



Release Notes for Cisco Conference Connection 1.1(3)

These release notes for Cisco Conference Connection 1.1(3) contain important information for new installations and upgrades. The release notes also describe resolved and known problems in Cisco Conference Connection 1.1(3).

The release notes provide the following information:

- [Documentation Roadmap, page 2](#)
- [Caveats, page 2](#)
- [Document Erratum, page 15](#)
- [Documentation Addenda, page 15](#)
- [Obtaining Documentation, page 42](#)
- [Obtaining Technical Assistance, page 43](#)



Corporate Headquarters:
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

Copyright © 2002. Cisco Systems, Inc. All rights reserved.

Documentation Roadmap

Use these publications to learn how to install and use Cisco Conference Connection:

Document Name	Description and Location
<i>Cisco Conference Connection Administration Guide</i>	Provides information for network and telephone administrators about installing, configuring, and troubleshooting Cisco Conference Connection. URL: http://www.cisco.com/univercd/cc/td/doc/product/voice/ccdocs/index.htm
<i>Cisco Conference Connection Quick Start Guide</i>	Describes how to use Cisco Conference Connection. URL: http://www.cisco.com/univercd/cc/td/doc/product/voice/ccdocs/index.htm

Caveats

Caveats are unexpected behaviors or defects in Cisco hardware releases. They are graded according to severity level. These release notes contain information for severity levels 1, 2, 3 (and some 4's) only. You can search for known problems on the Cisco bug tracking system tool, called Bug Navigator II.

To access Bug Navigator II, perform one of the following actions:

- Enter the following URL in your web browser:
<http://www.cisco.com/support/bugtools>
- Log in to CCO and select **Service & Support > Technical Assistance Center > Tools > Software Bug Toolkit Bug Navigator II**

[Table 1](#) lists problems resolved in Cisco Conference Connection Release 1.1(3).

[Table 2](#) lists existing problems in Cisco Conference Connection Release 1.1(3).

Table 1 *Cisco Conference Connection 1.1(3) Resolved Problems*

DDTS Number	Description
CSCdw62893	The DC Directory does not start after the upgrade to Cisco CallManager 3.2 with the Cisco Conference Connection User Synchronization process running on the Cisco CallManager server.
CSCdw20603	The login to Cisco Conference Connection fails after synchronization with Cisco CallManager 3.2.
CSCdt66668	A participant cannot rejoin a conference after hold or implied hold.
CSCdu43907	A participant does not get a response when an ID is not valid.
CSCdu44471	A participant cannot transfer a caller into conference.
CSCdu88956	On screen instructions are not clear for entering a license.
CSCdv44493	An error occurs when a participant adds a space before the conference name.
CSCdv47224	The option for a new key is not removed when the maximum license is reached.
CSCdv66287	The User Synchronization Process Installation to the LDAP directory on Cisco CallManager is not automatic.
CSCdv21880	The first-party announcement is not available in conference.
CSCdw21904	There are no Japanese voice prompts to provide the Telephone User Interface.
CSCdw21914	The Operator Extension should be optional on the Cisco CallManager AppAdmin pages.
CSCdw35816	A participant is unable to access Cisco Conference Connection web pages because of special characters in the MSDE password.
CSCdw35849	Cisco Conference Connection does not allow a period in the user name but Cisco CallManager does.
CSCdv11355	The entry tone is too loud.
CSCdv04464	The <i>Cisco Conference Connection Administration Guide</i> should not be visible on the Regular/Guest Info screen.
CSCdu51093	Callers get a busy signal or are dropped when calling the primary Cisco Conference Connection number when Cisco CallManager fails over.
CSCdw89562	The Cisco Conference Connection Metalink agreement is corrupted during Cisco CallManager upgrade to version 3.2.

Table 2 Known Problems in Cisco Conference Connection 1.1(3)

DDTS Number	Description	Solution/Work Around
CSCdw68175	<p>When a user subscribes to the Cisco Conference Connection IP Phone Service, the user may be asked to enter his password.</p>	<p>The user should be automatically logged into the list of conferences.</p> <p>This problem can be resolved as follows:</p> <ol style="list-style-type: none"> 1. In the Cisco CallManager administration pages where Cisco IP Phone service is configured, in the Service Parameter Information page, be sure to enter the names of the parameters exactly as shown here, with the first character capitalized: Name Password 2. Users must enter their passwords to log into the Cisco Conference Connection service.
CSCdw64700	<p>When the Cisco CallManager service is manually shut down, Cisco CallManager failover occurs and in-conference audio channels are cut off.</p> <p>If the failover occurs for other reasons (for example, the power goes off or a network cable is unplugged), the in-conference audio channel(s) remain active.</p>	<p>This problem rarely occurs. To avoid it completely, do not manually shut down the Cisco CallManager service. Manually shutting down Cisco CallManager causes the running conferences to be disconnected.</p>

Table 2 Known Problems in Cisco Conference Connection 1.1(3) (continued)

DDTS Number	Description	Solution/Work Around
CSCdu74973	<p>Using a MIB Browser tool, you can see the version of Cisco Conference Connection (in the Serviceability Table sysAppMIB/sysAppInstallPkgEntry/sysAppInstallPkgVersion2).</p> <p>The Cisco Conference Connection version incorrectly shows 1.1(2) instead of 1.1(3).</p>	<p>To check which version of Cisco Conference Connection you are running:</p> <p>On the Admin pages of Cisco Conference Connection, click the About button in the menu on the top of the screen.</p> <p>The Cisco Conference Connection version displays.</p>
CSCdu75518	<p>Cisco Conference Connection does not distinguish between a blank administrator password and a password containing spaces only.</p>	<p>Do not use spaces in a password. Choose a password containing digits and letters.</p>
CSCdw67381	<p>After a Cisco Conference Connection server is upgraded to operating system version 2000-1-3, the Cisco Conference Connection administration pages become inaccessible and the virtual directory “Scripts” is removed.</p>	<p>Recreate the virtual directory as described in the solution to CSCdv18352.</p>

Table 2 Known Problems in Cisco Conference Connection 1.1(3) (continued)

