

# **Cisco Collaboration Server Installation Guide**

Cisco Collaboration Server Version 5.0

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## Overview

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## About the Guide

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This guide includes:

- Hardware, software, and database requirements for Cisco Collaboration Server (CCS)
- Instructions for new installations of Collaboration Server
- Instructions for configuring and running Collaboration Server

### Audience

This guide is written for the Collaboration System Administrator and other qualified installers who are familiar with their system environment, network, and resources.

### Collaboration Documentation

Collaboration documentation is available at <http://<CCS server>/doc>.

Document(s)	Describes...	Located at
Collaboration Server Release Notes	Last minute product information, with links to other documentation	Located at the top level of the installation CD  Release notes for upgrades are available at the Cisco Collaboration Server upgrade site.
Online Documentation	Configuration, administration, and technical details for Collaboration server	<a href="http://&lt;CCS server&gt;/doc">http://&lt;CCS server&gt;/doc</a>



## Documentation Conventions

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### Cisco Collaboration Server (CCS)

In this document:

- **<CCS server>** refers to the name of the computer running Cisco Collaboration Server (CCS).
- **<CCS root drive>** refers to the letter of the drive where Collaboration is installed.
- **<CCS install dir>** refers to the Collaboration root directory. The default directory is **Cisco\_CS**.
- **<CCS content dir>** refers to the Collaboration Content Directory. This directory holds customized files.
- **<Database server>** refers to the database server on which your CCS database resides.

### Database

Information	Collaboration Documentation Convention
Oracle database administrator user name	<DBA name>
Oracle database administrator password	<DBA password>
The machine name of the database host or the TCP/IP address.	<DB host>
Oracle database service name	<Oracle DB service name>
The name of the database you are going to use	<CCS DB name>
Collaboration user with privileges to write to the Collaboration database	<CCS DB username>
Collaboration user password	<CCS DB password>

Collaboration tablespace name	<CCS DB tablespace>
Collaboration datafile name	<CCS DB datafile>
Collaboration database port number (the default value for the Collaboration Installation Conventions is 1521)	<CCS DB port number> Documentation

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## Database

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Oracle database administrator user name	<DBA name>
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The name of the database you are going to use	<CCS DB name>
Collaboration user with privileges to write to the Collaboration database	<CCS DB username>
Collaboration user password	<CCS DB password>
Collaboration tablespace name	<CCS DB tablespace>
Collaboration datafile name	<CCS DB datafile>
Collaboration database port number (the default value for the Collaboration Installation is 1521)	<CCS DB port number>



## **Installation Requirements**

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## **Hardware and Software Requirements**

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Server hardware requirements depend on your intended use of Collaboration.

### **Minimum Configuration for Limited Testing**

This configuration can be used for testing the basic features of Collaboration Server using one or two agents and callers.

#### **Collaboration Server and Database Server (MS SQL 2000)**

- 500 MHz Pentium III Processor
- 512MB RAM
- 1 GB Free Hard Drive Space

### **Minimum Enterprise Configuration**

This is the **minimum** configuration suggested for enterprise use. This configuration has been extensively tested. Agent/Caller loads for this configuration are detailed below

#### **Collaboration Server Hardware Requirements**

- Dual 1.3 Ghz Pentium III Processors w/ 512 L2 Cache
- 512 MB Memory
- 1 GB Free Hard Drive Space

#### **Database Server Hardware Requirements (MS SQL 2000)**

- Dual 450 Mhz Pentium II Processors
- 512 MB Memory
- Free Hard Drive Space according to Database Manufacturer's Recommendations

### **Acceptable Loads for the Minimum Enterprise Configurations**

- Agents and Callers (any one of the items below)
  - 250 Single-session Chat agents and 250 Callers, *or*
  - 250 Blended Collaboration agents and 250 Callers, *or*
  - 125 Multi-session Chat agents and 375 Callers
  - 10 Administrators

### **Server Software Requirements (all configurations)**

- Windows 2000 Server
- Service Pack 3
- Microsoft IE 5.5+ SP2 (for Administration Desktop)

## Supported Databases

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The following databases are supported in a Windows 2000 environment:

Database	Recommended for:
Oracle 8.1.7 (8i)	Production environment
Microsoft SQL Server 2000	

### Production Environment Databases

These databases are not supplied with Collaboration. Obtain a copy of the database and **install the database application before installing Collaboration**. Refer to the product installation manual for instructions.



## **Windows Install or Upgrade**

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## **New Installations - Server Configuration**

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### **Server Configuration, IP Address and Settings**

Your server must have:

- A static IP address
- A name for the internal network (defined during Windows 2000 installation)
- Appropriate TCP/IP network settings

## **Installation Prerequisites**

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### **Windows 2000 Installation**

1. Install **Windows 2000 Server**.
2. Install **Service Pack 3**.
3. Install **Microsoft IE 5.5 SP2** or above.

### **Database Installation**

Install the **Oracle** or **Microsoft SQL 2000** database application before installing Collaboration Server. You can install the database application on the Collaboration server or on another machine.

Refer to the appropriate product installation manual for instructions.

## Installing Collaboration Server

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To Install Collaboration Server follow the steps below:

1. Stop IIS Admin Service
2. Install Collaboration
3. Install the Collaboration FlexLM License (new licenses)
4. Install the Collaboration FlexLM License (existing licenses)
5. Apply GMT Time Report Fix

### Stop IIS Admin Service

Before installing Collaboration Server, stop the IIS Admin service.

1. On the Windows Desktop, right click on **My Computer** and select **Manage** from the menu.
2. In the **Microsoft Management Console** window titled **Computer Management**, expand **Services and Applications** and click on **Services**.
3. In the right pane, click to highlight the **IIS Admin** service.
4. If the IIS Admin service is **Started**, click the stop button (a black square) in the tool bar to stop the service and go to **Step 4**.
5. If the IIS Admin service is **not started**, skip to the Install Collaboration procedure.
6. The **Stop Other Services** dialog box lists the subordinate services that will stop. Verify that the **World Wide Web Publishing** service is listed. Click **Yes**.
7. The **Service Control** dialog box displays services as they are stopped.
8. In the right pane of the Management Console, verify that the **IIS Admin** and **World Wide Web Publishing** services no longer display **Started** in the **Status** column. Close the window.
9. Open **Windows Explorer**.

## Install Collaboration

1. Close all applications except **Windows Explorer**.
2. In Windows Explorer, navigate to the Collaboration CD. Open the folder **ccs\_windows\_5.0** and double click on **Setup.exe**.
3. The Setup Wizard opens. In the **Welcome** window, click **Next**.
4. In the **Software License Agreement** window, click **Yes**.
5. In the **User Information** window, enter your name and company name. Click **Next**.
6. In the **Choose Destination Location** window, select the destination location for Collaboration Server. The default location is **C:\Cisco\_CS**. If you are entering a different location, do not include spaces in the path.

Click **Next**. Installation begins.

7. A WinZip window appears and begins to install documentation. Do not click the close button. The window disappears when documentation installation is complete.
8. In the **ServletExec 4.1.1 ISAPI Setup** window, click **Next**.
9. In the **License Agreement** window, click **Yes**.
10. In the **Information** window, click **Next**.
11. In the **Choose Destination Location** window, accept the default, **C:\Program Files\New Atlanta\ServletExec ISAPI**. Click **Next**. Installation begins.
12. A dialog box warns that you will need to stop the IIS Admin service. The service has already been stopped. Click **OK**.
13. In the **Setup Complete** window, click **Finish**.
14. Several command windows open and execute scripts identified in the **Cisco Collaboration Server 5.0 Java Installer** window. When complete, click the **Close** bar at the bottom of the window.
15. In the **Setup Complete** window, click **Finish**.

**Caution:** Do not reboot the server or restart IIS before installing the FLEXlm license key.

## Install the Collaboration FLEXIm License

1. Stop the IIS Admin Service if it is running.
2. Locate the **Product Authorization Key** (software serial number) on the back of your Collaboration CD.
3. In a Web browser, open the Cisco Software Registration Web page.

Registered Cisco Connection Online users:

<http://www.cisco.com/cgi-bin/Software/FormManager/formgenerator.pl>

Non-registered users:

<http://www.cisco.com/pcgi-bin/Software/FormManager/formgenerator.pl>

4. On the Software Registration page, select **Cisco Collaboration Server** from the list of software forms.
5. Follow the instructions on the Collaboration Server registration page. When you have completed the form and entered your Product Authorization Key, a license file with the extension **.lic** will be sent to your email address.
6. Copy the **<CCS license>.lic** file to the **<CCS install dir>\license** directory.

**Note:** Do not restrict write access to the **<CCS install dir>\license** directory. Collaboration writes a temporary file to that directory while reading the license file.

7. Restart the IISAdmin service.

## Pre-Existing and Multiple FLEXIm License Files

To install a pre-existing or additional FLEXIm license file:

1. Rename the the license file if necessary to avoid overwriting an existing file in the license directory.
2. Copy the license file (**.lic**) into the **<CCS install dir>\license** directory.
3. Restart the IISAdmin service.

**Do not overwrite .lic files in the license directory.** Collaboration will calculate your licensed seats based on all **.lic** files in the license directory.

**Note:** Renaming and copying the same license file within the **<CCS install dir>\license** directory does not add seats to your existing license(s). Collaboration ignores duplicate files.

**Caution:** Do not modify license files. Collaboration will not recognize INCREMENT lines that have been altered or added to the file. Collaboration may not recognize the .lic file at all if you have opened the .lic file in an editor and re-saved the file.

## Apply GMT Time Report Fix

Due to an issue with Java running under Microsoft Windows, reports may display times in GMT instead of your local time. To have your report times displayed in local time you should apply the following fix.

To resolve this issue, simply uncheck the "automatically adjust clock for daylight savings changes" in the Time Zone tab of the Date/Time Properties.

*To uncheck the "automatically adjust clock for daylight savings changes" checkbox:*

1. Double-click the time in the Windows System Tray to make the Date/Time properties appear.
2. Click the **Time Zone** Tab.
3. Uncheck the **"automatically adjust clock for daylight savings changes"** checkbox.
4. Click **OK**.

Some versions of Microsoft Windows do not allow you to access this property (it is not present in the property window). In these cases, you can manually add an entry into the windows registry to apply this fix.

*To enable this fix for windows versions that do not include the daylight savings checkbox:*

1. From the Windows Start button select **Run...** then enter *regedit* into the dialog box and click **OK**.
2. Navigate the tree to the *HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\TimeZoneInformation* node. If *TimeZoneInformation* does not exist, then right-click *Control*, and select New Key. Name the Key *TimeZoneInformation*.
3. In the *TimeZoneInformation* folder, right-click the *DisableAutoDaylightTimeSet* name and choose **Modify**. If the *DisableAutoDaylightTimeSet* name does not

exist, then right-click in the right-hand frame and choose New String Value. Name the new string value *DisableAutoDaylightTimeSet* and follow the process above to modify it.

4. In the Edit DWORD Value dialog box, change the Value Data to 0 (zero).
5. Click **OK**.
6. Reboot your computer AFTER you have completed the installation of Collaboration Server for the new value to take effect.



## **Database Configuration**

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### **Configuring the Database**

You will find configuration instructions for the following databases:

- Oracle 8.1.7 (8i)
- MS SQL Server 2000

## Oracle 8i

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To create and configure an Oracle database, follow the instructions in the sections below:

1. Create the Oracle Database
2. Open an Oracle Client Tool
3. Create a Tablespace
4. Create a User
5. Install Native Oracle JDBC Driver

### Additional Information

- Calculate Database Size

For descriptions of bracketed names (for example, <**DBA name**>), see Documentation Conventions.

