference Connection auto-extends the conference if there are conference ports available.

Step 1 In the left pane of the Cisco Conference Connection Web Interface, click **Conferences in Progress**.

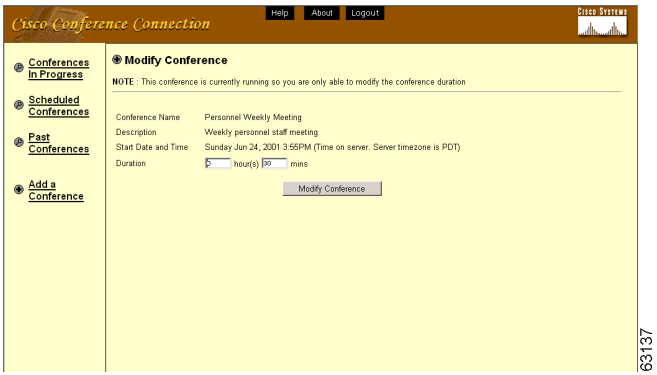
The Conferences in Progress page appears.

Step 2 On the Conferences in Progress page, click the conference whose duration you want to change.

The Conference Information page appears.

Step 3 To change the conference duration, click **Modify conference duration**.

The Modify conference page appears.



Since the conference is in progress, you can only change the conference duration.

Step 4 To change the conference duration, click **Modify Conference**.

The Modify conference page appears.

Step 5 In the Duration field, change the conference duration.

Note You cannot shorten the duration of a conference in progress by less than 10 minutes. If you need to shorten a conference by less than 10 minutes, stop the conference at the appropriate time.

Step 6 Click **Modify Conference** to save your changes.

Modifying Conferences Scheduled at a Future Date

To change a conference, follow these steps.

Step 1 In the left pane of the Cisco Conference Connection Web Interface, click **Scheduled Conferences**.

Step 2 On the Schedule Conferences page, scroll to the **Conferences You Scheduled** section.

Step 3 Click the conference that you want to change.

The Conference Information page appears.

Step 4 To change the conference information, click **Modify this conference**.

Note If the conference is a recurring conference and you want to make a change for all occurrences of the conference, you should click **To modify the entire series click here** to change all instances of the conference.

The Modify Conference page appears.

Step 5 Make any changes to the conference information that you want and then click **Modify Conference** to save your changes.

Deleting Conferences

You can delete individual conferences or delete a group of past conferences based on a date range.

Deleting Individual Conferences

To delete a conference, follow these steps.

Step 1 In the left pane of the Cisco Conference Connection Web Interface, click **Scheduled Conferences**.

Step 2 On the Schedule Conferences page, scroll to the **Conferences You Scheduled** section.

Step 3 Click the conference that you want to delete.

The Conference Information page appears.

Step 4 To delete the conference, click **Delete Conference**.

Note If the conference is a recurring conference and you want to delete all occurrences of the conference, you should click **To delete the entire series click here** to delete all instances of the conference.

Click **OK** to confirm the deletion and the conference is deleted from the list of scheduled conferences.

Deleting a Group of Past Conferences

Yu may want to perform some periodic deletions of past conferences to free space in your database. Deletions of past conferences that are more than 30 days old is a suggested guideline. You can do this using the Bulk Delete Past Conferences function. You could also copy the mdb file (database) periodically and/or use SQL management tools at your site to back up your data.

To delete a group of past conferences, follow these steps.

Step 1 In the left pane of the Cisco Conference Connection Web Interface, click **Administration Tasks and Reports**.

Step 2 Under Administration Tasks, click **Bulk Delete Past Conferences**.

The Bulk Delete Past Conferences for Cisco Conference Connection page appears.

Step 3 In the From fields, choose the starting date for the deletion of past conferences. (Click **Calendar** for easy date selection.)

Step 4 In the To fields, choose the ending date for the deletion of past conferences. (Click **Calendar** for easy date selection.)

Step 5 Click **Submit**.

The conferences within the date range that you specified are deleted.

Joining Conferences

You can join a conference in Cisco Conference Connection using your telephone.

For instructions, refer to one of the following sections:

- Dial a Conference Directly, page 4-17
- Join a Conference Via Your Cisco IP Phone 7960/7940, page 4-19

Dial a Conference Directly

To dial a conference in Cisco Conference Connection, follow these steps.

Step 1 Dial the Cisco Conference Connection phone number.

You will hear the Welcome prompt.

Step 2 At the Welcome prompt, dial the conference ID, followed by the # key.

To start over, press the * key.

Note You cannot join a conference before the conference start time.

Step 3 If your conference ID is correct, press the # key.

When you are connected to a conference, you will hear an ascending tone or a prompt.

Note Use of the Hold feature, or otherwise answering or placing a call while connected to a conference, will result in your conference call being dropped. This eliminates the possibility of getting music on hold from the local Cisco CallManager.

If you are not able to join a conference, you may hear one of the following:

- a busy tone

  In this case, the conference is full.

- a rapid busy tone

  In this case, the conference ID that you entered was not correct. You have to hang up and call the conference phone number again.

- you hear nothing or are disconnected

  In this case, it is likely that your conference ID is not recognized. Hang up and verify the conference ID, and then call the conference phone number again.

  If you time out while trying to join a conference, you will hear one of the following prompts:

- "Make sure you call during the time the conference is scheduled. Enter the conference ID, followed by the # key."