DDTS Number	Description	Solution/Work Around
CSCdv18352	During the installation of Cisco Conference Connection, the Scripts virtual directory may fail to be installed, and therefore the Cisco Conference Connection web components installation is incomplete.	<p>After the installation, perform the following steps:</p> <ol style="list-style-type: none"> 1. From the Windows 2000 desktop, select Start > Programs > Administrative Tools > Internet Services Manager. 2. In the left pane, select the Cisco Conference Connection server. 3. In the right pane, double-click Default Web Site. A list of all of the virtual directories appears in the right pane. 4. Check to see if the Scripts virtual directory appears in the list. 5. If the Scripts virtual directory does not appear in the list, in the right pane right-click Default Web Site and select New > Virtual Directory. The Virtual Directory Wizard starts. 6. Click Next to continue. 7. In the Alias field, enter Scripts, and the click Next. 8. Click Browse, and browse to the C:\Inetpub\Scripts folder. 9. Click OK, and then click Next to continue. 10. Clear the Read and Run scripts (such as ASP) checkbooks, and then click Next. 11. Click Finish.

Table 2 Known Problems in Cisco Conference Connection 1.1(3) (continued)

DDTS Number	Description	Solution/Work Around
		<ol style="list-style-type: none"> <li data-bbox="784 293 1228 354">12. In the left pane, right-click Scripts and click Properties. <li data-bbox="784 370 1228 459">13. In the Execute Permissions field, select Scripts and Executables from the drop-down list. <li data-bbox="784 475 1228 565">14. Click OK, and then restart the Cisco Conference Connection server.
CSCdt69224	<p>When viewing the participant information for a past conference, the participant column may contain an IP address, not the phone number of the participant. This usually occurs when the Caller ID is unavailable. The IP address is the address of the Gateway (or sometimes the Cisco CallManager) that directed to the call to Cisco Conference Connection</p>	<p>You can accept that no Caller ID appears and that the gateway IP address appears. Or, you can make sure that the Caller ID is reported by the gateway in the gateway configuration. Ask callers to reveal their Caller ID.</p>

Table 2 Known Problems in Cisco Conference Connection 1.1(3) (continued)


DDTS Number	Description	Solution/Work Around
CSCdt86769	<p>If a time period during which scheduled conferences consume all or nearly all of the available conference ports, and a user tries to create a conference, the error “Conference Scheduling Failed” with the reason “no resource available” may appear.</p> <p>Conference resources are reserved in five-minute intervals:</p> <ul style="list-style-type: none"> • Conference start times are rounded down to the nearest five-minute interval. • Conference end times are rounded up to the nearest five-minute interval. <p>For example, a conference scheduled for 100 ports from 10:23 a.m. to 10:43 a.m. reserves 100 ports from 10:20 a.m. to 10:45 a.m.</p> <p> Note The conference still runs only in the scheduled 10:23 a.m. to 10:43 a.m. time interval.</p>	<p>Schedule conferences so that they begin or end at five-minute intervals (for example, 5:00, 5:05, 5:10, and so on).</p>

Table 2 *Known Problems in Cisco Conference Connection 1.1(3) (continued)*

DDTS Number	Description	Solution/Work Around
CSCdt87084	<p>If the start date of the first occurrence of a repeating conference is after the end date, at least one meeting will be scheduled for that series, provided no other conflicts occur.</p> <p>For example: On August 20, 2001 (Monday) a recurring conference is scheduled to run every Wednesday, but the start and end date for the recurring conference is today (Aug 20, 2001). As a result, one conference will be scheduled for the series. This conference will run on Aug 22, 2001 (Wednesday), even though this is after the end date (Aug 20, 2001).</p>	<p>When scheduling repeating conferences, make sure there is at least one valid conference that can run within the given start and end dates.</p>

Table 2 Known Problems in Cisco Conference Connection 1.1(3) (continued)


DDTS Number	Description	Solution/Work Around
CSCdu01568	<p>One or more participants in one or more conferences may be dropped from a conference without warning and without having taken any action.</p> <p>There may be one or more causes for this problem:</p> <ul style="list-style-type: none"> • The conference time elapsed and resources are needed for other conferences. In this case, Cisco Conference Connection terminates the running conference. • The administrator has modified or reset the conference server. If an administrator modifies the route pattern or any attributes of the conference gateway in the Cisco CallManager configuration, a reset is normally performed and calls to the conference engine are dropped. • A remotely connected user is dropped because a gateway is reset. • An administrator or the conference creator manually stopped the conference. 	<p>Here are some recommendations for avoiding this problem:</p> <ul style="list-style-type: none"> • Allow sufficient time for your conference. • Restrict administrative changes to off hours. • Only reset gateways or the conference engine when absolutely needed. <hr/> <p> Note If the participant is unable to immediately reconnect, the problem may be due to a conference server failure or because the conference was stopped for administrative changes.</p> <hr/>

Table 2 *Known Problems in Cisco Conference Connection 1.1(3) (continued)*


DDTS Number	Description	Solution/Work Around
CSCdu06957	<p>Echo is heard while using Cisco Conference Connection.</p> <p>This problem is generally caused by improper gateway configuration and thus is most prominent when external callers are involved in the conference. The most important parameter to adjust is the echo-cancel command, which is found on IOS gateways.</p> <p>Other sources of echo include:</p> <ul style="list-style-type: none"> • placing a handset face down on a hard surface, particularly when the volume is set to high • feedback from some headsets and handsets • poor quality speakerphones • Impedance mismatch between phones and their network connection (analog phones) or between a trunk and the CO connection (analog trunks). 	<p>One way to help eliminate various participants as the source(s) of echo is to ask them to mute their phones one by one (if possible). Or, if it is not possible to mute, then ask them to momentarily drop out of the conference.</p> <p> Note The participant who is <i>not</i> hearing echo is usually the source of the problem.</p>
CSCdu20908	<p>When several participants join the conference at the same time, or very close together, the entry tone may not be heard completely for each participant who joined the conference.</p>	<p>Have the conference participants announce themselves when joining a conference.</p>