### Create the Oracle Database

Follow the instructions in Oracle user documentation to create an Oracle database.

When creating the database, select the character set **UTF8**. The **UTF8** character set handles non-Latin 1 character storage and is necessary to ensure that storing data in Unicode is acceptable. Select the **UTF8** character set for each database you create.

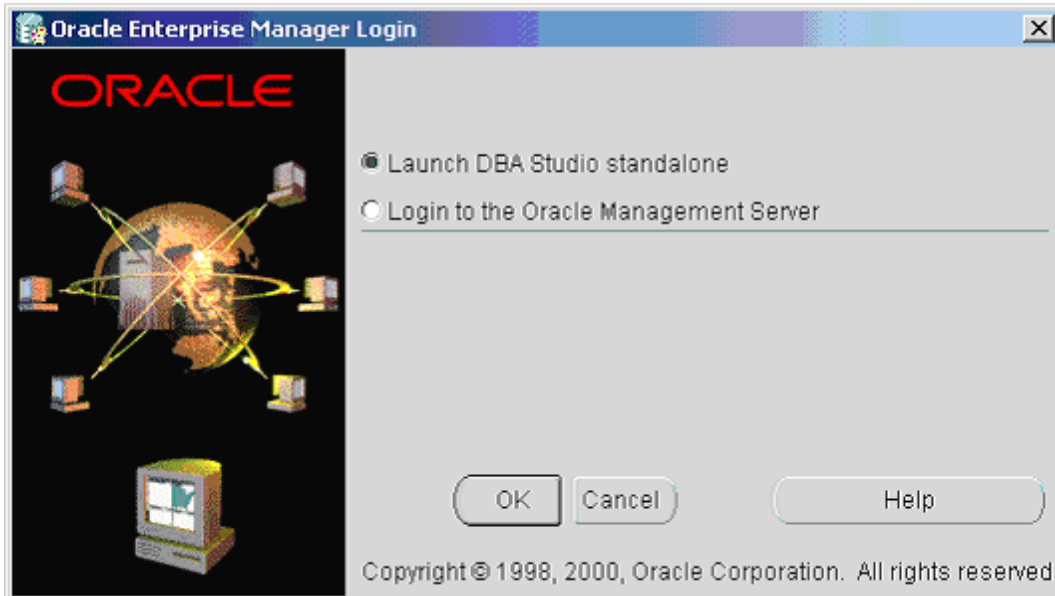
For more information on Unicode and internationalization features in Collaboration, refer to the *Collaboration Administration Guide*.

These instructions assume you have a functional version of Oracle DBA Studio.

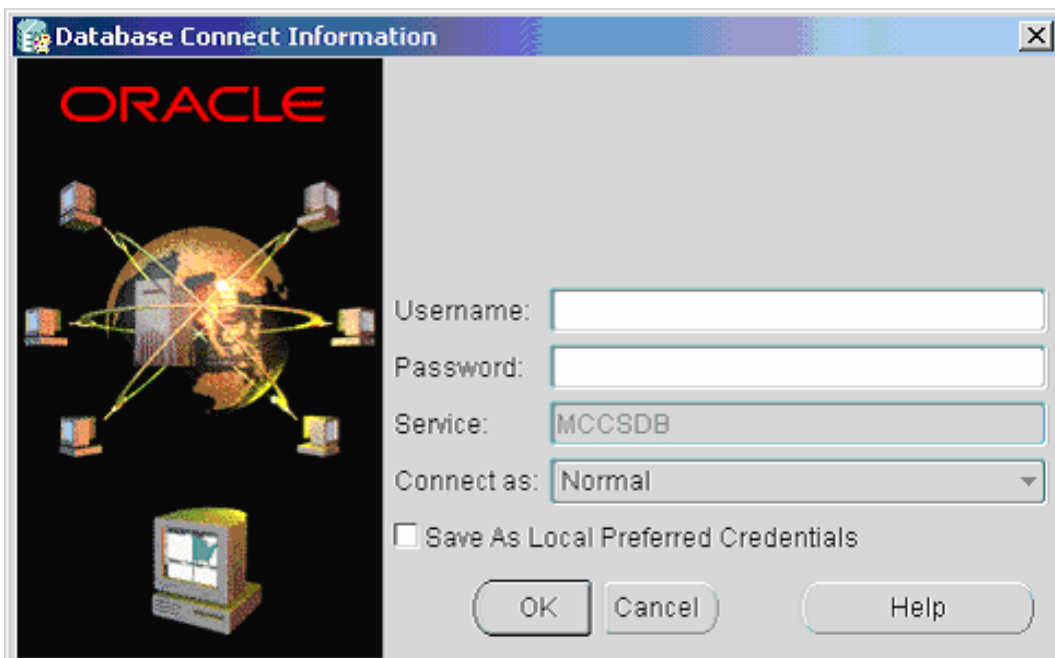
### Open an Oracle Client Tool

1. From the Windows **Start** menu, select an Oracle client tool such as **SQL Worksheet** or **SQL Plus** to access the Oracle server. These instructions assume that you are using **SQL Worksheet**.
2. In the **Oracle Enterprise Manager Login** dialog box, select "Launch DBA Studio standalone".

Click **OK**.

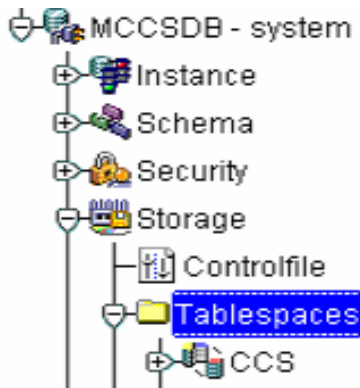


3. The **Oracle DBA Standalone** application opens. Select the service in which you want to create a new tablespace for use with CCS. After selecting the service, login using the service username and password.



### Create a Tablespace

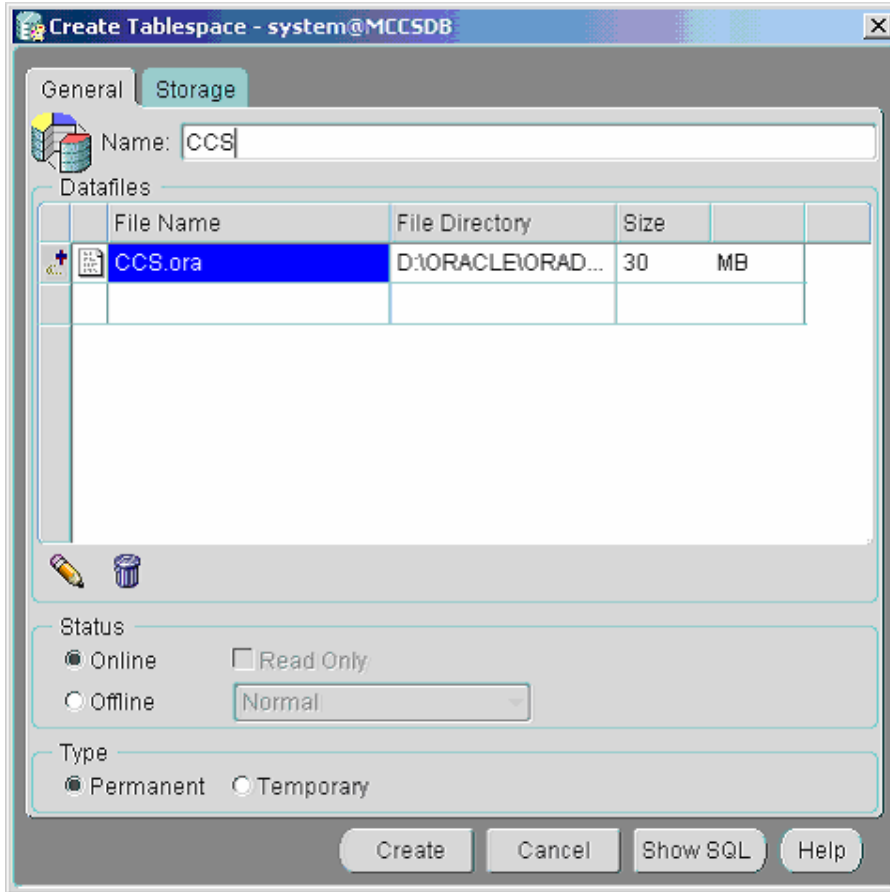
1. Expand the **server name**, expand **Storage**, then expand **Tablespaces**.



2. Right-click **Tablespaces** and select **Create...**
3. Enter the **Name** of the database that you want to create, for example "CCS" and change the size of the database.

Database Sizing Guidelines:

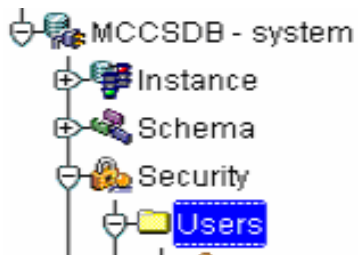
- Change the database size to 30 MB for general testing purposes
  - Change the database size to 100 MB for load testing
  - For production settings, see Calculate Database Size
4. Click **Create** when finished.



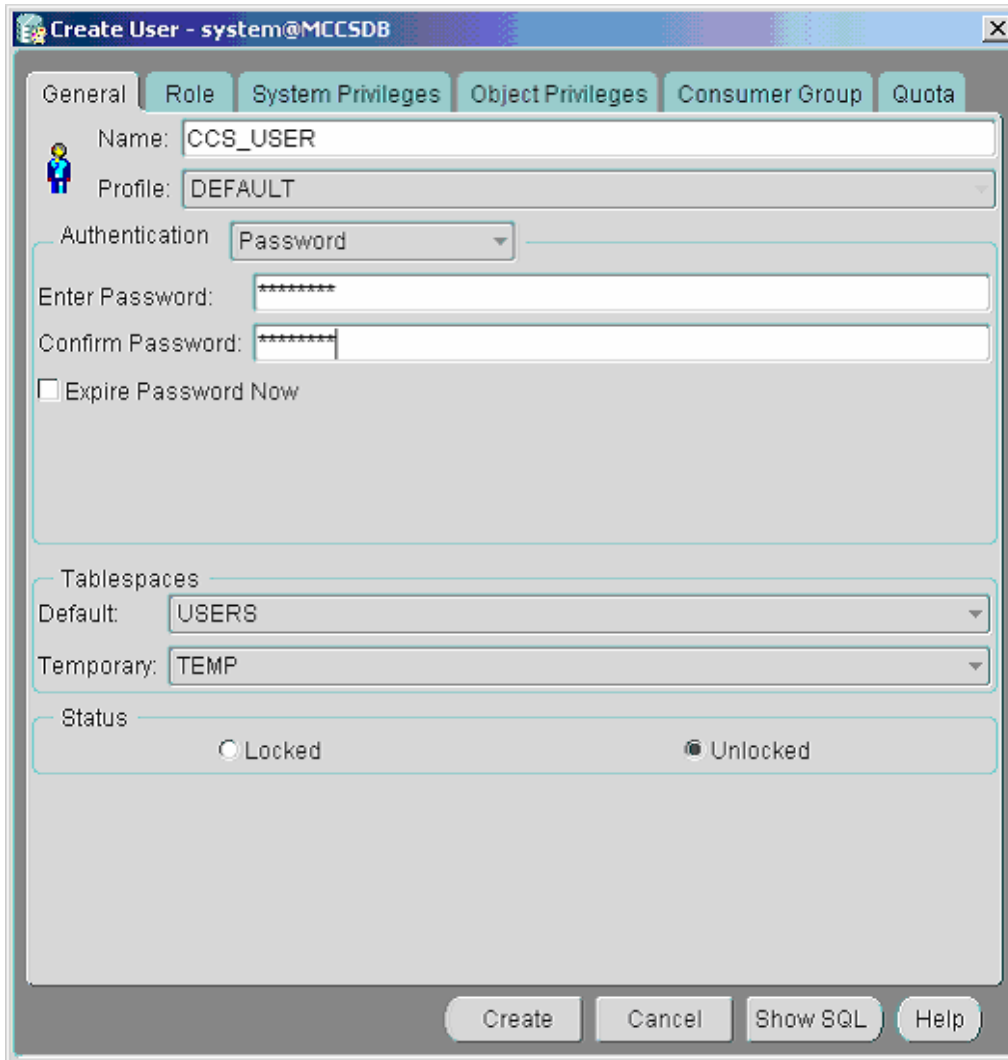
5. A dialog box appears confirming that you have created the tablespace.