  In this case, verify the conference time and either re-enter the conference ID, or call back at the correct conference time.

- "Contact the conference organizer for the conference ID, or enter the conference ID followed by the # key."

  In this case, verify the conference ID with your conference organizer.

- "Stay on the line to be connected to an operator, or to start over press the * key ."

  In this case, you will be connected to an operator.

Step 4 To leave the conference, hang up.

The other remaining participants in the conference will hear a descending tone or a prompt.

Join a Conference Via Your Cisco IP Phone 7960/7940

To join a conference in Cisco Conference Connection via your Cisco IP Phone 7960/7940, you must be subscribed to the Cisco Conference Connection Service. Once you are subscribed, you can join conferences via the **services** button on your Cisco IP Phone 7960/40.

Subscribing to the Cisco Conference Connection Service

To subscribe to the Cisco Conference Connection Service, follow these steps.

Step 1 Open your Web browser.

Step 2 Enter the URL of your IP Phone User Options Web page.

The Cisco IP Phone User Options logon page appears.

Step 3 In the User Identification field, enter your user name.

Step 4 In the Password field, enter your password.

Step 5 Click **Log On**.

The User Options Menu page appears.

Step 6 From the Select a device or device profile to configure list box, select your Cisco IP Phone 7960/7940.

The User Options Menu page redisplays with a list of configuration options.

Step 7 Click **Configure your Cisco IP Phone Services**.

The Service Subscription: New page appears.

Step 8 From the Select a Service list box, select the Conference Connection service and click **Continue**.

The Service Subscription page appears.

Step 9 In the Service Name field, leave the default name of the service.

Step 10 In the User Password field, enter your password (the same one you entered when logging on to the Cisco IP Phone User Options Web page).

Step 11 In the UserID field, enter your user name (the same one you entered when logging on to the Cisco IP Phone User Options Web page).

Step 12 Click **Subscribe**.

The page redisplays and the service appears in the Your Subscribed Services list.

Step 13 Click **Log off**.

Joining a Conference

To join a conference from your Cisco IP Phone 7960/7940, follow these steps.

Step 1 On your Cisco IP Phone 7960/7940, press the **services** button.

Step 2 Use the **Navigation** buttons to scroll to the Cisco Conference Connection service that you configured in the "Subscribing to the Cisco Conference Connection Service" section on page 4-19. Press the **Select** soft key to select the service.

The Conferences in Progress screen is displayed.

Note If the Cisco Conference Connection Login screen appears, enter your user ID and password, and the Conferences in Progress will be displayed. You will need to go back and re-subscribe to the Conference Connection Service using the correct user ID and password.

Step 3 Using the **Navigation** buttons, select the conference you want to join, and press the **JoinCnf** soft key.

Step 4 Follow the prompts to join a conference.

Note Use of the Hold feature, or otherwise answering or placing a call while connected to a conference, will result in your conference call being dropped. This eliminates the possibility of getting music on hold from the local Cisco CallManager.

Step 5 To leave a conference, hang up.

Tips for Managing Conferences

Here are some tips for managing conferences and achieving good performance with Cisco Conference Connection.

Tip

- Restrict administrative changes to off hours.
- Reset gateways only when necessary.
- Reset the Cisco Conference Connection Server only when necessary.
- Before stopping a conference in progress, join the conference first and warn the participants. See the "Joining Conferences" section on page 4-17.

Viewing and Searching for Conferences

You can view and search for all conferences.

Viewing Conferences in Progress

To view a list of conferences in progress:

- In the left pane of the Cisco Conference Connection Web Interface, click **Conferences in Progress**.

  A list of conferences in progress is displayed, as well as a list of conferences that you scheduled yourself.

- To look at detailed conference information, click a specific conference.

  The Conference Information page appears with the following conference information:

  - Conference Owner: the person who scheduled the conference.
  - Number of Participants: number of participants who can join the conference.
  - Start Date and Time: the scheduled start date and time for the conference.
  - End Date and Time: the scheduled end date and time for the conference.
  - Conference ID: the unique ID for the conference.
  - Dial In Info: if configured, this includes the external and internal conference numbers, as well as who to contact for assistance.
  - Record Identifier: the unique database record number for the conference. This number is also recorded in the Windows Event log.
  - Repeat ID: indicates whether or not the conference is a repeating conference. 0 indicates that the conference does not repeat; a non-zero number indicates that the conference repeats and this non-zero number indicates the record number in the repeating conference table.
  - Hidden conference: icon notation only appears if the conference was marked with the Hidden attribute.

To find a specific conference:

- Enter the conference name in the Find conference named text box and then click **Find**.

  A list of conferences is displayed.

Viewing Scheduled Conferences

To view a list of scheduled conferences:

- In the left pane of the Cisco Conference Connection Web Interface, click **Scheduled Conferences**.

  A list of next scheduled conferences is displayed, as well as a list of conferences that you scheduled yourself.

Note This list may also include conferences already in progress.

- To look at detailed conference information, click a specific conference.

  The Conference Information page appears showing more detailed conference information, as described in the "Viewing Conferences in Progress" section on page 4-22.

To find a specific conference:

- Enter the conference name in the Find conference named text box and then click **Find**.

  A list of conferences is displayed.

Viewing Past Conferences

To view a list of past conferences:

- In the left pane of the Cisco Conference Connection Web Interface, click **Past Conferences**.