Table 2 Known Problems in Cisco Conference Connection 1.1(3) (continued)

DDTS Number	Description	Solution/Work Around
CSCdu73866	<p>Microsoft Database Engine (MSDE) sometimes fails to install during the Cisco Conference Connection installation.</p> <p>The MSDE installation running in single user mode causes this failure. During the installation, if some other process gets a connection to the MSDE server, the installation fails because it cannot get a connection to the MSDE server (a user is already connected). These other process can be any of the following:</p> <ul style="list-style-type: none"> • Metalink agreements running on Call Manager machine • SQL Enterprise manager connecting to the MSDE • Monitoring services on the machine or the network. 	<p>When you install Cisco Conference Connection, be sure:</p> <ul style="list-style-type: none"> • To disconnect the network cable on the machine where you are installing Cisco Conference Connection. • No metalink agreements are running. If there is a metalink agreement running on the Cisco CallManager machine, stop it. • No enterprise manager is trying to connect to MSDE on this machine.

Table 2 Known Problems in Cisco Conference Connection 1.1(3) (continued)

DDTS Number	Description	Solution/Work Around
CSCdv10356	<p>During a conference, participants experience jittery voices, which may sound like the speaker is underwater, robotic, or clipped entirely.</p> <p>This problem is most often observed when participants join a conference through gateways and in a highly routed/switched network (multiple hops).</p>	<p>The problem can be resolved as follows:</p> <ol style="list-style-type: none"> 1. Attach the Cisco Conference Connection directly to a switch. 2. Configure the switch to lock in 100 Mbps at Full Duplex. 3. Configure the PC NIC card to the same (100 Mbps/FDX). <ol style="list-style-type: none"> a. From the Windows 2000 desktop, select Start > Settings > Control Panel > Network and Dial-up Connections b. Select and right-click Local Area Connection and click Properties. c. In the Local Area Connection Properties dialog box, click Configure to set the Ethernet card properties. d. In the next dialog box, click the Advanced tab and select Link Speed & Duplex. e. In the value field, select 100Mbps/Full Duplex. 4. Click OK.
CSCdv20597	<p>Cisco Conference Connection web pages are not accessible or the access is too slow.</p> <p>This may occur if the server for Cisco Conference Connection is infected with the Code Red virus.</p>	<p>Install the Microsoft patch to prevent the Code Red virus. Download this patch from:</p> <ul style="list-style-type: none"> • the Microsoft web site, or • the Cisco Conference Connection installation CD-ROM.

Table 2 Known Problems in Cisco Conference Connection 1.1(3) (continued)

DDTS Number	Description	Solution/Work Around
CSCdv25490	<p>Occasionally, after a new installation of Cisco Conference Connection, subsystems fail to start even though the Application Engine is shown as running <code>http://<machine-name>/appadmin/Engine</code>.</p> <p>For Cisco Conference Connection to function properly, it is necessary for the subsystems to be running.</p>	<p>Reboot the server for Cisco Conference Connection to cause the subsystem to start.</p>
CSCdv39677	<p>When the Cisco Conference Connection server rejects the call, a busy tone is played back to the user. This tone playback may not work when the caller has dialed in using a H.323 gateway. This may occur when the conference is full.</p>	<p>There is no workaround for H.323 gateway callers. However, if you schedule enough ports so the conference is not full, you will not encounter this problem.</p>
CSCdw28983	<p>When using the VG200 with Cisco Conference Connection, a participant using a G.711 phone can join the conference. However, when using a G.729 phone, the participant reaches the IVR but gets fast busy when attempting to connect to the conference.</p>	<p>Dial in through a non-VG200 gateway, if one is available.</p> <p>It is recommended that you use the Catalyst 6000 Family Voice T1/E1 and Services Modules (product number WS-X6608) as the transcoding resource for Cisco Conference Connection.</p> <p>If using Cisco Conference Connection with a VG200 gateway, do not use a G.729 phone.</p>
CSCdt77086	<p>If the repeat options are used when creating a conference, using the drop-down list boxes, it is possible to select invalid days, like February 30. An error appears when trying to schedule a repeating conference that has an invalid start or end day.</p>	<p>Do not select invalid dates and/or correct them after receiving such an error.</p>

Document Erratum

[Table 3](#) corrects an error in the *Cisco Conference Connection Administration Guide* and in the *Cisco Conference Connection Quick Start Guide*.

Table 3 Documentation Erratum

DDTS Number	Description	Solution/Work Around
CSCdt63974	The Hidden Conference option is incorrectly described as the default configuration in the <i>Cisco Conference Connection Administration Guide</i> and the <i>Cisco Conference Connection Quick Start Guide</i> .	At installation, the default configuration is not hidden and conferences are visible to all users. However, you may change the default setting to hidden. To configure the Hidden Conference setting, use Administration Tasks on the Edit Information Page. Regardless of the default, selection of a hidden or visible conference may be changed at the option of the individual scheduling the call.

Documentation Addenda

This section contains the following information:

- [Conference ID Validation in Cisco Conference Connection](#), page 16
- [Installing Cisco Conference Connection: New Installation](#), page 17
- [Upgrading Cisco Conference Connection](#), page 33
- [Upgrading from Cisco CallManager 3.1](#), page 38
- [Changes to Cisco Conference Connection When Upgrading from Cisco CallManager 3.1 to Cisco CallManager 3.2](#), page 39
- [Installing Japanese Voice Prompts](#), page 41

Conference ID Validation in Cisco Conference Connection

The Cisco Customer Response Application (Cisco CRA) database validates the Conference ID that the participant enters. To activate this validation feature, you must properly configure the Cisco CRA database. Refer to the [“Configuring the Cisco Customer Response Application \(Cisco CRA\) Database Subsystem” section on page 28](#) for installation and upgrade instructions.