### Create a User

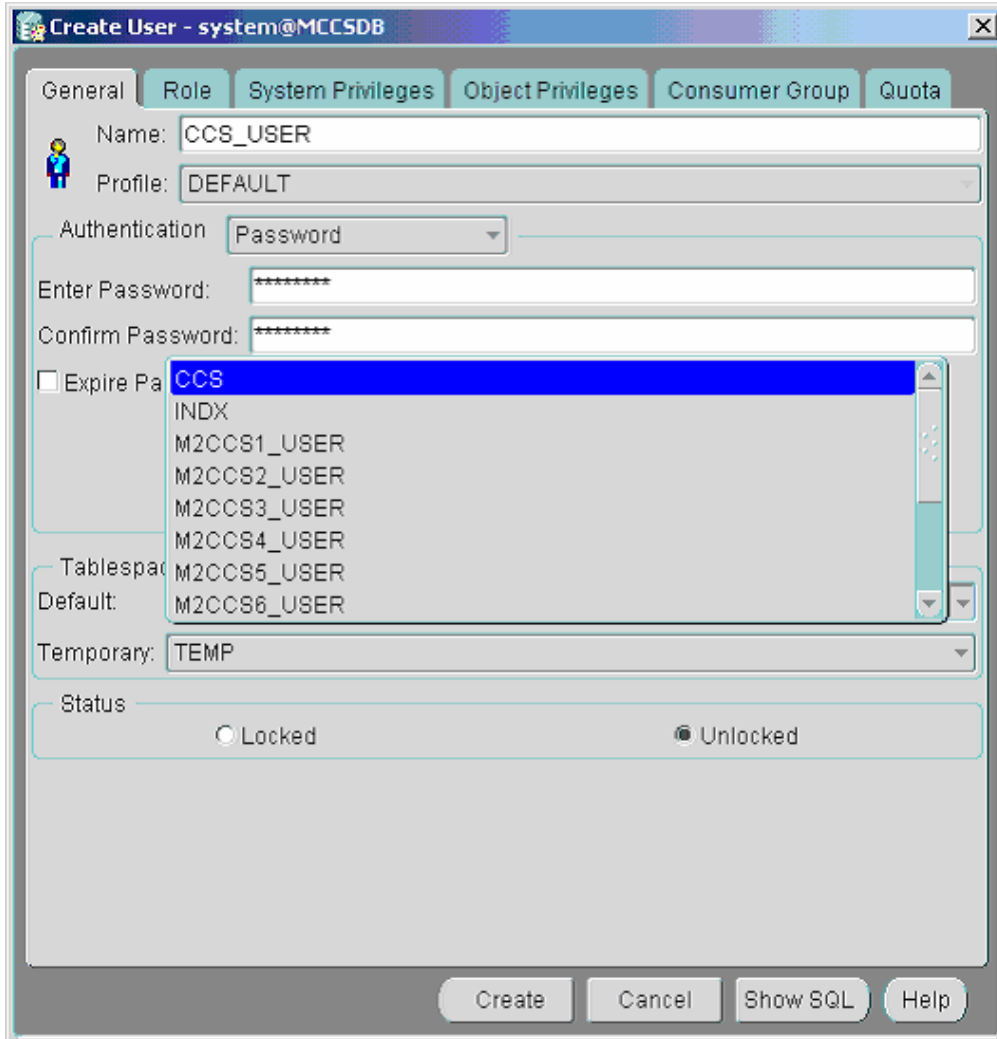
1. Expand the **server name**, then expand **Security**, then expand **Users**.



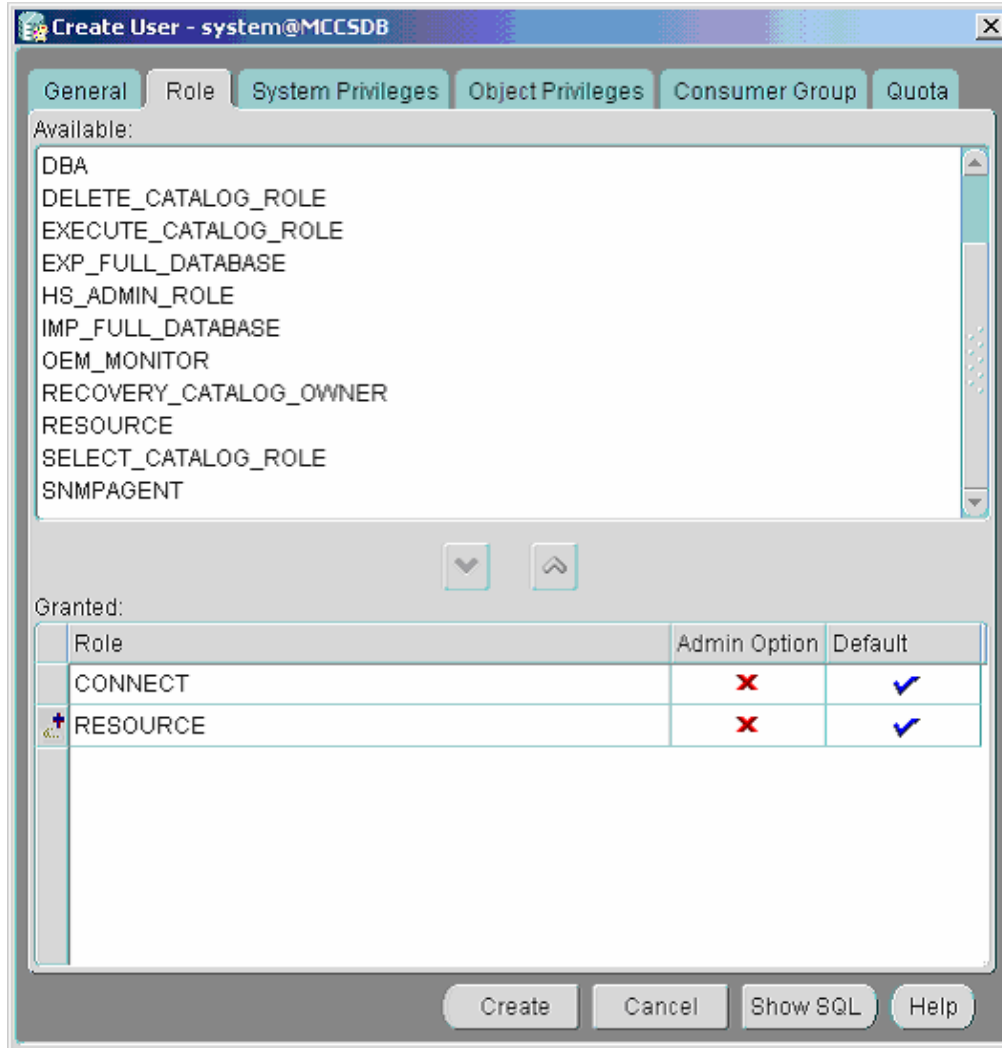
2. Right-click **Users** and select **Create..**
3. Enter a **Name** for the database user and a **Password** (enter a confirmation password as well).



4. Under **Tablespaces** click **Default** to display the list of tablespaces. Select the tablespace that you previously created (for example CCS).



5. Click the **Role** tab. Select **Resource** from the top frame of the tab, then click the down arrow key to add **Resource** to the list of granted roles. Click **Create** when finished.



6. A dialog box appears confirming that you have created the user.

### Install Native Oracle JDBC Driver

To connect to the database, copy the **Oracle JDBC-Thin Driver v8.1.7** (classes12.zip) to the <CCS install dir>\servlet directory.

To locate the **Oracle JDBC-Thin Driver v8.1.7** driver (Oracle8i 8.1.7 JDBC Drivers for use with JDK 1.2.x):

1. Search your **Oracle installation CDs** for the file **classes12.zip**, or
2. Go to the **Oracle download site** (<http://technet.oracle.com/software/download.htm>). If you are not already a member of the Oracle Technology Network, click on the membership link at the top of the page to join. Membership is free.



**Note:** If you are already a member of the Oracle Technology Network, you can find the **classes12.zip** file at:

[http://otn.oracle.com/software/tech/java/sqlj\\_jdbc/htdocs/winsoft.html](http://otn.oracle.com/software/tech/java/sqlj_jdbc/htdocs/winsoft.html)

From the Oracle installation CD or the Oracle download site, copy the file **classes12.zip** to **<CCS install dir>\servlet**.

**Note:** If IIS is running then you need to restart the server before Collaboration can detect the newly installed drivers.

**Important:** Do not unzip the **classes12.zip** file.

### Calculate Database Size

Your database sizing requirements will depend on the behavior of your customer service agents. We suggest that you contact customer support for database sizing recommendations.

Please complete the following table before contacting customer support.

<b>Estimate the number of ...</b>	<b>Estimate</b>
Logins and logouts per agent per day	
Sessions per day (all agents)	
Chat messages per session	
Shared URLs per session	
Agents active each day	
Days to retain data	

### Database Sizing Example

The figures below are included as examples only. Contact customer support for sizing information specific to your database configuration.

Event	Memory Allocation
Agent login	320 bytes
Agent logout	320 bytes
Agent session	2200 bytes
Average size of a chat message	100 bytes
Average size of a shared URL	100 bytes

**Calculations**

Calculation	Total
[Number of agents] * [Number of logins and logouts per day]	logins and logouts per day
[Number of sessions per day] * [Agent session size]	session size per day
[Number of sessions per day] * [Number of chat messages per session] * [Average size of a chat message]	chat size per day
[Number of sessions per day] * [Number of shared URLs per session] * [Average size of a shared URL]	shared URL size per day

Add the per-day totals and multiply by the [Days to retain data].

Allocate additional memory for static agent data.

## MS SQL Server 2000

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To create and configure a MS SQL Server 2000 database, follow the instructions in the sections below:

1. Create a MS SQL 2000 Database
2. Assign a User to the Database

### Additional Information

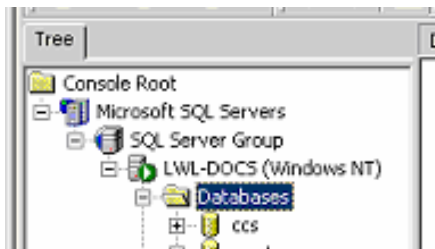
- Calculate Database Size

For descriptions of bracketed names (for example, <**DBA name**>), see Documentation Conventions.