  A list of past conferences is displayed, as well as a list of past conferences that you scheduled yourself.

- To look at detailed conference information, click a specific conference.

  The Conference Information page appears showing more detailed conference information, as described in the "Viewing Conferences in Progress" section on page 4-22.

  In addition, the Participant Information table is shown, which includes the following information:

  – Participant: phone number, or IP address if CallerID is not enabled on the Cisco CallManager

- Start time: time each participant joined the conference
- Duration: how long each participant remained in the conference
- Total number of participants: total number of participants that joined the conference

Note If no participants joined the conference, then the table reads "No participants joined this conference."

To find a specific conference:

- Enter the conference name in the Find conference named text box and then click **Find**.

  A list of conferences is displayed.

Searching for Conferences

To search for a conference:

- From the Conferences in Progress, Scheduled Conferences, or Past Conferences list, click **Search**.
  - Fill in the search criteria (Conference Name, Conference ID, and Conference Creator).
  - Click **Search**.

  A list of conferences matching your search criteria is displayed.

Cisco Conference Connection Administration

The Cisco Conference Connection Web Interface for the system administrator lets you generate a Port Usage report and add System Information.

Running a Port Usage Report

This report shows you the utilization of ports (used vs. scheduled) for past conferences for a specified timeframe.

To run a Port Usage report, follow these steps.

Step 1 In the left pane of the Cisco Conference Connection Web Interface, click **Administration Tasks and Reports**.

The Administration Tasks and Reports page appears.

Step 2 Under Administration Reports, click **Port Usage**.

The Port Usage Report for Cisco Conference Connection page appears

Step 3 In the From fields, enter the starting date for your report. (Use the **Calendar** for easy date selection.)

Step 4 In the To fields, enter the ending date for your report. (Use the **Calendar** for easy date selection.)

Step 5 Click **Submit**.

The Port Usage Report is displayed. It includes a list of all conferences in the date range that you specified, up to a maximum of 100 conferences per page. The ports used vs. scheduled is displayed for each conference. The total port utilization is indicated at the bottom of the report.

System Information

A template can be used to display urgent information, news, dial-in information, support information, and alternate dial-in information for Cisco Conference Connection.

Specific instructions for using the template are provided in the template and in the online help for the Information Configuration page. Carefully follow the steps in the template when you want to initially set up or change system information.

To view the system information, follow these steps.

Step 1 In the left pane of the Cisco Conference Connection Web Interface, click **Administration Tasks and Reports**.

The Administration Tasks and Reports page appears.

Step 2 Under Administration Tasks, click **Edit Information Page**.

The Cisco Conference Connection Information Configuration page appears.

Follow the instructions in the information page template to change the information that appears on this page.

Step 3 To save the new information, click **Modify**.

Upgrading the Cisco Conference Connection

You may want to upgrade the Cisco Conference Connection software or install a maintenance release.

To download and install a Cisco Conference Connection upgrade or maintenance package from the Internet, perform the following steps.

Step 1 Start the Cisco MCS and log in to Windows 2000.

Step 2 Use a Web browser to access the following URL:

http://www.cisco.com/cgi-bin/tablebuild.pl/ccc

Step 3 Locate the Cisco Conference Connection file and download it.

Step 4 Double-click on the downloaded file to launch the installer, and follow the instructions in the Readme file that accompanied the update.

Re-installing the Cisco Conference Connection Server

This section provides instructions for a re-installation of the Cisco Conference Connection Server. When re-installing the Cisco Conference Connection Server, you need to:

- back up the Cisco Conference Connection database
- re-install the Cisco Conference Connection Server
- restore the Cisco Conference Connection database after a re-installation of the Cisco Conference Connection software

Backing Up the Database

To back up the Cisco Conference Connection database, follow these steps.

Step 1 Note down and save the Cisco Conference Connection database password that was configured during the installation. (When you re-install the Cisco Conference Connection software and restore a backup database, you must use the same database password.)

Step 2 Stop Cisco Conference Connection.

- From the Windows 2000 desktop, select **Start > Programs >Cisco Conference Connection >Stop Cisco Conference Connection**.

Step 3 Stop MSDE services.

a. From the Windows 2000 desktop, select **Start > Programs MSDE Service Manager**

b. From the Service Manager, stop all SQL services on the Cisco Conference Connection Server.

c. After all the SQL services have stopped, close Service Manager.

d. On the Windows taskbar, find and right-click the **Service Manager** icon. Select **Exit**.

Step 4 Copy c:\MSSQL7\Data\DCMS_DATA.mdf and c:\MSSQL7\Data\DCMS_log.ldf to a secure backup location. You will need to retrieve these files when you restore the Cisco Conference Connection database.

Re-installing the Cisco Conference Connection Server

To re-install the Cisco Conference Connection Server, follow these steps.

Step 1 Re-install the Cisco Conference Connection Server. Follow the instructions provided in the:

- "Installing Windows 2000" section on page 2-3.
- "Configuring Windows 2000" section on page 2-4
- "Configuring Windows 2000 Event Logging" section on page 2-6
- "Installing Cisco Conference Connection from the CD" section on page 2-7

Note During the re-installation of the Cisco Conference Connection software, use the database password that you noted and saved in the "Backing Up the Database" section on page 4-27.