Read the following information to understand how Conference ID validation works with Cisco Conference Connection:

- If the conference with the entered ID is currently running, the call is transferred into the conference.
- If conference capacity is full, the caller gets a busy tone.
- If the conference with the entered ID has ended or the ID is invalid, the call is disconnected.
The caller is given three attempts to enter a valid ID, if validation still fails, the call gets disconnected or transferred to the operator.
- If the conference with the entered ID has not yet started, then the corresponding message is played to the caller in each of the following cases:
 - Conference starts in 1 second to 2 minutes
 - Conference starts in 3 minutes to 4 minutes
 - Conference starts in 5 minutes to 6 minutes
 - Conference starts in 7 minutes to 8 minutes
 - Conference starts in 9 minutes to 10 minutes
 - Conference starts in 11 minutes to 12 minutes
 - Conference starts in 13 minutes to 14 minutes
 - Conference starts in 15 minutes to 16 minutes
 - Conference starts in more than 16 minutes today
 - Conference starts later than today

After playing this message, the call is disconnected.

To configure the Operator Extension feature, see [“Configuring the Cisco Customer Response Application \(Cisco CRA\) Operator Extension” section on page 29](#).

After each subsequent failed attempt, the caller is provided with a more detailed help message. The caller can also choose to get more help by pressing the * key.

On the final (third) attempt, confirmation of entered digits is not provided and no more choices are given to the caller.

When a gateway is used to enter the conference, configure it to provide error or busy tones to the callers. The conference propagates the notifications that it receives.

Once started, conferences cannot be expanded to allow more participants. If a conference is full and additional participants are needed, the conference must be stopped and recreated. All existing participants must dial back in.

Installing Cisco Conference Connection: New Installation

To install *Cisco Conference Connection* as a new installation, perform the following procedure in this release note:

- [Overview of Installing Cisco Conference Connection, page 18](#)

This overview procedure tells you when to perform these procedures:

- [Installing the Operating System, page 19](#)
- [Setting up Cisco Conference Connection Users, page 20](#)
- [Configuring the Cisco Customer Response Application \(Cisco CRA\) Database Subsystem, page 28](#)
- [Configuring the Cisco Customer Response Application \(Cisco CRA\) Operator Extension, page 29](#)
- [Configuring JTAPI for Cisco CallManager Failover Support, page 30](#)
- [Configuring Music on Hold for Cisco Conference Connection, page 31](#)
- [Enabling Licenses for Cisco Conference Connection, page 32](#)

Overview of Installing Cisco Conference Connection

Perform the following steps to install Cisco Conference Connection as a new installation:

-
- Step 1** Perform the steps in [“Installing the Operating System”](#) section on page 19.
- Step 2** Perform the steps in Chapter 2 “Installing Cisco Conference Connection” in the *Cisco Conference Connection Administration Guide*.
- Step 3** Perform the steps in Chapter 3 “Cisco Conference Connection Configuration” in the *Cisco Conference Connection Administration Guide* except for the following changes. Perform the procedures in this release note as described here:
- When you are performing the steps in the “Adding CTI Ports in Cisco CallManager” procedure in the *Cisco Conference Connection Administration Guide*, use the guidelines in [CTI Port Addition in Cisco CallManager, page 20](#).
 - Use the [“Setting up Cisco Conference Connection Users”](#) section on page 20.
 - Perform the database subsystem configuration in the [“Configuring the Cisco Customer Response Application \(Cisco CRA\) Database Subsystem”](#) section on page 28.
 - Perform the steps in the [“Configuring the Cisco Customer Response Application \(Cisco CRA\) Operator Extension”](#) section on page 29.
 - Perform the steps in the [“Configuring JTAPI for Cisco CallManager Failover Support”](#) section on page 30.
 - Perform the steps in the [“Configuring Music on Hold for Cisco Conference Connection”](#) section on page 31.
- Step 4** Perform the procedures in Chapter 4 “Cisco Conference Connection Administration” in the *Cisco Conference Connection Administration Guide*.
- When configuring “Licensing Setup” and “Licensing Update,” use the guidelines in the [“Enabling Licenses for Cisco Conference Connection”](#) section on page 32.
-

Installing the Operating System

The instructions to install the operating system are provided in the Cisco CallManager documentation. See the “Starting the Operating System Installation” section of the following release note:

http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/3_1/install/cm313ins.htm

To install the operating system for Cisco Conference Connection, use the Cisco CallManager “Starting the Operating System Installation” procedure along with the following information specific to Cisco Conference Connection:

Procedure

- Step 1** Use the installation instructions for the server type that you are installing.



Note Cisco Conference Connection does not support the IBM xSeries 330 servers.

- Step 2** In Step 14, enter the product key FVHD-IAZA-ROFJ-DERJ.

- Step 3** After you install the Operating System do not proceed to the section “Installing Cisco CallManager.” Instead, continue with the Cisco Conference Connection installation and follow the instructions in the section “Installing Cisco Conference Connection” in the *Cisco Conference Connection Administration Guide*.
-

CTI Port Addition in Cisco CallManager

Follow these guidelines along with the “Adding CTI Ports in Cisco CallManager” procedure in the *Cisco Conference Connection Administration Guide*.

To determine the number of CTI ports in Cisco CallManager that you need for Cisco Conference Connection:

- For a 20-port license, configure 10 CTI ports.
- For a 60-port license, configure 10 CTI ports.
- For a 100-port license, configure 15 CTI ports.

**Note**

The CTI port is only active as a participant accesses the IVR; therefore, a CTI port is not required for each Cisco Conference Connection participant.

Setting up Cisco Conference Connection Users

This section contains the following procedures.

- [Automatically Starting the User Synchronization Process, page 20](#)
- [Adding Additional Servers for Cisco Conference Connection for Cisco CallManager 3.1, page 22](#)
- [Manually Starting the Synchronization Process for Cisco CallManager 3.2, page 23](#)
- [Adding Additional Servers for Cisco Conference Connection for Cisco CallManager 3.2, page 25](#)
- [Changing the Synchronization Process TimeInterval Parameter for Cisco CallManager 3.2, page 26](#)
- [Stopping the Synchronization Process for Cisco CallManager 3.2, page 27](#)

Automatically Starting the User Synchronization Process

The installation CD-ROM comes with an installation to facilitate setting up Cisco Conference Connection users. Use the following procedure instead of the “Starting the Synchronization Process” procedure under “Setting up Cisco Conference Connection Users” in the configuration chapter of the *Cisco Conference Connection Administration Guide*.