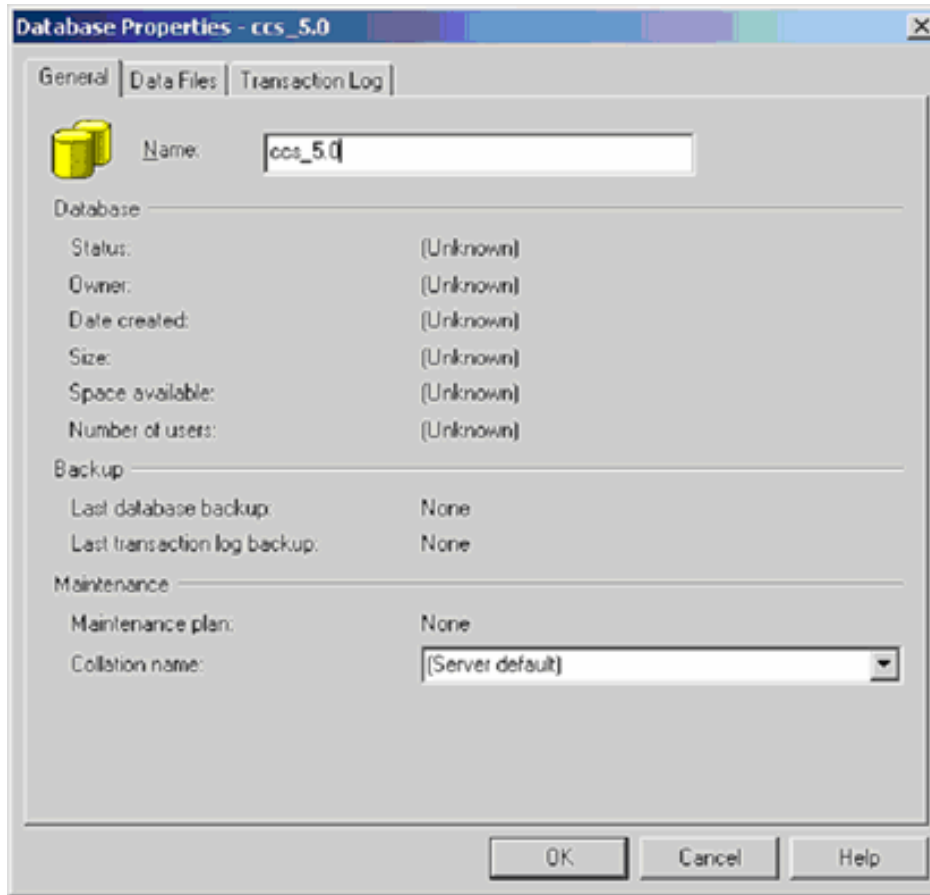
### Create a MS SQL 2000 Database

To create a new MS SQL 2000 database:

1. Open the SQL Server Enterprise Manager Application
2. Drill-down and select the Microsoft SQL Server > SQL Server Group > <Database Server> on which you want to create your CCS database. Expand the <Database Server> tree.
3. Right click on **Databases** and select **New Database...**



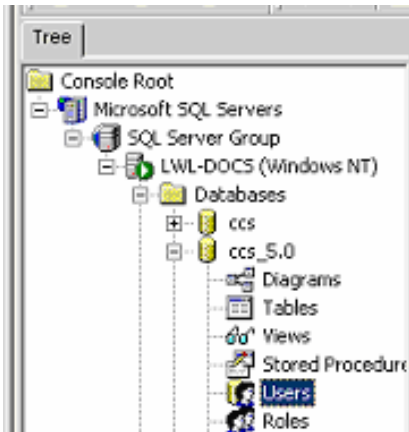
4. Enter a **Name** for the database, for example "ccs". Click **OK** to create the database.



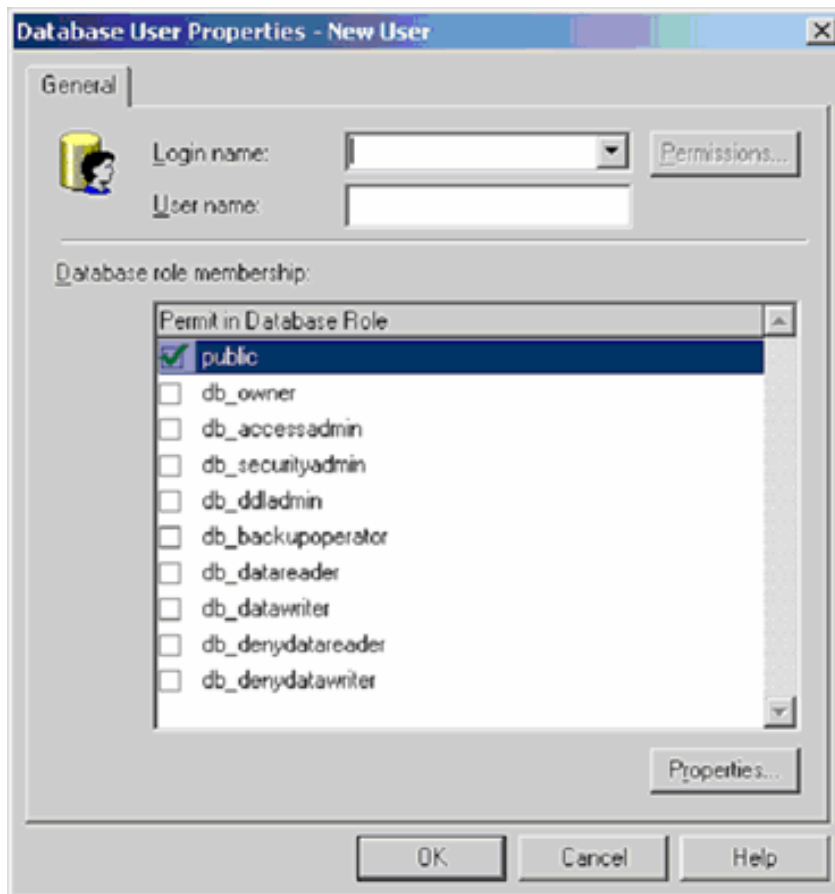
### Assign a User to the Database

To assign a user to the new database:

1. Drill-down and select the Microsoft SQL Server > SQL Server Group > <Database Server> > <CCS DB name> that you just created. Expand the <CCS DB name> tree.
2. Right click on **Users** and select **New Database User...**



3. Select one of the Login names from **Login name**. If you want to create a new user for this database select **<new>** and consult the MS SQL Server documenting on creating a new user, otherwise select one of the existing database login names.



4. Enter a **User name** for the user, or use the default name provided (normally the default user name provided is that same as the Login name that you selected).
5. Grants the following roles memberships to this user for the selected database:

- db\_owner
- db\_accessadmin
- db\_securityadmin
- db\_ddladmin
- db\_backupoperator
- db\_datareader
- db\_datawriter

6. Click **OK** to add the user to the database. You can now access this database from CCS using this users user name and password.

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Please complete the following table before contacting customer support.

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Logins and logouts per agent per day	
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Chat messages per session	
Shared URLs per session	
Agents active each day	
Days to retain data	

### Database Sizing Example

The figures below are included as examples only. Contact customer support for sizing information specific to your database configuration.

Event	Memory Allocation
Agent login	320 bytes
Agent logout	320 bytes
Agent session	2200 bytes
Average size of a chat message	100 bytes
Average size of a shared URL	100 bytes

### Calculations

Calculation	Total
[Number of agents] * [Number of logins and logouts per day]	logins and logouts per day
[Number of sessions per day] * [Agent session size]	session size per day
[Number of sessions per day] * [Number of chat messages per session] * [Average size of a chat message]	chat size per day
[Number of sessions per day] * [Number of shared URLs per session] * [Average size of a shared URL]	shared URL size per day

Add the per-day totals and multiply by the [Days to retain data].

Allocate additional memory for static agent data.

## Starting IIS and Collaboration Server

---

### Disable the SMTP Publishing Service

By default, the following Windows 2000 services begin automatically on startup:

- IIS Admin
- World Wide Web Publishing
- Simple Mail Transport Protocol (SMTP)

Collaboration Server requires only the **World Wide Web Publishing** and **IIS Admin** services. If you do not need IIS to provide **SMTP** service, disable the SMTP service or set the service to **Manual** on startup.

1. On the Windows Desktop, right click on **My Computer** and select **Manage** from the menu.
2. In the **Microsoft Management Console** window titled **Computer Management**, expand **Services and Applications** and click on **Services**.
3. In the right pane, right click on the **Simple Mail Transfer Protocol (SMTP)** service and select Properties.
4. In the **Simple Mail Transport Protocol (SMTP) Properties** dialog box, click on the down arrow next to the **Startup type** field and select **Disabled**. Click **OK**.
5. In the **Management Console**, right click on **Simple Mail Transfer Protocol (SMTP)** and select **Stop** from the menu (it may already be stopped).

### Start the IIS Admin Service

In the **Management Console**, verify that the **IIS Admin** and **World Wide Web Publishing** services have started.

- If both services are **started**, close the Management Console.
- If one or both services are **stopped**, right click on the **World Wide Web Publishing** service and select **Start** from the menu. This starts both services. Close the Management Console.

**Note:** If the **World Wide Web Publishing** service is set to **Automatic** on startup, both Collaboration Server and IIS will start automatically even if one or both are set to **Manual**.



---

## Logging in to Collaboration Administration for the First Time

---

The first time that you log in to CCS is unique. Instead of logging in and being presented with the standard CCS Administration desktop, you are instead presented with the database connection wizard. You must configure the database connection before you can continue configuring CCS.

To login and configure the database:

1. Log in as the Super Administrator
2. Complete the Database Connection Wizard
3. Verify the CCS Install

### Log in as the Super Administrator

To log in to Collaboration as the Super Administrator:

1. Open a Web browser and enter the URL **http://<CCS server>/admin**.
2. In the **Login Name** field, enter **admin**.
3. In the **Password** field, enter **Password**. The password is case sensitive.
4. Click the **Log in** button. The Database Connection Wizard appears. The normal Administration desktop appears after you have configured the database connection.

**Note:** Collaboration Server compiles each page the first time it is used. As a result, Administration runs slowly on a newly installed system. Performance returns to normal on the second and subsequent uses.

### Complete the Database Connection Wizard

To complete the Database Connection Wizard:

1. Select the database type: Oracle 8i, or Microsoft SQL Server 2000.
2. Select the JDBC driver that you are using. If you are using Oracle 8i, then you should have already installed the Oracle JDBC drivers. If you have not installed the Oracle JDBC driver then you must stop IIS, install the drivers, and restart

IIS. The Microsoft SQL Server 2000 drivers are installed automatically by CCS.

Oracle 8i	Microsoft SQL Server 2000
Oracle Thin JDBC Driver V8.1.7	Inet Microsoft SQL Server Driver Sprinta2000 v4.18

3. Fill in the Database Connection properties:

Property	Description	
	Oracle 8i	MS SQL 2000
Host	The hostname for the server on which the database server software is running. For example <i>database.mycompany.com</i> .	
Port	Port 1521 by default	Port 1433 by default
System ID (SID) <i>Oracle Only</i>	The System ID (database name) of the database that you use for CCS.	N/A to MS SQL
Database Name <i>MS Only</i>	N/A to Oracle	The database name of the database that you use for CCS
Database Login Name	The Username of the user with access rights to the database.	
Password	Your database password.	
Verify Password	Your database password again for verifivaiton.	
Description	A brief description of this connection. This field is optional.	

4. Click **Next** to verify the Database Connection Wizard. A confirmation screen is displayed verifying your settings. If there were no errors then "The current database connection settings have been verified." is displayed. If there are errors, then they are displayed on the screen along with possible solutions. Follow the directions on the screen to fix the problem. If there are no problems click **Apply**.

**Note:** It may take a few minutes for the next screen to appear. Do no click Apply again.

5. If this is the first time that you have connected to the database from CCS, then the Database Connection Wizard attempts to create the CCS schema in the database. Click **Finish** to allow the Database Connection Wizard to create the CCS schema in the database. The Database Utilities applet creates the schema:
  - a. If you have not installed the Database Utilities Applet before you must click **Yes** in the Security Warning dialog box to allow the Database Utilities Applet to be installed on your system.
  - b. The Database Utilities Applet attempts to create the database scheme. Any errors that are encountered are shown on the screen. If you encounter any errors you must fix them according to the instructions on the screen and then RESTART IIS so that the Database Utilities Applet can re-run.