Step 2 After the installation is complete, start the Cisco Conference Connection Server.

- From the Windows 2000 desktop, select **Start > Programs >Cisco Conference Connection >Start Cisco Conference Connection**.

Step 3 Ensure that the new database is working.

- Log in to Cisco Conference Connection and add a conference. Follow the instructions provided in the "Scheduling Conferences" section on page 4-10.

Restoring the Cisco Conference Connection Database

To restore the Cisco Conference Connection database after a re-installation of the Cisco Conference Connection software, follow these steps.

Caution No configuration changes can be made while restoring the database.

Step 1 Stop the Cisco Conference Connection Server.

- From the Windows 2000 desktop, select **Start > Programs >Cisco Conference Connection >Stop Cisco Conference Connection**.

Step 2 Stop MSDE services.

a. From the Windows 2000 desktop, select **Start > Programs MSDE Service Manager**

b. From the Service Manager, stop all SQL services on the Cisco Conference Connection Server.

c. After all the SQL services have stopped, close Service Manager.

d. On the Windows taskbar, find and right-click the **Service Manager** icon. Select **Exit**.

Step 3 Copy the DCMS_DATA.mdf and DCMS_log.ldf backup files as follows:

- Copy DCMS_DATA.mdf to c:\MSSQL7\Data\ and overwrite the current .mdf file.
- Copy DCMS_log.ldf to c:\MSSQL7\Data and overwrite the current .ldf file.

Step 4 Restart SQL services.

Step 5 Restart Cisco Conference Connection.

Step 6 Verify that the new database is working.

- Log in to Cisco Conference Connection and add a conference. Follow the instructions provided in "Scheduling Conferences" section on page 4-10.

Cisco Conference Connection Troubleshooting

This chapter provides you with information for troubleshooting Cisco Conference Connection.

Refer the the following topics to troubleshoot Cisco Conference Connection:

General Troubleshooting

This section provides general troubleshooting information for the Cisco Conference Connection. Refer to the following topics when troubleshooting.

Installation Problems

In general, look at the c:\ciscoInstall.log for any problems related to installation. If you encounter error messages during installation, refer to the following table.

Error Message	Description/Solution
"MSDE user password failed ..."	Verify that if MSDE is installed correctly on the Cisco Conference Connection Server machine: • From the Windows 2000 desktop, select **Start > Programs >MSDE** If you do not find the MSDE folder, then MSDE was not installed correctly. Note that the installation should not be done using Terminal Services. Re-install the Cisco Conference Connection Server. See the "Re-installing the Cisco Conference Connection Server" section on page 4-27.
"Serviceability installation failed" or "Installation of Compaq drivers and agent failed..."	Check the c:\ciscoInstall.log file for errors related to the serviceability installation. Re-install the Cisco Conference Connection Server. See the "Re-installing the Cisco Conference Connection Server" section on page 4-27.
"Unable to create Virtual Directory"	You may have to create the virtual directory yourself. Try to log on to the Cisco Conference Connection Web interface. If you can log on successfully, then ignore this message. Otherwise, re-install the Cisco Conference Connection Server. See the "Re-installing the Cisco Conference Connection Server" section on page 4-27.

Error Message	Description/Solution
"You do not have administrator privileges on this machine..."	Log out and log in with an account that has administrative privileges.
"Failed to identify the IIS ..."	Check to see if IIS is installed on the Cisco Conference Connection Server machine. If it is not installed, re-install the Cisco Conference Connection Server. See the "Re-installing the Cisco Conference Connection Server" section on page 4-27.

Service(s) Fail to Start Problems

The following services should be configured with a Startup Type of "Automatic":

- Cisco Application Engine
- Conferencing Gateway
- Cisco AVVID Alarm Service

Other services that should be running include:

- IIS Admin Service
- World Wide Web Publishing Service
- Event Log

If you are having service fails to start problems, refer to the following table.

Error Message	Description/Solution
"one of the services fails to start..."	Peform the following steps: 1. Open Windows Services. – From the Windows 2000 desktop, select **Start >Programs >Administrative Tools >Services**. 2. Look for the Cisco Application Engine Service and check the logon privileges of the service. a. In the Services window, select and right-click the Cisco Application Engine Service. b. Select **Properties**. The login account (entered during the installation) used must have Administrative privileges on the server on which the service is installed. If the password contains spaces, change it here.

Startup Problems

If you are having startup problems, refer to the following table.

Symptom/Error Message	Description/Solution
If you change the IP address or the name of the server after installation, Cisco Conference Connection may not start or work.	To resolve this, re-install Cisco Conference Connection. See the "Re-installing the Cisco Conference Connection Server" section on page 4-27. For additional assistance or possible workarounds, contact the Technical Assistance Center.
Cisco Application Engine Service fails to start after a reboot with a "one of the services fails to start..." error message.	See the "Service(s) Fail to Start Problems" section on page 5-3.

Configuration Problems

If you are having configuration problems, refer to the following table.