To install the Automated User Synchronization Tool, perform the following steps:

Procedure

- Step 1** Take the CD-ROM to the Cisco CallManager server.
- Step 2** In the UserSynchInstall directory on the CD-ROM, run **setup.exe**.
- Step 3** At the welcome prompt, click **Next**.
- Step 4** At the Software License Agreement screen, click **Yes** to accept the license terms.
- Step 5** At the User Synchronization Configuration screen, enter the Cisco Conference Connection server name or IP address and click **Next**.



Note If your network uses DNS services, you can enter the DNS name of the Cisco Conference Connection server. You must update the DNS server with the appropriate Cisco Conference Connection server name and IP address information before using that information here.

If your network does not use DNS services, you must enter the full IP address of the server.

- Step 6** At the Database Password screen, enter the password specified during the Cisco Conference Connection installation and click **Next**.
- Step 7** Confirm the installation and click **Yes**.
- Step 8** Click **Finish** to complete the installation.

This completes the user synchronization between Cisco CallManager and one Cisco Conference Connection server.

If you require additional servers, perform the steps in one of the following procedures:

- [Adding Additional Servers for Cisco Conference Connection for Cisco CallManager 3.1, page 22](#)
 - [Adding Additional Servers for Cisco Conference Connection for Cisco CallManager 3.2, page 25.](#)
-

Adding Additional Servers for Cisco Conference Connection for Cisco CallManager 3.1



Warning

Failure to follow the manual process for attachment of subsequent Cisco Conference Connection servers will damage the previously installed synchronization component.

To add additional Cisco Conference servers, use the following guidelines along with the “Starting the User Synchronization Process” section of the *Cisco Conference Connection Administration Guide*.

- In Step 1, Configure an ODBC Data Source.
You must configure a new DSN for each synchronization process. Use different DSN names for different synchronization agreements. For example, DCMS1 , DCMS2
- In Step 3: Copy odbcagr.txt.
Make sure that you do not overwrite the configuration files for a synchronization agreement. Copy the files into a different directory.
- In Step 4: Edit the odbcagr.txt.
 - Give the correct path name for the configuration file “odbcdcms.cfg,” the location where the files have been copied.
 - Enter the correct name for the “datasource” (for example, DCMS1, DCMS2).
 - Make sure that you specify a unique agreement ID. It must not conflict with the agreement IDs used for any other synchronization agreements.
- In Step 5:
 - When you run the command “dcmdlkag”, make sure that you give the correct path name for the “ocbcagr.txt” file.
- When you stop the Synchronization process, make sure that you give the correct path name for the “delete.txt” file.

Manually Starting the Synchronization Process for Cisco CallManager 3.2

Use this procedure only if you are adding additional servers for Cisco Conference Connection running Cisco CallManager 3.2 (see the [“Adding Additional Servers for Cisco Conference Connection for Cisco CallManager 3.2” section on page 25](#)).

To set up user synchronization with only one Cisco Conference Connection server, follow the guidelines in the [“Automatically Starting the User Synchronization Process” section on page 20](#).

To set up Cisco Conference Connection users and start the manual synchronization process, perform the following steps on the Cisco CallManager 3.2 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.”

Click **OK**.

m. 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.mmu, odbcdcms.cfg, and delete.txt.mmu 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.mmu 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.
 - 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:
- ```
dcdmmu PROCESS $DCDSRVR\run\dcx500\config\odbcagr.txt.mmu
(where $DCDSRVR is the directory path, normally C:\dcdsrvr)
```
- 

## Adding Additional Servers for Cisco Conference Connection for Cisco CallManager 3.2



### Warning

**Failure to follow the manual process for attachment of subsequent Cisco Conference Connection servers will damage the previously installed synchronization component.**

---

To add additional Cisco Conference servers, use the following guidelines along with the [“Manually Starting the Synchronization Process for Cisco CallManager 3.2” section on page 23.](#)

- In Step 1, Configure an ODBC Data Source.  
You must configure a new DSN for each synchronization process. Use different DSN names for different synchronization agreements. For example, DCMS1, DCMS2
- In Step 3: Copy odbcagr.txt.mmu.  
Make sure that you do not overwrite the configuration files for a synchronization agreement. Copy the files into a different directory.

- In Step 4: Edit the odbcagr.txt.mmu.
  - Give the correct path name for the configuration file “odbcdcms.cfg,” the location where the files have been copied.
  - Enter the correct name for the “datasource” (for example, DCMS1, DCMS2).
  - Make sure that you specify a unique agreement ID. It must not conflict with the agreement IDs used for any other synchronization agreements.
- In Step 5:
  - When you run the command “dcdmmu”, make sure that you give the correct path name for the “ocbcagr.txt.mmu” file.
- When you stop the Synchronization process, make sure that you give the correct path name for the “delete.txt.mmu” file.

### Changing the Synchronization Process TimeInterval Parameter for Cisco CallManager 3.2

To change the TimeInterval parameter for Cisco CallManager 3.2, 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.mmu 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.mmu file.

---

## Stopping the Synchronization Process for Cisco CallManager 3.2

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 3.2 directory machine:

- 
- Step 1** Locate C:\\$DCDSRVR\run\dcx500\config\delete.txt.mmu.
- Step 2** In the delete.txt.mmu file, change the agreementID parameter so that it is the same as the one in odbcagr.txt.mmu.
- Step 3** At the command prompt, enter the following command:
- ```
dcdmmu PROCESS $DCDSRVR\run\dcx500\config\delete.txt.mmu
```
- (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.

---

## Configuring the Cisco Customer Response Application (Cisco CRA) Database Subsystem

You must configure the Cisco CRA database if you are installing Cisco Conference Connection 1.1(3) for the first time or if you are upgrading from Cisco Conference Connection 1.1(1).

If you are upgrading from Cisco Conference Connection 1.1(1), start with the [“Upgrading Cisco Conference Connection” section on page 33](#).