**Note:** After setting up the database connection, you can use Collaboration without shutting down and restarting the server. If you make changes to the database connection after installation, however, you must restart the server before the changes will take effect.

## Verify the CCS Install

To verify the CCS install:

1. Select Collaboration Server > Agents > Show.
2. CCS is correctly installed and functioning if:
  - A list of agents is displayed (if the database was previously populated with agents), or
  - The screen says "There are no agents currently defined. Click Agents:Create to create an agent."
3. CCS is NOT correctly installed if:
  - An error occurs (denoted by a large exclamation point within a red triangle). The most common error is using the incorrect JDBC driver, OR incorrect database settings. Re-run the Database Connection Wizard from **Collaboration Server > Server Setp > Database > Setup Wizard**.

## Changing Default Admin Password

---

### Super Administrator Login Name

The Super Administration password is automatically set up in your default installation of Collaboration Server. This default password appears in `wlserver.properties`: it is not included in the database. You can change it using **Server Setup > Show** and then clicking **view/change** (see below).

After you have configured your database setting, you should change the default Super Administration password as soon as possible.

### Change Super Administrator Password

1. Open a browser and enter `<servername>/admin`.
2. Log in to the Collaboration Administration desktop using the default administration login name and password.
3. In the **Welcome to Cisco Administration** page, select **Server Setup > Show**.
4. Click **View/Change**.
5. Enter a new login name and/or password for the super administrator.
6. Click **submit**.

### Additional Information

For more information about password administration, refer to the *Collaboration Administration Guide* (located at <http://<CCS server>/doc>) and the Administration online Help.

## **Backing Up Collaboration Server**

---

After you complete the installation, back up the <**CCS install dir**> directory tree.

You have now completed the steps to install and configure Collaboration.

## **Upgrading Previous Installations**

---

### **Upgrade Path for Collaboration Server**

CCS 3+ -> 4.0 -> CCS 5.0

CCS 4.0 -> CCS 5.0

### **Upgrade Path for the Database**

SQL7 -> SQL2000 -> CCS 5.0 Auto Upgrade

Oracle -> CCS 5.0 Auto Upgrade

Sybase (not supported)

### **Upgrade Overview**

Collaboration server can be upgraded to version 5.0 from version 4.0 or greater by using the InstallShield upgrade program.

If you are using a previous version of Collaboration Server then you must upgrade to at least version 4.0 before you can run the upgrade to version 5.0. This may require that you update the Operating System to the supported version of Microsoft Windows 2000.

**Important!** Be sure to backup the database before attempting any upgrades.

Additionally, Collaboration Server 5.0 supports SQL Server 2000 and Oracle 8.1.7 for database servers. If you are using a previous version of the database server then you must upgrade to one of the supported version for Collaboration Server version 5.0.

## Upgrading from Version 3.01 to 4.0

---

Cisco Collaboration Server running on NT/IIS **can only be upgraded to Release 4.0 from either Release 3.01 or Release 3.02 on Windows NT using IIS**. If you are running CCS Release 3.0 then you must upgrade to Release 3.01 before installing this upgrade. The upgrade from Release 3.0 to 3.01 is available from the Cisco web site Cisco Collaboration Software page (login required).

If you are using JWS as your web server then you must do a new install of CCS 4.0. There is no upgrade path to version 4.0 for servers running on JWS.

### Installation Instructions

These instructions assume that you already have a functioning version of CCS Release 3.01 or Release 3.02 up and running, that the database connectivity has been setup, and that you have logged in and verified everything is working properly. **Do Not Attempt To Upgrade to Release 4.0 Until You Have Received Your New FlexLM License!** CCS 4.0 will not function correctly unless you have obtained a new FlexLM License. You should have obtained your new license before you were able to download the upgrade if you have not obtained your FlexLM license, see the section on obtaining your FlexLM license.

#### To install the CCS 4.0 update on Windows NT with IIS:

1. Double-click the patch, **upgrade-30x-40-ntiis.exe**. The CCS 4.0 Upgrade automatically unzips and Installshield launches.
2. After the Welcome screen appears click Next. The License Agreement screen appears.
3. Click **Yes** to accept the license agreement. The Install Destination screen appears.
4. The patch should be installed to the same location that your current installation of CCS is installed. The default installation folder is **C:\Webline**. If you installed CCS in a different location than the default folder, then click the browse button to specify the correct folder to install the 4.0 upgrade.
5. Click Next after you have selected the destination folder. The Confirmation screen appears.
6. Click Next to start the upgrade installation. If you made any mistakes, click Back to make any necessary changes.
7. If you are upgrading from release 3.01:

- i. a dialog box appears asking if you want to completely remove ServletExec ISAPI 2.2 and all of its components. Click yes to remove ServletExec ISAPI 2.2
  - ii. The Installshield Uninstaller removes ServletExec 2.2. Click OK.
  - iii. The ServletExec 3.0 ISAPI install welcome screen appears. Click next.
  - iv. The ServletExec 3.0 ISAPI License Agreement appears. Click yes to accept the license agreement.
  - v. A ServletExec 3.0 ISAPI readme file appears. Click next.
  - vi. The Installation Destination screen appears. The default installation folder for ServletExec 3.0 ISAPI is **C:\Program Files\New Atlanta\ServletExec ISAPI**. Click Next to install into the default location (recommended) or click browse to choose a different location to install ServletExec 3.0 ISAPI.
  - vii. A dialog box appears warning you to stop IISADMIN. Click OK, the Weblines upgrade program has already stopped it.
  - viii. ServletExec 3.0 ISAPI installation completes. Click Finish.
8. A command window opens and installs the CCS upgrade files. Wait a few minutes as the patch updates your CCS 3.0x installation to CCS 4.0.
  9. A command window opens notifying you that the World Wide Web Publishing Service is starting.
  10. Click the **Close** button on the install status screen.
  11. A "Setup Complete" dialog box appears. Click Finish. The Installshield application closes.
  12. The zip extraction utility remains on the screen for a few moments as temporary files are deleted. Let the zip extraction utility close by itself.
  13. You must now upgrade the database. The database upgrade script is called **alterTables301to4.sql** (use this upgrade script regardless if you are upgrading from Release 3.01 or Release 3.02). Use your database software to execute this script on the CCS database. Depending on your database, the script is located in one of the following directories:
    14. MS SQL - **<CCS Installation Directory>\sql\ms\_sql\_server\**
    15. Oracle - **<CCS Installation Directory>\sql\oracle\**
    16. Sybase - **<CCS Installation Directory>\sql\sybase\system11**
- You must now obtain and install your new flexLM license. Follow the instructions below to install your FlexLM license:



**If you already have obtained your FlexLM License:**

1. You should have received your license file before installing the upgrade. Find your license file with the extension .lic.
2. Copy the .lic file to the \license directory in your **<CCS Root Directory>** (by default c:\weblines). Note: Do not restrict write access to the \license directory. Collaboration writes a temporary file to that directory while reading the license file.
3. Restart IIS.
4. CCS 4.0 is now operating normally using your new FlexLM license.

**If you have not yet obtained your FlexLM License:**

1. Locate the Product Authorization Key (software serial number) on the back of your existing Collaboration CD.
2. In a Web browser, open the Cisco Software Registration Web page. Registered Cisco Connection Online users: <http://www.cisco.com/cgi-bin/Software/FormManager/formgenerator.pl> Non-registered users: <http://www.cisco.com/pcgi-bin/Software/FormManager/formgenerator.pl>
3. On the Software Registration page, select **Cisco Collaboration Server** from the list of software forms.
4. Follow the instructions on the Collaboration Server registration page. When you have completed the form and entered your Product Authorization Key, a license file with the extension Lic will be sent to your email address.
5. Copy the ccs license.lic file to the \license directory in your **<CCS Root Directory>** (by default c:\weblines). Note: Do not restrict write access to the \license directory. Collaboration writes a temporary file to that directory while reading the license file.
6. Restart IIS.
7. CCS 4.0 is now operating normally using your new FlexLM license.

## **Upgrading from Version 4.0+ to 5.0**

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Use these instructions to upgrade your Collaboration Server version 4.0+ to version 5.0.

### **Installation Instructions**

These instructions assume that you already have a functioning version of CCS Release 4.0 or greater, that the database connectivity has been setup, and that you have logged in and verified everything is working properly.

Additionally, you must be running Windows 2000 Service Pack 3 and be using Microsoft SQL Server 2000 or Oracle 8/8i.

**Do Not Attempt To Upgrade to Release 5.0 Until You Have Received Your New FlexLM License!** CCS 5.0 will not function correctly unless you have obtained a new FlexLM License. You should have obtained your new license before you were able to download the upgrade.

#### **To install the CCS 5.0 update on Windows 2000 with IIS:**

1. Stop IIS by opening a command prompt and typing *net stop iisadmin*. Type **Y** when prompted to stop additional services.
2. Double-click the patch, **upgrade-40-50-w2kiis.exe**. The CCS 5.0 Upgrade automatically unzips and Installshield launches.
3. After the Welcome screen appears click Next. The License Agreement screen appears.
4. Click **Yes** to accept the license agreement. The Install Destination screen appears.
5. The patch should be installed to the same location that your current installation of CCS is installed. The default installation folder is **C:\Cisco\_CS**. If you installed CCS in a different location than the default folder, then click the browse button to specify the correct folder to install the 5.0 upgrade.
6. A warning dialog box appears asking you to make sure the IIS Admin Service is stopped. Click **OK**.
7. A dialog box appears asking if you want to delete the old Servlet Exec install directory. Click **Yes**. A new version of Servlet Exec will be installed.
8. A dialog box appears telling you Servlet Exec has been uninstalled. Click **OK**.

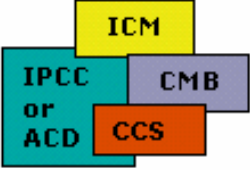
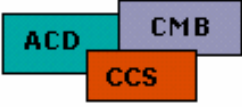

9. The Servlet Exec 4.1.1 Setup program launches. Click **Next**.
10. The Servlet Exec License Agreement appears. Click **Yes** to accept the license agreement.
11. The Servlet Exec information screen appears. Click **Next**.
12. The Servlet Exec installation destination screen appears. Accept the default install location and click **Next**.
13. A warning dialog box appears asking you to make sure the IIS Admin Service is stopped. Click **OK**.
14. The Servlet Exec Install Shield Wizard completion screen appears. Click **Finish**.
15. A command window opens and installs the CCS upgrade files. Wait a few minutes as the patch updates your CCS 4.xx installation to CCS 5.0.
16. A command window opens notifying you that the World Wide Web Publishing Service is starting.
17. A "Setup Complete" dialog box appears. Click Finish. The Installshield application closes.
18. The zip extraction utility remains on the screen for a few moments as temporary files are deleted. Let the zip extraction utility close by itself.
19. You must install your new flexLM license. You should have received your license file before installing the upgrade. Find your license file with the extension .lic.
20. Copy the .lic file to the \license directory in your **<CCS Root Directory>** (by default c:\Cisco\_CS). Note: Do not restrict write access to the \license directory. Collaboration writes a temporary file to that directory while reading the license file.
21. Restart IIS. From a command prompt type *net start w3svc*.
22. Using Internet Explorer 5.5+ go to <http://<CCS Server>/admin>. The Collaboration Server Administration desktop appears.
23. Login to the admin workstation using the username "admin" and password "Password". The fields are case sensitive.
24. A wizard appears to upgrade the database. Follow the instruction on the screen then click **Finish**.
25. A Security Warning window may appear. Click **Yes** to allow the database upgrade wizard to continue.
26. The database upgrade will take place and a status is displayed in the browser. After the upgrade completes a screen appears stating that you have upgraded the database.