Symptom	Description/Solution
Encounter errors when configuring the LDAP directory	It is probable that network connectivity to the Cisco CallManager server hosting LDAP services is down. • Check to see if you can ping the Cisco CallManager LDAP server from the Cisco Conference Connection server.
Synchronization with Cisco Call Manager users does not work	• Check whether Cisco Call Manager is using DC Directory for user profiles (as opposed to Active Directory or Netscape Directory). If DC Directory is not being used, user synchronization will not work. • Check if the DC Directory Server Service is running on the Cisco Call Manager Publisher server. If it is not, restart the DC Directory Server Service. There might be some problems with the synchronization process. (See the "Setting Up Cisco Conference Connection Users" section on page 3-18.) • To diagnose this problem, go to the Cisco CallManager Publisher server and follow these steps: – Check the log files in the suspense directory (the directory set by the SuspensePath parameter in the odbcagr.txt file). If you notice errors such as "There is no Index Table record corresponding to the...", it is probably due to a problem with the agreement ID set by the agreement ID in the odbcagr.txt file. – Delete the earlier agreement ID(s). See the "Stopping the Synchronization Process" section on page 3-21 and the "Starting the Synchronization Process" section on page 3-18.

Symptom	Description/Solution
Synchronization with Cisco Call Manager users does not work	• Check the log files in the $DCDSRVR\run\dcx500\ directory ($DCDSRVR would typically be c:\dcdsrvr) that are formatted as: ev20010508.0000, where 2001 is the year, 0508 is the month/day, and 0000 is the hour. Look for the agreement ID that you configured. If there is a "Communications error" error message when connecting to LDAP, perform the following: – Delete the earlier agreement ID(s). See the "Stopping the Synchronization Process" section on page 3-21 and the "Starting the Synchronization Process" section on page 3-18. – From the Services window, restart the DC Directory Server, and then restart the synchronization process.
JTAPI subsystem OUT_OF_SERVICE	• Check to make sure that the Cisco CallManager server is up and running. Make sure that the Cisco CallManager service and the CTI Manager service are running. If they are not running, go to Windows Services and start each service. • On the Cisco Conference Connection server, ensure that the IP address is configured correctly. – Open the Application Administration page and select **Engine**. – Select **Configure**. The Application Engine Hostname (IP address) must match the IP address configured on the Cisco Conference Connection server. If it does not, enter the correct IP address and click **Update**.

Problems Joining a Conference

If users are having problems joining a conference, refer to the following table.

Symptom/Error Message	Description/Solution
No welcome prompt heard after dialing the Cisco Conference Connection access number (users might get a busy tone, error tone, silence, or be disconnected)	If users report that they get an error tone, busy tone, or are disconnected when they call the Cisco Conference Connection access number (but do not hear a welcome prompt): • First check to be sure that the number being dialed is correct (the CTI Route Point number; see the "Adding CTI Route Points in Cisco CallManager" section on page 3-6). • Next check that the Conference Director (Engine) is operating properly. To check the Conference Director status: On the Cisco Conference Connection Server: 1. Open your Web browser and enter: http://<conferenceconn machine>/appadmin, where conferenceconn machine is the IP address of your Cisco Conference Connection Server. 2. On the Application Administration page, select **Engine** and check if the Engine status is "Running" and if the JTAPI Subsystem is "IN_SERVICE". 3. Stop the Engine by clicking **Stop Engine** and then restart the Engine by clicking **Start Engine**. **Note** Stopping and restarting the Engine does not affect any callers currently in conferences. However, it does prevent new callers from joining conferences.

Symptom/Error Message	Description/Solution
No welcome prompt heard after dialing the Cisco Conference Connection access number (users might get a busy tone, error tone, silence, or be disconnected)	Check the Cisco Conference Connection configuration script. 1. On the Application Administration page, select **Telephony Applications.** 2. Select the conference.aef script. On the next page click **Next**. 3. Make sure that the following are set correctly: – The CTI Route Point – Maximum number of sessions is not zero (0) – The Enabled option button is set to Yes
Hear a welcome prompt, but later get a busy tone, error tone, or are disconnected	• Busy Tone: The conference is already full (that is, if six participants is the scheduled limit, and six participants are currently present, then no more participants can join the conference). Cisco Conference Connection issues a busy tone when an attempt is made to join a valid, but full conference. • Error Tone: The Conference ID entered is incorrect. It may have been entered incorrectly, correspond to a conference that has already stopped, or a conference that has not yet started. Recheck the conference information to be sure the Conference ID is correct and that the the start time has arrived. **Note** The conference start time is relative to the time zone of the Conference Connection server.

Symptom/Error Message	Description/Solution
Hear a welcome prompt, but later get a busy tone, error tone, or are disconnected	• Disconnection: There are several possible causes for this. The most common are: – Either of the conditions above (Busy Tone or Error Tone) are true, but the caller has arrived on a gateway that is not properly configured to generate the appropriate tone. In this case the gateway may disconnect. Consult your gateway configuration documentation to determine how to configure the gateway so that it does not disconnect in these cases (it varies according to gateway type). – The conference has just reached its end time and is being stopped. – The GWPrefix on the Application Parameters Configuration screen is incorrect. If an incorrect GWPrefix is given, the call will be incorrectly routed and may result in disconnection (or error tone). – The Route Pattern is not configured correctly. See the "Adding a Route Pattern" section on page 3-4.
Successfully join a conference and then subsequently get dropped	• The conference may have been stopped by the conference owner or the administrator. • The conference reaches its end time and there are insufficient resources to auto-extend it. • Use of the Hold feature, or otherwise answering or placing a call while connected to a conference, will result in a user's conference call being dropped. This eliminates the possibility of getting music on hold from the local Cisco CallManager. **Note** This also prevents someone from being transferred directly into a conference (although they can be transferred to the route point). • The H.323 Gateway for the Cisco Conference Connection may have been reset.