If this is a new installation of Cisco Conference Connection, perform the following procedure:

### Procedure

---

- 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.**
- Step 2** Click **Database**.
- Step 3** Click **Add New Data Source**.
- Step 4** Enter the following information:
- Data Source Name: **DCMS**
  - Username: **sa**
  - Password: enter the password specified for MSDE during the installation of Cisco Conference Connection
  - Maximum Number of Connections: enter the same number as the number of configured CTI ports

To determine the number of CTI ports in Cisco CallManager that you need for Cisco Conference Connection, follow these guidelines:

- For a 20-port license, configure 10 CTI ports.
- For a 60-port license, configure 10 CTI ports.
- For a 100-port license, configure 15 CTI ports.



Note

---

The CTI port is only active as a participant accesses the IVR; therefore, a CTI port is not required for each Cisco Conference Connection participant.

---

Step 5 Click **Update**.

---

## Configuring the Cisco Customer Response Application (Cisco CRA) Operator Extension

When configuring the conference telephony application, you can either enable or disable the transfer to the operator extension feature.

**To enable operator extension** On the last configuration screen of the conference telephony application, enter a valid operator extension in the operatorExtn field.

**To disable operator extension** On the last configuration screen of the conference telephony application, you must enter the word string **null** in the operatorExtn field.



Note

---

When you disable operator extension, if you enter any other string or an invalid extension instead of entering **null**, an error message (“This extension is invalid.”) plays.

---

## Configuring JTAPI for Cisco CallManager Failover Support

For Cisco CallManager failover support on Cisco Conference Connection, you must configure JTAPI in the Cisco Customer Response Application (Cisco CRA).

**Note**

---

The primary Cisco CallManager must be fully operational and running when the JTAPI engine starts up.

---

Perform the following steps to configure JTAPI for failover support:

**Procedure**

- 
- 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.**
- At the prompts, enter the network username and password.
- Step 2** Click **JTAPI**.
- Step 3** In the JTAPI providers field, enter the DNS name or IP address of the primary Cisco CallManager and then enter the secondary Cisco CallManager. Make sure a space separates the two DNS names or IP addresses.
- For example, enter **CM3 CM4** where CM3 is the primary Cisco CallManager server name.
- Step 4** Provide the JTAPI user and password and click **Update**.
-

## Configuring Music on Hold for Cisco Conference Connection

Use this procedure to disable the Music On Hold feature for Cisco Conference Connection and to allow the feature for calls between IP phones. This procedure prevents music on hold from being played into a conference for callers within the same Cisco CallManager cluster. This does not prevent music being played from other sources, such as remote callers on other systems.

This configuration is recommended so that the music on hold feature does not disrupt conferences when a participant places the conference on hold.

This configuration adds all of the music on hold resources into a Media Resource Group (other than the default). This ensures that music on hold is then available only to entities in the resource group list, where that Media Resource Group is included.

This procedure uses a new Media Resource Group and List for example only. Creation of new groups/lists is not required but may be used. The underlying principle is to have music on hold resources outside of the default group (each device is assigned a default, when it is added). See the Cisco CallManager documentation to configure a phone or other devices into a Media Resource Group List.



### Note

---

The Cisco Conference Connection H.323 gateway device must NOT be within a group or list that contains music on hold resources. Failure to do this may result in music on hold being played in conference and confusing messages being played.

---

Perform the following steps to disable the Music on Hold feature with Cisco Conference Connection:

### Procedure

---

- Step 1** On the Cisco CallManager administration page, go to **Services > Media Resource Group**.
- Step 2** Click **Add a new media resource group** and provide a name for the new group on the next page, for example, MOHGroup.

- Step 3** In the selection box, select all the Music On Hold resources and put them in the new group, such as, MOHGroup.
- Step 4** Go to **Services > Media Resource Group List**.
- Step 5** Add a new Resource Group List (for example, MOHList) and then add the new group created in step 2 to this list.

All IP phones that require the Music On Hold feature must be part of this list. Now all entities that belong to this group list will be able to receive music on hold and users of Cisco Conference Connection will not hear music.

---

## Enabling Licenses for Cisco Conference Connection

Use this information along with the “Licensing Setup” and the “Licensing Update” sections in the *Cisco Conference Connection Administration Guide*.

Initial Cisco Conference Connection installation provides six conference ports. To enable additional ports, you must perform one or several steps depending on the number of license upgrades.

License keys are required as described here:

- 6 to 20 port upgrade
- 20 to 60 port upgrade
- 60 to 100 port upgrade
- 20 to 100 port upgrade

For example, if 100 ports are purchased, you will perform the following steps:

1. Use the first license key and upgrade 6 to 20 ports.
2. Use the second license key and upgrade 20 to 100 ports.

After entering all license keys, restart Cisco Conference Connection for the changes to take effect.



## Upgrading Cisco Conference Connection

To upgrade Cisco Conference Connection, perform the following procedures:

- [Preparing to Upgrade, page 34](#)
- [Upgrading Cisco Conference Connection, page 35](#)
- [Restoring the Configuration for Cisco Conference Connection, page 36](#)
- [Configuring Music on Hold for Cisco Conference Connection, page 31](#)
- [Enabling Licenses for Cisco Conference Connection, page 32](#)

## Preparing to Upgrade

Before you begin the upgrade, have the following information available:

- The MSDE password for the user named “sa.”
- License keys for all purchased licenses.
- The directory hostname/IP address and the profile name.