27. Go to the section "Configuring Collaboration Server" for further configuration instructions.

## **Configuring Collaboration Server**

## About Collaboration Server configuration types

The Collaboration Server can exist in three different configurations:

Configuration	Description	Look for this icon to find information specific to this configuration:
ICM-integrated configuration	The Collaboration server is installed with the Cisco Media Blender, the ICM, and either the IPCC or an ACD. This configuration takes advantage of the queuing and routing capabilities of ICM software. Modules in this configuration include the Collaboration Server, the ICM, the Cisco IP Contact Center software (IPCC)	<p><b>ICM-integrated configuration</b></p> 
Basic ACD routing configuration (or the basic Media Blender configuration)	The Collaboration Server is installed along side the Cisco Media Blender. The Media Blender serves as an event bus, exchanging messages between the Collaboration Server and an ACD. In this configuration, the Collaboration Server relies on the ACD to make routing decisions for Web requests.	<p><b>The basic Media Blender configuration</b></p> 
Standalone Collaboration Server configuration	The Collaboration Server can be installed by itself, and can rely on Collaboration Server routing to ensure web requests are routed to Collaboration agents.	<p><b>CCS standalone configuration</b></p> 

**See Also:**

For information on	See
Details on prerequisites and setup tasks for the ICM-integrated Collaboration Server configuration	ICM and Collaboration Server Configuration
Collaboration Server configuration in a basic ACD routing configuration	Collaboration Server and Media Blender Configuration: Basic ACD routing

Collaboration Server configuration in standalone mode.	Standalone Collaboration Server Configuration
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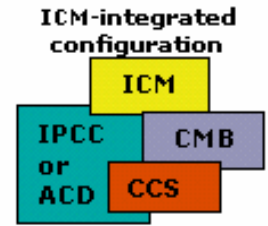


## **Configuring For ICM Integration**

## ICM and Collaboration Server Configuration

Configuring the Collaboration Server for an ICM-integrated installation involves setup on several machines and requires you to understand configuration concepts for each of these machines.

This section provides an overview of configuration topics you should understand before you begin your Collaboration Server configuration. It also outlines the steps you should follow when setting up your Collaboration Server in an ICM-integrated environment. It discusses these topics:



- About the ICM-integrated CCS configuration
- Understanding ICM Setup
- Collaboration Server Setup Tasks

**See also:**

For information on	See
The potential components in a Cisco Customer Contact Software Platform installation	Cisco Customer Contact Software Platform Implementation Map

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## About ICM setup

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This section provides an overview of the configuration tasks that must be performed on the ICM central controller before you should begin configuration of the Collaboration Server.

ICM configuration tasks required include:

- Setting up Media Routing Domains for Appropriate Media Classes
- Media Classes
- Establishing a Media Routing Peripheral Gateway
- Establishing Peripherals
- Setting up ECC (Expanded Call Context) Variables
- Define the CCS Application Instance name in the ICM database (from ICM Administration Workstation)
- Configure the ICM side of the Administration Connection using CMS Control (from ICM Admin Workstation)

### Setting up Media Routing Domains for Appropriate Media Classes

The ICM uses Media Routing Domains (MRDs) to organize how requests for different media are routed. A MRD is a collection of skill groups and services that are associated with a common communication medium. ICM software uses a MRD to route a task to an agent who is associated with a skill group and a particular medium. Before you can configure your Collaboration Server to use the ICM as a routing engine, MRDs must be established on the ICM. These MRDs have unique IDs across the enterprise. Then, on the Collaboration Server, you must enable those ICM Media Routing Domains that you need to use.

### Media Classes

A Media Class describes the type of requests you want to set up for routing on the ICM. On the Collaboration Server, you can establish routing for any or all of these Media Classes:

- Multi-session chat

- Single-session chat
- Blended Collaboration (with IPCC)
- Voice (used for Web Callback and delayed callback, and Blended Collaboration using legacy ACDs).

(Another Media Class supported in the Cisco Contact Center Software Platform is eMail.)

## **Establishing a Media Routing Peripheral Gateway (MR-PG).**

An ICM Peripheral Gateway is capable of routing media requests of different kinds (for example, e-mail, web callback, etc.). MR-PGs support multiple media routing clients by placing multiple, independent Peripheral Interface Managers (PIMs) on a PG platform. A single MR-PIM is required for each application server to be connected to the ICM system. For example, if you were connecting a CeM server and a CCS server, you would need two MR-PIMs on the PG.

## **Establishing Peripherals**

ICM peripherals are ACDs or IPCCs set up to perform agent and skill group control and reporting. Peripherals are connected to the Collaboration Server via the Agent Reporting and Management interface (ARM) connection. Using this connection, a peripheral tracks an agent's activity across all the media to which he or she is logged in. It reports this activity back to the ICM Central Controller, which can use the information when making routing decisions.

## **Setting Up ECC (Expanded Call Context) Variables**

If you intend to use web or delayed callback, you must set up the following variables on the ICM:

- `user.cisco.cmb`
- `user.cisco.cmb.callclass`

## **Define the CCS Application Instance Name in the ICM database (from ICM Administration Workstation)**

To define the CCS Application Instance Name in the ICM database:

1. From the ICM Administration Workstation, Open the ICM Configuration Manager.
2. Select **Configure ICM > Application > Application Instance List**. The Application Instance List window appears.
3. In the Application Instance List window click **Retrieve** then click **Add**.
4. In the Attributes tab enter the following:

Field	Description
Name	Enter a name for the Application. This name must mach the value that is entered into the Collaboration Server application instance name. It is suggested that you use a name that is short but descriptive, such as "CCS_Conn1".
Application Key	Enter an Application Key for the Collaboration Server. This value must also match the application key entered in Collaboration Server. For example "CCS_Conn1_App_Ke1".
Application Type	Select the type of application from the pull-down menu. For Collaboration Server you select "Cisco Collaboration Server".
Permission Level	Enter the permission level that the application has to access the ICM database. This should be set to "Full Read/Write".
Description	Enter an optional description of this application, for example "Routing Agent CCS 1".

### Configure the ICM side of the Administration Connection using CMS Control (from ICM Admin Workstation)

CMS Control allows you to define the administration connection from the ICM to Collaboration Server.

To configure this connection from the ICM:

1. From the ICM Admin Workstation folder double-click **CMS Control** to start the CMS Control Console.  
**Note: CMS Control** may not be installed by default. Run ICM setup to install the CMS Control utility.

2. Select the Applications tab.
3. Click **Add**.
4. Enter the following information:

Field	Description
ICM Distributor AW link	Enter the service name, for example " <i>ICM_Service_1</i> ".
ICM Distributor AW RMI registry port	Enter the port number. By default the port is " <i>1099</i> ".
Application link	Enter the remote service name, for example " <i>CCS_Client_1</i> ".
Application RMI registry port	Enter the port number. The default is " <i>1099</i> ".
Application Host Name	Enter the name of the remote CCS Server.

5. Click **OK** in the dialog box and click **Apply** in the control console. A dialog box appears stating that the CMS Jserv process will restart. Click OK.

**See Also:**

For information on	See
The components in a Cisco Customer Contact Software Platform installation	Cisco Customer Contact Software Platform Implementation Map
Setting up ICM routing for web requests	<i>The Collaboration Server Administration Guide</i>
Creating ICM routing scripts	<i>The ICM Script Editor Guide</i> <i>The ICM Script Applications Guide</i>
Setting up VRU scripts	The ICM Configuration Tools Guide

## Setting up the CCS for ICM integration

Immediately after installing the Collaboration Server software and connecting to the database, you must complete some basic configuration tasks so that the CCS can work in an ICM-integrated mode. Specifically, you must complete these configuration procedures:

- Run the Integrate with ICM wizard to set up the Application instance and Admin Workstation Connection
- Enable ICM Media Routing Domains
- Establish Media Blender connections
- Enable ICM Peripherals
- Create ACD Queues (for legacy ACD configurations only)

**Note:** These procedures assume you have installed and configured the ICM software. In addition, these procedures assume that you have installed the Collaboration Server software and enabled the connection to the database.

### See Also:

For information on	See
Required ICM setup	About ICM Setup
Setting up your database connection	<i>The Collaboration Server Installation Guide</i>

### Run the Integrate with ICM wizard

The next step in configuring your Collaboration Server for ICM integration is to run the Integrate with ICM wizard from the Collaboration Server Administration Desktop (<http://<CCS Server>/admin>). This option is available under the Server Setup administration node.

The Integrate with ICM wizard loads the integrated version of the Administration Desktop. Each screen of the wizard also provides links to lead you through the rest of the required CCS setup discussed in this section.

When you select these links, the Collaboration Server launches an external window, allowing you to complete the required configuration. After you complete each step, close the external window and complete the steps outlined in the wizard.

**To run the Integrate with ICM wizard:**

1. Select Server Setup > Integrate with ICM.
2. Click **Integrate with ICM**. The system displays a warning, asking whether you are sure you want to integrate.

**Note:** You cannot return to standalone mode once you begin the integration process by clicking **OK**.

3. Click **OK**. You are prompted to establish two settings:
  - the Application Instance on Collaboration Server
  - the Collaboration Server-side of the Administration Workstation (AW) Connection

**To define the Collaboration Server Application Instance:**

1. On the Integrate with ICM screen, click the link for the **Application Instance**. A new window opens, allowing you to define the Application Instance.
2. Enter the following information into the form:

Field	Description
Collaboration Server application instance name	Enter the same name as entered in ICM. For example "CollaborationServer1".
Description	Enter an optional description of this application, for example "Routing Agent CCS 1".
New application key	Enter an Application Key for the Collaboration Server. This value must also match the application key entered in ICM. For example "CCS_App_Key1".
Verify application key	Re-enter the key.
Super	If you want to change the login name of the super administrator you



administrator login name	can change it here. If you do not wish to change it then do not edit this field.
New password	If you wish to change the super administrator password then enter a new password here. Otherwise leave the field blank.
verify password	If you changed the super administrator password, then re-enter the password here. Otherwise leave it blank.

3. Click **submit**. A confirmation dialog box appears. Click **OK** and close the Application Instance window to return to the Integrate with ICM screen.

**To establish the Collaboration Server-side of the Admin Workstation Connection:**

1. On the Integrate with ICM screen, click **ICM Administration Connection**. A new window appears, Collaboration Server : Server setup : Connections : Create.
2. Enter the following information into the new window:

Field	Description
ICM Administration connection name	Enter a name for this connection. For example, "AWconn1".
Description	Enter an optional description for this connection. For example "ICM AW Connection 1".
Disable automatic connect to ICM Distributor AW	If checked, then Collaboration Server will not attempt to connect to the ICM Administration Workstation. Instead, Collaboration Server waits for the connection to be initiated by the ICM. If checked you will also be unable to enter information into the next three fields.  This feature is useful if the ICM is behind a firewall, since Collaboration Server cannot initiate a connection through a firewall unless the RMI registry port has been opened in the firewall.
ICM Distributor AW host name **	If Collaboration Server is initiating the connection to the ICM Distributor AW, enter the host name, for example "icm.example.com".
ICM Distributor AW link **	Enter the AW Link as specified in CMS Control on the ICM, for example, "ICM_Service_1". Note: This is currently ICM Service Name.
ICM Distributor	Enter the port on which the connection should be initiated. Port 1099 is

AW RMI ** registry port	the default port.
Application (Collaboration Server) link	Enter the Collaboration Server link as specified in CMS COnTrol on the ICM, for example, " <i>CCS_Client_1</i> ". Note: This is currently Application Service Name.
Application (Collaboration Server) RMI registry port	Enter the port on which Collaboration Server should accept incoming connection initiation requests. By default this is 1099.
Application (Collaboration Server) RMI connection port	Enter the port over which the AW connection should communicate. If left blank then communications occur over the registry port (1099 by default). If you enter a port number here then connection initiations occur over the registry port and actual communications occur over this port. Be sure that the port is opened on the firewall.
<p>* AW, Media Blender, and DCA connections use the Sun Microsystems Remote Method Invocation (RMI).</p> <p>** If the Disable automatic connect box is unchecked you cannot enter a value in this field, since the ICM is initiating the connection.</p>	

3. Click **submit** and close the connection window to return to the Integrate with ICM wizard.
4. Click **Apply** in the Integrate with ICM screen. A Notice appears informing you to close the browser and restart Collaboration Server. Close the browser window.