Audio Quality Problems

If you are having audio quality problems, such as no announcements, scrambled audio, conference is too loud or too soft, refer to the following table.

Symptom	Description/Solution
Conference entry or exit tones or annoucements not working	Check that the WAV files are present in C:\Program Files\Cisco\ConferenceConnection\Prompts Check the format of the WAV files, which must be 8 or 16 bit mono 8000 kHz, PCM
Poor audio quality	**Echo** • First, determine if all participants hear an echo. If one participant is not hearing an echo, the chances are very good that the echo is coming from the participant who does *not* hear the echo. • There are two main sources of echo: – Acoustic echo—this kind of echo may be induced by the use of a speakerphone, where some of the audio from the speaker is fed back into the microphone. This is especially true when certain devices are used in conference halls, or when PC speakers are facing a participant who is talking into a microphone. Another common cause of echo is the placement of a handset face down on a desk, especially if the handset volume is set at a very high level. To reduce acoustic echo, determine if any participant is using a speakerphone and request that a handset or headset be used.

Symptom	Description/Solution
Poor audio quality	– Network echo—this is caused by impedance mismatch problems between physical network components. This is usually observed when one or some of the participants are calling in from an external number. To reduce the network echo, determine if any participant is calling from the Public Switched Telephone Network (PSTN), or using a cellular phone. PSTN gateways include some form of echo cancellation; this may be set to a value that cannot handle the echo produced by some networks. Since it not feasible to recommend a particular value for the echo cancellation parameter, check the gateway documentation to see how to vary echo cancellation, then try to experiment with different values. A sniffer program trace would help when contacting the Technical Assistance Center (TAC). **Robotic voice, clipped audio, silence** To effectively diagnose problems with audio quality, follow these procedures. • If the call with poor audio originated from the Public Switched Telephone Network (PSTN), have the participant(s) dial into Cisco Conference Connection directly and check to see if audio problems persist. • Check the bandwidth of the network connection. It is recommended that Cisco Conference Connection be run on a 100Mbps network connection. If the network connection is running at 10Mbps, then upgrade the connectivity. At 10Mbps, it is estimated that 60 participants will use all of the available bandwidth. Any other traffic on such a network will adversely effect voice quality.

Symptom	Description/Solution
Poor audio quality	• To debug short intervals of silence, or clicks and pops, check to see if the problem occurred during a call with the gateway. Voice Activity Detection (VAD) on the gateways, or intelligent routers, can cause short periods of silence, if the volume of the audio stream is determined to be low. Try to lower the VAD, or remove it completely, and then check to see if the problem persists. If none of the above procedures has any positive effect on the voice quality, then the installation of a network sniffer program is recommended. • Install the sniffer program on a separate machine, then connect this machine to a hub connected to the Cisco Conference Connection Server. Read the sniffer program instructions on how to capture traces. Two common tools used are Netmon (Microsoft, ships with Windows 2000 Server) and Sniffer PRO (Network Associates). • It is desirable to have a sniffer running at the endpoint where the poor audio is received. However, if this not possible, then trace the Cisco Conference Connection Server input and output streams, and send them to the Technical Assistance Center (TAC), if necessary.

General End-User Problems

If users are having general problems, such as trying to log in to Cisco Conference Connection, or add or find a conference and so on, refer to the following table.

Symptom	Description/Solution
Cannot log in to the Cisco Conference Connection Web interface	• Check the URL for the Cisco Conference Connection Web interface • When logging in, use your Cisco CallManager user ID and password. If you recently changed your Cisco CallManager password, wait 15 minutes and then try to log in again • After logging in, you see "Current Conferences - Not Available" or "Add a conference - Not Available" • Stop and restart Cisco Conference Connection.
Cannot access the Cisco Conference Connection Web interface	• Check the URL for the Cisco Conference Connection Web interface. Ask your system administrator for the correct URL • If you see the error: `Cannot find server or DNS Error`, then either the URL is incorrect, or the Cisco Conference Connection Server is not available
Cannot add a conference	• Check for common errors first: – conference end date or time precedes start time (end date applies only to recurring conferences) – missing or duplicate conference name – invalid conference start or end date (for example, February 30) (end date applies only to recurring conferences) – insufficient system resources available for the conference date/time requested • On the Cisco Conference Connection Web page check that the Add a Conference link is available. If it is not available, then system resources may not be available, the Cisco Conference Connection Server has stopped, or the user does not have permission to add a conference. • If you are trying to add a recurring conference, make sure that the recurring conference name is unique. Recurring conference names must be unique so that they can be modified as a series.

Symptom	Description/Solution
Cannot find a conference	• Check for a conference on the Conferences In Progress page. Use the Search tool (available on the Conferences in Progress, Scheduled Conferences, and Past Conferences pages) to search for the conference you want. You can also use the **Find** button to search for conferences. (Note that when searching for a "hidden" conference, you must enter the exact conference name.) • Conferences created as "Hidden Conferences" are only visible to the conference owner and the system administrator. If you are not the conference owner or a system administrator, you will not be able to see the conference. • It is also possible that the conference has been stopped, deleted, or finished normally. If the conference has been deleted, no further information will be available.
Conferernces do not appear on your Cisco IP Phone 7960/40 display	• Check that you have subscribed to the Cisco Conference Connection Service. See the "Subscribing to the Cisco Conference Connection Service" section on page 4-19. • The conferences may be hidden. "Hidden" conferences are only visible to the conference owner and the system administrator. If you are not the conference owner or a system administrator, you will not be able to see the conference.
Extending or deleting conferences	• Conferences must be extended in increments of at least 5 minutes past the current end time. • Conferences that are currently in progress must be stopped before they can be deleted. Exception: Deleting a recurring conference series will stop any currently running conference (you will be warned first).