To obtain the Directory hostname/IP address and the profile name, perform the following steps:

### Procedure

---


- 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.**
- At the prompts, enter the network username and password.
- Step 2** On the menu page, go to Directory and note the Directory hostname as well as the profile selected in the box on the right of the web page.
- For more information, refer to the “Configuring Directory Information” section in the *Cisco Conference Connection Administration Guide*.
-

## Upgrading Cisco Conference Connection

Before starting the upgrade, make sure that no conferences are currently running. Perform the following steps to upgrade Cisco Conference Connection to the current release:

### Procedure

---

- Step 1** Go to **Start > Programs > Cisco Conference Connection**.
- Step 2** In the menu, choose **Uninstall**.
- Step 3** In the dialog box “Are you sure you want to uninstall?” choose **Yes**.
- Step 4** At the end of the uninstall, you may get a dialog (“It is recommended that you restart the machine to remove files...”). Click **OK**.
- Step 5** After the uninstall, reboot or restart the server.
- Step 6** After the reboot, insert the Cisco Conference Connection Release 1.1(3) CD-ROM into the server, or, if you have the zip file, unzip the contents of the zip file into a temporary directory of your choice. Do NOT unzip contents onto the desktop.
- Step 7** Complete the steps outlined in the “Installing from the CD-ROM” section in the *Cisco Conference Connection Administration Guide* (Steps 1 through Step 17).
-  **Note** For the JTAPI client, you will receive a dialog asking you to choose an action for JTAPI client installation. Choose **Upgrade JTAPI client**. Then continue as outlined in the Administration Guide.
- Step 8** During the installation, enter the MSDE password when prompted. After you complete the installation, restart the server.
-

## Restoring the Configuration for Cisco Conference Connection

Perform the following procedures to restore the configuration for Cisco Conference Connection:

### Procedure

---

- 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.**
- At the prompts, enter the network username and password.
- The Directory information appears.
- Step 2** Verify that the Directory Hostname and the profile name are the same as in [“Preparing to Upgrade” section on page 34.](#)
- Step 3** On the Main Menu page, verify that the Database option appears.
- Step 4** Perform the database configuration in the [“Configuring the Cisco Customer Response Application \(Cisco CRA\) Database Subsystem” section on page 28.](#)



### Note

In this release of Cisco Conference Connection, the Operator Extension feature is optional. You may disable it. See [“Configuring the Cisco Customer Response Application \(Cisco CRA\) Operator Extension” section on page 29.](#)

---

**Step 5** After configuring the database, go back to the menu and choose the Engine option.



**Note** At this time you may need to configure JTAPI for failover. See the [“Configuring JTAPI for Cisco CallManager Failover Support”](#) section on page 30.

**Step 6** Check that the following subsystems appear and that they are in service:

- Database
- Application
- JTAPI

This may take some time to reflect. Use the refresh checkbox to check the status. If the status does not change, restart the engine and check the status.

The configuration restore is complete. You may now start and join conferences.

## To Disable Music On Hold

To disable the Music On Hold feature for Cisco Conference Connection while allowing the feature for calls between IP phones, perform the steps in the [“Configuring Music on Hold for Cisco Conference Connection”](#) section on page 31.

## To Enable Licenses

If you have purchased additional licenses, perform the steps in the [“Enabling Licenses for Cisco Conference Connection”](#) section on page 32.

## Upgrading from Cisco CallManager 3.1

If you have upgraded Cisco CallManager 3.1 to a later release of Cisco CallManager, perform the following steps to enable Cisco Conference Connection to work properly:

### Procedure

---

- Step 1** Log into the Cisco CallManager administration page  
`http://servername/ccmadmin`  
where the server name is the IP address of the Cisco CallManager server.
- Step 2** Choose **Route Plan > Route Pattern** and select the route pattern that is configured for the Cisco Conference Connection server.
- Step 3** In the Route Pattern Configuration page, go to Route Pattern entry box and add # at the end of the route pattern string.  
For example, change 5321.! to 5321.#!
- Step 4** Click **Update**.
-

# Changes to Cisco Conference Connection When Upgrading from Cisco CallManager 3.1 to Cisco CallManager 3.2

When you upgrade Cisco CallManager 3.1 to Cisco CallManager 3.2, you must perform the following procedures to enable Cisco Conference Connection to work properly:

- [Upgrading the JTAPI Client, page 39](#)
- [Repairing the User Synchronization Process on Cisco CallManager, page 40](#)

## Upgrading the JTAPI Client

### Procedure

---

- Step 1** Log into the Application Engine web page  
`http://servername/AppAdmin`  
where the server name is the DNS name or IP address of the Cisco Conference Connection server.  
or  
If you are working on the Cisco Conference Connection server, go to **Start>Programs>Cisco Extended Services Administrator>Application Administrator**
- Step 2** Click on **Engine**.  
The Engine Status page displays.
- Step 3** Click on the **Stop Engine** button.
- Step 4** Open the browser on the Cisco Conference Connection server and log into the Cisco CallManager administration page  
`http://servername/ccmadmin`  
where the server name is the DNS name or IP address of the Cisco Conference Connection server.
- Step 5** Click on **Application>Install Plugins>Cisco JTAPI**.
- Step 6** Choose “Run program from its current locations,” and click **OK**.
- Step 7** At the prompt “Do you want to install and run Cisco JTAPIClient.exe?”, click **Yes**.

- Step 8** At the prompt “Cisco JTAPI Client ver. X.X(x.x)”, click **Continue**.
- Step 9** On the Maintenance Operations screen, choose “Upgrade from vX.X(x) to vX.X(x)” and click **Next**.
- Step 10** Choose “Yes, I want to restart my computer” and click **Finish**.
- 

## Repairing the User Synchronization Process on Cisco CallManager

The upgrade from Cisco CallManager 3.1 to Cisco CallManager 3.2 corrupts the the User Synchronization process. You must repair the User Synchronization process on the Cisco CallManager server after upgrading Cisco CallManager.



### Note

Before you upgrade Cisco CallManager, make sure you rename ConvEmail.dll in c:\dcdsdrv\lib on the Cisco CallManager server. See the Cisco CallManager release notes ([http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_callmg/3\\_2/install/upgrade/upgra321.htm#xtocid6](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/3_2/install/upgrade/upgra321.htm#xtocid6)) for more information.

---

Use this procedure to repair the User Synchronization process after upgrading Cisco CallManager.

### Procedure

- 
- Step 1** Download Cisco Conference Connection Version 1.1(3) Support Patch A from this URL. The patch is ccc-1-1-3-spA.exe.
- <http://www.cisco.com/cgi-bin/tablebuild.pl/ccc>
- Step 2** Follow the instructions in ccc-1-1-3-spA.README.txt (available at the same URL).
- Step 3** After you run the batch file, if the results say “No Metalink Agreements currently running...,” then you need to set up a new User Synchronization process for Cisco Conference Connection. Use the procedure in the “Automatically Starting the User Synchronization Process” section on page 20.
-



# Installing Japanese Voice Prompts

Perform the following steps to install Japanese voice prompts.