**To restart Collaboration Server:**

1. From Windows, click **Start > Run**. Enter CMD into the dialog box and click **OK**. A Command Prompt window opens.
2. In the Command Prompt window type: **net stop iisadmin** and press Enter. Type **Y** when prompted to stop additional services.
3. After the World Wide Web Publishing service has stopped, type: **net start w3svc**. The World Wide Web Publishing service starts.
4. **Note:** You may receive an error stating the World Wide Web publishing service was unable to start. Ignore this error and wait 5 minutes. Collaboration Server takes longer to start when integrated with ICM, and windows falsely reports that IIS fails to start.
5. Open Internet Explorer and go to <http://<CCS Server>/admin>. Login with the super administrator username and password. The Administration Desktop automatically brings you to the rest of the Integrate with ICM wizard. Follow the instructions below.

**Note:** The pages will continue to load slowly during this portion of setup.

## Enable ICM Media Routing Domains

The Collaboration Server Administration Desktop lets you select the ICM Media Routing Domains that should be used to route requests for the Media Classes you intend to use. The Collaboration Administration Desktop displays four Media Classes you can set up through Collaboration:

- Blended collaboration-IPCC
- Multi-session chat
- Single-session chat
- Voice (Blended Collaboration-Legacy ACD and Callback)

For each of these Media Classes, you can choose a Media Routing Domain that has been established on the ICM.

You use the Collaboration Server Administration Desktop to enable, view, or change Media Routing Domains for your Media Classes.

### To enable ICM Media Routing Domains:

1. Click the Media Routing Domains link on the Integrate with ICM screen. An external window opens, allowing you to choose Media Routing Domains.
2. Select those Media Routing Domains you want to enable for your Media Classes.
3. Click **submit** and close the external window to return to the Integrate with ICM wizard.

## Establish Media Blender connections

On the Collaboration Server, you must set up connections to each Media Blender in your configuration. Because Media Blender serves several purposes in this configuration, a CCS connection to it establishes these services:

- A Blender API (BAPI) service. This service ensures that Blended Collaboration and Web Callback requests are forwarded to the Media Blender.
- Agent Reporting and Management (ARM) service. This service ensures communication between the Collaboration Server and the ACD or IPCC

peripherals used to do agent reporting and tracking.

- Media Routing Interface (MRI) service--This service ensures communication between the Collaboration Server and the Media Routing Peripheral Gateway (MRPG), used when ICM routes multi-media requests to various MRDs.

Additional properties for the ARM connection are created when you enable a peripheral. Likewise, additional Media Blender properties are created if you set up an ACD queue. Also, additional MRI properties are established when you create an ICM queue.

Once these connections are set up, properties for each of these connections are stored in the property files shown in this table:

This file...	...contains these properties...
<connectionname>.properties	Common properties for the ARM, MRI and Media Blender common properties
MessageAdapter.properties	Properties for the ARM and MRI connections
BAPI.properties	Properties for the Media Blender connection

Two additional property files store information about each connection and the peripherals to which each connection is assigned:

Property file	Description
CMBconn.properties	Lists all Media Blender connections for this Collaboration Server., and their corresponding <connectionname>.properties file.
PeripheralConns.properties	Lists all Media Blender connections and the peripherals to which they are assigned.

**Note:** Media Blender connections must be set up before you can create ICM or ACD queues or enable peripherals.

Establishing Media Blender connections involves completing some tasks using the Administration Desktop, as well as copying two properties files from the Collaboration Server to the Media Blender Server.

**To establish Media Blender connections:**

1. Click the Connections link from the Integrate with ICM wizard. An external window opens, allowing you to enter the following information about your Media Blender connection:

<b>Field</b>	<b>Description</b>
Media Blender Connection Name	Enter a name for this connection. For example, "MBconn1".
Description	Enter an optional description for this connection. For example "ICM AW Connection 1".
Media Blender host name	Enter the hostname for the Media Blender
Media Blender RMI registry port *	Enter the port on which the connection should be initiated. Port 1099 is the default port.
Media Blender password	Enter a password for this connection.
Verify Media Blender password	Verify the password.
Collaboration Server RMI Connection Port	Enter the port over which the connection should communicate. If left blank then communications occurs over any port that is open on both servers. If you enter a port number here then connection initiations occur over the registry port and actual communications occur over this port. Be sure that the port is opened on the firewall.
Collaboration Server RMI registry port *	Enter the port on which the connection should be initiated. Port 1099 is the default port.
Collaboration Server password	Enter a password for this connection.
Verify Collaboration Server password	Verify the password.

Disable automatic connect to Media Blender **	If checked, then Collaboration Server will not attempt to connect to the Media Blender. Instead, Collaboration Server waits for the connection to be initiated by the Media Blender.  This feature is useful if the Media Blender is behind a firewall, since Collaboration Server cannot initiate a connection through a firewall unless the RMI registry port has been opened in the firewall.
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\* AW, Media Blender, and DCA connections use the Sun Microsystems Remote Method Invocation (RMI).

\*\* If the Disable automatic connect box is unchecked then the connection is initiated by the Media Blender.

2. Click **submit**, then close the external window.
3. You must create as many Media Blender connections as peripherals that you will enable. Click the Connections link in the Integrate with ICM screen to open a new window and create a new connection as necessary.
4. Copy the following files from the Collaboration Server to the Media Blender Server. The files must be copied to the specific Media Blender for which the connection was created:

Copy this file from the Collaboration server...	...to this path on the Media Blender server
<CCS_installdir>\servlet\properties\cmb\conn_name\<connectionname>.properties	<CMB_installdir>\servlet\properties\
<CCS_installdir>\servlet\properties\cmb\conn_name\blender\collaboration.properties	<CMB_installdir>\servlet\properties\blender

## Enable ICM Peripherals

ICM peripherals perform agent and skill group tracking and reporting. You must therefore identify all peripherals that will perform these tasks for the agents and skill groups you set up on your CCS. The Blender connection must be established before you can enable an ICM peripheral from the Collaboration server. For information on creating a Peripheral, please consult your ICM documentation.

**Note:** You need not enable ICM peripherals here if the Collaboration Server will be set up as a routing-only CCS; that is, if no agents or skills groups will be created on this Collaboration Server, you need not enable peripherals.

**Note To ICM Administrators:** When creating peripherals on the ICM use short descriptive names. The peripheral name is used in the construction of other names,

such as the enterprise name which is comprised of <peripheralName>.<lastName>\_<firstName>, truncated to 32 characters.

You use the Collaboration Administration Desktop to enable, view, change, or disable peripherals.

**To enable ICM peripherals:**

1. Click the Peripherals links from the Integrate with ICM screen. An external window opens, allowing you to enable ICM peripherals.
2. Select those peripherals that should be used by each of your Media Blender connections.
3. Click **submit**. Close the external window and return to the Integrate with ICM wizard
4. After establishing MRDs and Media Blender connections, as well as enabling peripherals, click Next on the ICM wizard screen.

**Determine Collaboration Server type (*routing* and *agent* Collaboration Servers)**

In an ICM-integrated configuration, you must have at least one server that is configured as a routing Collaboration Server. That is, at least one of your CCS machines must be connected to a Media Routing PG, which will sent route requests to the ICM central controller.

Each Collaboration server can also serve as an agent Collaboration Server. Agent servers are connected to Agent Reporting Peripheral Gateways, which track and report on agent state.

A single Collaboration server can be configured in any of these ways:

- a Routing-only CCS
- an Agent-only CCS
- a Routing server that also serves as an agent server
- Using the Integrate with ICM wizard you specify whether your Collaboration Server will be used to route requests, manage agents, or both.

**To establish Collaboration Server type:**

1. Select the type of Collaboration Server, as described below

**Note:** If you enable a peripheral during the integration then Collaboration Server is automatically set as an ARM (Agent Reporting and Management) server. It may also still be set to be a routing server.

At least one Collaboration Server in the network must be a routing server, if this is the only Collaboration Server then you must enable this one as a routing server.

Select these options....	...if this is true about your Collaboration Server:
Routing	<p>This Collaboration Server will be used to submit requests to the ICM only. Agents and skill groups will not be created on this Collaboration Server.</p> <p>If you choose this option, the Media Routing (MR) interface will be enabled on the Collaboration Server when you restart Collaboration Server.</p>
Agent Reporting and Management	<p>Agents and skill groups will be created on this Collaboration Server. However, this Collaboration Server will not be used to send Web requests to the ICM central controller.</p> <p>If you choose this option, the Agent Reporting and Management (ARM) interface will be enabled on the Collaboration Server when you restart Collaboration Server.</p>
Routing <i>and</i> Agent Reporting and Management	<p>This Collaboration Server will be used to submit requests to the ICM central controller. Agents and skill groups will also be created on this Collaboratin Server.</p> <p>If you choose both of these options, the MR interface and the ARM interface will be enabled on the Collaboration Server when you restart Collaboration Server.</p>

2. If you choose Routing, click the Queue link to create an ICM queue that will submit Web requests to the ICM central controller.
3. Click Finish to complete the Integrate with ICM wizard. You will be prompted to reboot your system.

### Creating ACD queues (legacy ACDs only)

If you are using legacy ACDs for Blended Collaboration, or Web or Delayed Callback, you must create ACD queues on the Collaboration server. ACD queues are used to communicate with Media Blender.

Note that, in this configuration, requests are still submitted to the ICM queue. However, after the ICM routes the request and returns a label to the Collaboration Server, the request resides in the ACD queue, until it is put into session with an



agent.

You must have already enabled your peripherals and defined Media Blender connections to them before you can create ACD queues.

**To create ACD queues:**

1. Select **Server Setup > Queues > Create** from the Collaboration Administration Desktop.
2. Follow the wizard to create ACD queues.
3. When finished, **submit**.

**Notr: With IPCC /Soft ACD, you do not require an ACD queue.**

**Creating an ICM Queue**

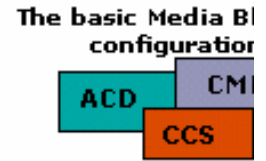
ICM queue forwards new tasks to the ICM for routing. If you don't create an ICM Queue then the ICM is used for reporting only.

**To create an ICM queue:**

1. Select **Server Setup > Queues > Create** from the Collaboration Administration Desktop.
2. Follow the wizard to create an ICM queue.
3. When finished, **submit**.

## Collaboration Server and Media Blender Configuration: Basic ACD routing

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Basic ACD routing refers to the Media Blender enabling ACD routing of Web requests. Ensuring this configuration is setup correctly requires an understanding of the configuration necessary on the Collaboration Server, the Media Blender, and the ACD used as the routing engine.

**NOTE:** The information in this section does not apply to Collaboration Server and Media Blender in an ICM-integrated environment.