Symptom	Description/Solution
Conference ID is not as expected	Cisco Conference Connection uses the standard keypad mapping to provide default conference IDs, if you do not specify one. Often, it is possible to have conferences with similar names, occurring at the same time. In such cases, the conferenceIDs must be unique. For example, the conference "Steven staff meeting" would normally generate 783836. Another conference called "Stevenson Weekly Meeting" would generate the same ID, provided they do not occur at the same time. If the conferences do overlap, then another ID is provided for the conference that is scheduled second. This is an arbitrary 6 or 7 digit number, which does not follow the keypad mapping. It is possible to change the conference ID before the conference actually starts. You can do so on the Conference Information page, provided there are no ID clashes with other conferences at the same time and date.
Poor audio quality (echo)	See the "Audio Quality Problems" section on page 5-10.

Troubleshooting Tools

You can use several tools to help you troubleshoot problems that might occur. Refer to the following topics for a description on how to use these tools.

- Windows Event Viewer, page 5-16
- Engine Log Files, page 5-18

Windows Event Viewer

You can use the Windows Event Viewer to look at the application events log when trying to troubleshoot the Cisco Conference Connection.

To open the Event Viewer:

- From the Windows 2000 desktop, select **Start >Programs >Administrative Tools >Event Viewer**

Some of the key messages to review are listed in the following table.

Category	Summary	Description/Cause	Example
None	empty Terminal CapabilitySet	A call will be disconnected due to a HOLD	empty TerminalCapabilitySet
27	Conference started	A conference was started successfully	Conference ID = 2368 started
28	Conference ... entering endzone	Conference end time has arrived	Conference 2008 entering the endzone with 0 clients connected
29	Conference stopped	Conference was ended	Conference ID = 2351 stopped and deleted from Slave's records
44	Conference stop	Conference cannot continue due to resource restrictions (normal end initiated)	Master explicitly denied an extension for conference ID = 1837 so stop it

Category	Summary	Description/Cause	Example
64	Check schedule	Normal checking to see if any conferences are ready to be stopped	Slave 1 tells Master that conference 2353 'CCC Roundtable' has stopped. +++++ updateType = 3. Found CCT entry. ScheduledConferenceTable doesn't exist. No conference error. Update CCS. Update existing CCT. Delete SCT entry (0 rows deleted). Archive conference. Ack sent to slave. Slave 1 tells Master that conference 2399 ‘CCC discussion’ has been extended. +++++ updateType = 1. Found SCT entry. Found CCT entry. Compare endTime with SCT. endDateTime updated in SCT from 2001-07-09 15:00:00.0 to 2001-07-09 15:15:00.0. No conference error.
75	No video	Ignore this message, it does not apply	Failed to open outgoing video channel to node ‘70156’ at address 0.0.0.0
86	Call ... dropped	Conference participant was dropped due to an end of conference, or entry of an invalid conference ID	H323 call with node ‘4085558184’ at address 0.0.0.0 dropped for reason 0x2
88	Rejected call	Call was rejected (many causes)	
107	Audio codecs	Shown when first participant arrives in the conference	Audio codecs for conference ‘phantom 9’ fixed to: Send ‘g711Ulaw64k’, Receive ‘g711Ulaw64k’

Category	Summary	Description/Cause	Example
109, 110	New call	Participant added successfully to conference	New H323 call with node '70156' at address '0.0.0.0' in conference 'Apps'. H323 terminal label 0x101 New H323 call with node '71180' at address '10.34.42.11' (which already has a T120 connection) in conference 'CCC Issues'
113	Call ended	Normal end of call	H323 call with node '71180' at address'10.34.42.11' in conference 'CCC Issues' has ended
125			WCM using CGPI to connect to conference 'SP test'
126	Outgoing jitter	Indicates a possible audio quality problem	

Engine Log Files

You can review the Engine log files when troubleshooting Cisco Conference Connection.

To open the Engine log file:

Step 1 Connect to the Application Administration web server by using the following URL:

http://*servername*/AppAdmin

where *servername* is the DNS name or IP address of your Cisco Conference Connection server.

Step 2 On the Application Administration page, click **Engine**.

The status display appears and should show the following information:

System/Subsystem	Status
Engine	Running
Application subsystem	IN_SERVICE
JTAPI subsystem	IN_SERVICE

Step 3 If the subsystems are not in an IN_SERVICE state, click **Start Engine**.

To review trace files:

Step 1 Select **Trace files**.

A list of log files is displayed similar to the following list.

File Name	Date	Length
CiscoMIVR09.log	7/11/01 11:10 PM	420943
CiscoMIVR08.log	7/10/01 10:09 AM	723297
CiscoMIVR07.log	7/9/01 11:24 AM	651559
CiscoMIVR06.log	7/5/01 9:16 PM	1037044
CiscoMIVR05.log	7/4/01 5:31 PM	1031949

Step 2 To view a particular log file, select the file name from the list.