**Note**

---

This procedure installs Japanese voice prompts but does not add Japanese characters to the web interface.

---

**Procedure**

- 
- Step 1** Complete the IVR/CCC installation as described in the *Cisco Conference Connection Administration Guide*.
- Step 2** Restart your server after installation.
- Step 3** Run the following batch file:
- ```
C:\Program Files\Cisco\ConferenceConnection\InternationalPrompts\  
setupJapanesePrompts.bat
```
- Step 4** At the prompt “Do you want to overwrite existing .wav files,” reply **ALL**.

**Note**

Default backup subdirectories are created to save the original prompts in three directories:

```
C:\Program Files\wfavvid\Prompts\system\en_US
```

```
C:\Program Files\wfavvid\Prompts\user\en_US
```

```
C:\Program Files\Cisco\ConferenceConnection\Prompts
```

Users can restore English prompts from defaultbackup directories.

- Step 5** Restart the application engine.
-

Obtaining Documentation

The following sections explain how to obtain documentation from Cisco Systems.

World Wide Web

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

<http://www.cisco.com>

Translated documentation is available at the following URL:

http://www.cisco.com/public/countries_languages.shtml

Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which is shipped with your product. 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 through 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, elsewhere in North America, by calling 800 553-NETS (6387).

Documentation Feedback

If you are reading Cisco product documentation on Cisco.com, you can submit technical comments electronically. Click **Leave Feedback** at the bottom of the Cisco Documentation home page. After you complete the form, print it out and fax it to Cisco at 408 527-0730.

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:

Cisco Systems
Attn: Document Resource Connection
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 by using the Cisco Technical Assistance Center (TAC) Web Site. Cisco.com registered users have complete access to the technical support resources on the Cisco TAC Web Site.

Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information, networking solutions, services, programs, and resources at any time, from anywhere in the world.

Cisco.com is a highly integrated Internet application and a powerful, easy-to-use tool that provides a broad range of features and services to help you to

- Streamline business processes and improve productivity
- Resolve technical issues with online support
- Download and test software packages

- Order Cisco learning materials and merchandise
- Register for online skill assessment, training, and certification programs

You can self-register on Cisco.com to obtain customized information and service. To access Cisco.com, go to the following URL:

<http://www.cisco.com>

Technical Assistance Center

The Cisco TAC is available to all customers who need technical assistance with a Cisco product, technology, or solution. Two types of support are available through the Cisco TAC: the Cisco TAC Web Site and the Cisco TAC Escalation Center.

Inquiries to Cisco TAC are categorized according to the urgency of the issue:

- Priority level 4 (P4)—You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration.
- Priority level 3 (P3)—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- Priority level 2 (P2)—Your production network is severely degraded, affecting significant aspects of business operations. No workaround is available.
- Priority level 1 (P1)—Your production network is down, and a critical impact to business operations will occur if service is not restored quickly. No workaround is available.

Which Cisco TAC resource you choose is based on the priority of the problem and the conditions of service contracts, when applicable.

Cisco TAC Web Site

The Cisco TAC Web Site allows you to resolve P3 and P4 issues yourself, saving both cost and time. The site provides around-the-clock access to online tools, knowledge bases, and software. To access the Cisco TAC Web Site, go to the following URL:

<http://www.cisco.com/tac>

All customers, partners, and resellers who have a valid Cisco services contract have complete access to the technical support resources on the Cisco TAC Web Site. The Cisco TAC Web Site requires a Cisco.com login ID and password. If you have a valid service contract but do not have a login ID or password, go to the following URL to register:

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

If you cannot resolve your technical issues by using the Cisco TAC Web Site, and you are a Cisco.com registered user, you can open a case online by using the TAC Case Open tool at the following URL:

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

If you have Internet access, it is recommended that you open P3 and P4 cases through the Cisco TAC Web Site.

Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses issues that are classified as priority level 1 or priority level 2; these classifications are assigned when severe network degradation significantly impacts business operations. When you contact the TAC Escalation Center with a P1 or P2 problem, a Cisco TAC engineer will automatically open a case.

To obtain a directory of toll-free Cisco TAC telephone numbers for your country, go to the following URL:

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

Before calling, please check with your network operations center to determine the level of Cisco support services to which your company is entitled; for example, SMARTnet, SMARTnet Onsite, or Network Supported Accounts (NSA). In addition, please have available your service agreement number and your product serial number.

AccessPath, AtmDirector, Browse with Me, CCIP, CCSI, CD-PAC, *CiscoLink*, the Cisco *Powered* Network logo, Cisco Systems Networking Academy, the Cisco Systems Networking Academy logo, Cisco Unity, Fast Step, Follow Me Browsing, FormShare, FrameShare, IGX, Internet Quotient, IP/VC, iQ Breakthrough, iQ Expertise, iQ FastTrack, the iQ Logo, iQ Net Readiness Scorecard, MGX, the Networkers logo, ScriptBuilder, ScriptShare, SMARTnet, TransPath, Voice LAN, Wavelength Router, and WebViewer are trademarks of Cisco Systems, Inc.; Changing the Way We Work, Live, Play, and Learn, and Discover All That's Possible are service marks of Cisco Systems, Inc.; and Aironet, ASIST, BPX, Catalyst, CCDA, CCDP, CCIE, CCNA, CCNP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, the Cisco IOS logo, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Empowering the Internet Generation, Enterprise/Solver, EtherChannel, EtherSwitch, FastHub, FastSwitch, GigaStack, IOS, IP/TV, LightStream, MICA, Network Registrar, *Packet*, PIX, Post-Routing, Pre-Routing, RateMUX, Registrar, SlideCast, StrataView Plus, Stratm, SwitchProbe, TeleRouter, and VCO are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and certain other countries.

All other trademarks mentioned in this document or Web site are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0110R)

Copyright © 2002, Cisco Systems, Inc.
All rights reserved.