The following information can be used to diagnose problems.

Summary Content	Description/Cause	Example
ProcessStart notification	Usually the first line of a log, indicates that the engine was started	0: Jul 10 10:09:59.984 PDT %MIVR-ENG-7-UNK:ProcessStart notification signifies that a process has just started. : ProcessId = 2632 ModuleName = Cisco Application Engine
OUT OF SERVICE	Engine is not ready to receive calls (normal during startup)	179: Jul 10 10:10:02.828 PDT %MIVR-SS_TEL-2-SS_OUT_OF_SERVICE:JTAPI subsystem in out of service
Adding CTI Group	Shows the route number being selected	189: Jul 10 10:10:07.453 PDT %MIVR-SS_TEL-7-UNK:Adding CTI Port Group: type = Workflow, id = 31517, initial CTI Port = 13050, max ports = 10
Successfully Registered CTI Port	Indicates one of up to 10 ports are ready	190: Jul 10 10:10:07.890 PDT %MIVR-SS_TEL-7-UNK:Successfully registered CTI Port: 13050
Service Address Observer	Now monitoring the port for incoming calls	191: Jul 10 10:10:07.890 PDT %MIVR-SS_TEL-7-UNK:ServiceAddressObserver received CiscoAddrInService for port TPG[type = Workflow, id = 31517]-TP[num = 13050]
Call Received	Received a call from the number shown (ani)	405: Jul 10 10:10:28.953 PDT %MIVR-SS_TEL-7-UNK:Call.received() Call[id: 1, media: 3555/3, state = RECEIVED, dn = 31517, ani = 67927, lrd = null, type = DIRECT_CALL ...
Call Answered	Call is answered by the Engine	425: Jul 10 10:10:30.750 PDT %MIVR-SS_TEL-7-UNK:Call.answered() Call[id: 1, media: 3555/3, state = ANSWERED, dn = 31517, ani = 67927, lrd = null, type = DIRECT_CALL ...

Summary Content	Description/Cause	Example
Playing Prompt	Indicates the media that is played	428: Jul 10 10:10:30.968 PDT %MIVR-SS_TEL-7-UNK:MediaManager playing C:\Program Files\wfavvid\Prompts\user\en_US\Rv_welcome.wav
Collect Input	Waiting for user to enter digits	434: Jul 10 10:10:33.750 PDT %MIVR-ENG-7-UNK:Execute step of Task 9000000001 : Parse Input (store in User_Enter_Digit)
Call abandoned	Caller hung up/disconnected	440: Jul 10 10:10:34.359 PDT %MIVR-SS_TEL-7-UNK:Call.abandonned() Call[id: 1, media: 3555/3, state = ABANDONED, dn = 31517, ani = 67927, lrd = null, type = DIRECT_CALL ...
Digit Received	User digits received	1237: Jul 10 12:06:36.531 PDT %MIVR-SS_TEL-7-UNK:CallID:24 MediaId:3753/2 Task:9000000023 Digit received: 1
Play Confirmation Prompt	User has entered Conference ID followed by #	1254: Jul 10 12:06:44.062 PDT %MIVR-SS_TEL-7-UNK:MediaManager playing C:\Program Files\wfavvid\Prompts\user\en_US\Rv_confirm.wav
Redirect Participant into Conference	The caller is being transferred into the conference	1262: Jul 10 12:06:47.203 PDT %MIVR-SS_TEL-7-UNK:CallID:24 MediaId:3753/2 Task:9000000023, Redirecting call to: 15700111222 Unconditional: false ResetOrigCalledAddr:true

Summary Content	Description/Cause	Example
Transferred	Caller was successfully transferred into the conference	1272: Jul 10 12:06:47.453 PDT %MIVR-SS_TEL-7-UNK:Call.transferred(15700111222) - transferring Call[id: 24, media: 3753/2, state = TRANSFERRED, dn = 31517, ani = 71174, lrd = null, type = DIRECT_CALL ...

To review trace file configurations:

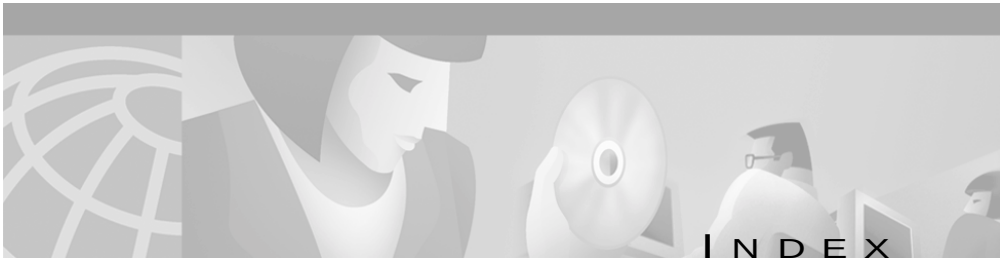
Step 1 Select **Trace configuration**.

Step 2 To obtain more detailed trace configuration information:

a. Scroll down to the Active trace level options table.

b. Select the **Debugging** check box for one or more of the items in the table.

Note Selecting the more detailed trace configuration information will slow down your system. You should only enable **Debugging** when trying to diagnose problems.



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