To understand a basic Media Blender configuration, familiarize yourself with these topics:

- About Basic Media Blender Setup
- About ACD/Media Blender Setup
- Configuring Media Blender Connections

### See Also:

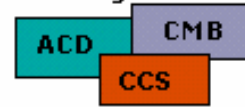
For information on	See
Media Blender Configuration	The Cisco Media Blender Administration Guide

## About Media Blender and ACD setup (basic ACD routing)

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Set up is required on both the Media Blender server and the ACD used to route Web requests. See the Media Blender documentation set for information on Media Blender, as well as ACD setup.

**The basic Media Blender configuration**



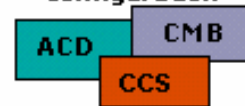
Media Blender and ACD setup in a basic ACD routing configuration consists of these tasks on the Media Blender Server:

- Identify participating media
- Establish call strategies for participating media

### Identify participating media

The `blender.properties` file on the Media Blender server allows you to identify participating media. In this file, you point to the properties file used to configure each medium in your configuration. For instance, for a basic Media Blender configuration, you will identify two properties files: one for the Collaboration Server (`collaboration.properties`) and one for the ACD medium (`<acdtype>.properties`).

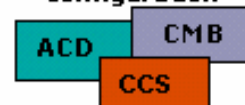
**The basic Media Blender configuration**



### Establish call strategies for participating media

Using properties files for all participating media, you establish different call strategies for different call classes. That is, you determine the callback strategy that should be used for chat requests or standard telephone calls. These properties files also let you determine which events should be shared and received by all media, as well as set up properties for international dialing.

**The basic Media Blender configuration**



**See Also**

For information	See
Configuring the Media Blender Server	<i>The Media Blender Administration Guide</i>

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## Configuring Media Blender Connections

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This section provides an overview of the setup tasks necessary for configuring the Collaboration Server with Media Blender in a basic ACD routing configuration.

Setting up the Collaboration Server for the basic Media Blender configuration consists of these procedures:

- Establish connections
- Create ACD queues

These procedures assume you have installed the Collaboration Server Software and established the connection to the database, as detailed in the *Collaboration Server Installation Guide*.

**Important:** This section does not describe setup for ACD routing in an ICM-integrated installation.

### Establishing Media Blender connections

With basic ACD routing, you establish connections to the Media Blender. (This connection is also sometimes referred to as a BAPI connection.) The Media Blender/Collaboration Server connection uses the Sun Microsystems Remote Method Invocation (RMI). RMI uses a mechanism to communicate with remote objects called stubs and skeletons. You establish common properties shared by all three of these connections using the Collaboration Administration Desktop.

Use the Collaboration Administration Desktop to establish these properties for the Media Blender connection:

- Define RMI registry ports for both the Collaboration Server and Media Blender
- Assign and verify passwords for both the Collaboration Server and Media Blender
- Identify the Media Blender host name
- Specify whether the Collaboration Server should automatically connect to Media Blender

#### To set up Media Blender connections:

1. Select Server Setup > Connections >Create.
2. Enter information for each of your Media Blender connections. You must enter a

name for the connection, the Media Blender host name, RMI registry ports for Collaboration Server and Media Blender, and passwords for both machines.

3. Click **submit**. You must copy files to the Media Blender server as described below before the connections can become active.
4. Copy the following files from the Collaboration Server to the Media Blender Server:

Copy this file from the Collaboration server...	...to this path on the Media Blender server
<CCS_installdir>\servlet\properties\cmb\conn_name\<connectionname>.properties	<CMB_installdir>\servlet\properties\
<CCS_installdir>\servlet\properties\cmb\conn_name\blender\collaboration.properties	<CMB_installdir>\servlet\properties\blender

Consult the *Media Blender Administration Guide* for details on setting up this connection on the Media Blender side.

## Creating ACD queues

On the Collaboration server, you must create ACD queues, which are used to communicate with Media Blender and queue requests to the ACD.

### To create an ACD queue:

1. Select Server Setup|Queues|Create.
2. Follow the wizard to create an ACD queue. Be sure to enter the correct Media Blender connection.
3. Click **submit**.

### See Also:

For information on	See
Setting up your database connection	<i>The Collaboration Server Installation Guide</i>

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## Configuring for Fault Tolerance

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### Limited Fault Tolerance Support

Collaboration Server supports limited fault tolerance in the following ways:

Fault Tolerance for Media Blender connections - Collaboration supports connections to two Media Blenders for fault tolerance. Only one Media Blender is connected at a time. If the connection fails to the Media Blender, the other Media Blender is automatically connected.

Fault Tolerance for ICM Administration Workstation connections - Collaboration supports connections to two ICM Administration Workstations. Only one Administration Workstation is connected at a time. If the connection fails to the Administration Workstation, then the other Administration workstation is automatically connected.

### Fault Tolerance Scenarios

*If a Media Blender connection fails:*

Existing Sessions - Stay Connected, however, when agent ends the session by hanging up the phone, the web session is not automatically ended. The agent must manually end the session using the Agent interface.

Queued Session - Sessions that are queued will be put into session when the second Media Blender connection is active and there are agents available on the Media Blender to take calls.

In-transit Sessions - Sessions that are being connected are disconnected may or may not complete.

*If an Admin Workstation connection fails:*

There should be no ill-effects with agents, callers, or sessions if an Admin Workstation connections fails and the second Admin Workstation connection activates. However, it is possible that administration functions on the Collaboration Server may have been interrupted. For example, if a Collaboration Server administrator was using a wizard to complete a task, and the connection to the ICM Admin Workstation failed before the admin completed the task, it is possible that the databases have become out of sync. In these rare situations it is advised to run the

Verify and Sync utility from the Collaboration Server Administration desktop as soon as possible.

*If the Collaboration Server fails:*

There is no fault tolerance for the Collaboration Server itself. If a Collaboration Server fails, any agents logins, current sessions, and queued sessions will cease to work when the Collaboration Server goes down. However, if you are using two Routing Collaboration Servers behind a Local Director, the local director will detect the failed Collaboration Server and send any new requests to the existing Routing Collaboration Server.

## **Fault Tolerance in Media Blender**

Media Blender also supports limited fault-tolerant connections to the ICM. Consult the Media Blender Documentation for more information.



## Configuring Fault Tolerance

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### To Enable Fault Tolerance:

Create Media Blender Connections to Two Media Blenders and follow the instructions in the *Media Blender Administration Guide* to complete the Media Blender portion of Fault Tolerance. If Collaboration Server is integrated with ICM then one connection should already exist.

If integrated with ICM, Create an additional ICM Admin Workstation Connection, then follow the instruction in the *Media Blender Administration Guide* to complete the Media Blender portion of Fault Tolerance setup.

### Create Media Blender Connections

*To establish a connection to a Media Blender:*

1. Select **Server Setup > Connections > Create** from the Administration menu.
2. Select **Media Blender** and click **Next**.
3. Complete the following fields on the screen:

Field	Description
Media Blender connection name	<p>A unique descriptive name for the connection. We recommend using the following naming convention:</p> <pre>conn_&lt;Collaboration Server host name&gt;_&lt;Media Blender hostname&gt;</pre> <p>For example, if your Collaboration server were named "collab.example.com" and your Media Blender Server were named "blender.example.com", you would enter "conn_collab_blender".</p>
Registry port on Collaboration Server	The port on this Collaboration Server server which is used to register a connection instance with a Media Blender.
Connection port on Collaboration Server	The port on which this Collaboration Server server connects to and communicates with the Media Blender.

Collaboration Server password	Password for the connection. If you enter a password in this field, then the Media Blender is required to provide this password to establish a connection to this Collaboration Server.
Verify Collaboration Server password	Password verification.
Media Blender host name	A Unique Media Blender host name.
Registry port on Media Blender	The port on the Media Blender that registers the connection with the Collaboration Server.
Media Blender password	The connection password for Media Blender.
Verify Media Blender password	Password verification.
Description	A short description. This is for the administrators benefit and is not used by the server.
Disable automatic connect to Media Blender	Selecting this checkbox disables the automatic connection feature. If you reboot the server and this checkbox is selected, then you must re-establish the connection manually.

4. Click **Submit** to save the settings.
5. Repeat the process and create a second Media Blender connection to a different Media Blender.

Once these connections are set up, properties for each of these connections are stored in the property files shown in this table:

This file....	...contains these properties...
<connectionname>.properties	Common properties for the ARM, MRI and Media Blender common properties
MessageAdapter.properties	Properties for the ARM and MRI connections
BAPI.properties	Properties for the Media Blender connection

Two additional property files store information about each connection and the peripherals to which each connection is assigned:

Property file	Description
CMBconn.properties	Lists all Media Blender connections for this Collaboration Server., and their corresponding <connectionname>.properties file.
PeripheralConns.properties	Lists all Media Blender connections and the peripherals to which they are assigned.

**Note:** Media Blender connections must be set up before you can create ICM or ACD queues or enable peripherals.

In addition, setting up the Media Blender connection involves copying two files from the Collaboration Server to the Media Blender Server.

## Create Additional ICM Admin Connection (ICM Integrated Systems)

The Collaboration Server must have a connection to an ICM Distributor Administration Workstation in order to be able to configure agents and skill groups on the ICM. The first connection is created when you use the Integrate with ICM Wizard to complete the ICM integration.

### To establish a second connection to the ICM Admin Workstation:

1. Select **Server Setup > Connections > Create** from the administration menu.
2. Select **Admin Workstation** and click **Next**.
3. This screen is used when you create a an ICM Administration connection. This screen only appears when the Collaboration Server is integrated with ICM. The fields on this screen are as follows:

Field	Description
ICM Administration connection name	A unique descriptive name for the connection.
Registry port on Collaboration	The port on this Collaboration Server server which is

Server	used to register a connection instance with the Admin Workstation. This also must be configured on the ICM using "cmscontrol.exe". The default is 1099.
Connection port on Collaboration Server	The port on which this Collaboration Server server connects to and communicates with the Admin Workstation.
Service Name on Collaboration Server	The service name give to this Collaboration Server for this connection. This also must be configured on the ICM using "cmscontrol.exe".
ICM Distributor Admin Workstation host name	The server name of the ICM Distributor Workstation.
Registry port on ICM Distributor Admin Workstation	The port on the Admin Workstation which is used to register a connection instance with this Collaboration Server. This also must be configured on the ICM using "cmscontrol.exe". The default is 1099.
Service name on ICM Distributor Admin Workstation	The service name give to the ICM Distributor Admin Workstation for this connection. This also must be configured on the ICM using "cmscontrol.exe".
Description	A short description. This is for the administrators benefit and is not used by the server.
Disable automatic connect to ICM Distributor Admin Workstation	Selecting this checkbox disables the automatic connection feature. If you reboot the server and this checkbox is selected, then you must re-establish the connection manually.

4. Click **submit** to save the settings. The second ICM connection has been created.

For more information and specific steps for creating a fault-tolerant Media Blender setup in an ICM-integrated configuration, see the *Media Blender Administration Guide*.

## **IIS Lockdown Support**

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## About Lockdown

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You can choose to install the IIS Lockdown Tool on the Collaboration Server. The IIS Lockdown Tool is a wizard which reduces IIS's vulnerability to virus attack by turning off unnecessary IIS features. It is available at:  
<http://www.microsoft.com/windows2000/downloads/recommended/iislockdown/default.asp>.

### Running the IIS Lockdown Tool on the Collaboration Server

The IIS Lockdown Tool should be run only AFTER Collaboration Server has been installed. If you have run the Lockdown Tool, you must uninstall it before installing the Collaboration Server. Failure to first remove the Lockdown Tool will prevent the Collaboration Server from installing properly.

After the Collaboration Server is installed, you can reinstall the Lockdown Tool using the settings described below.

**Note:** The information in this guide is based on the Lockdown Tool, version 2.1.

The PROXY SERVER template should be used for the Collaboration Server. This template automatically uses the settings required by the Collaboration Server.

### Collaboration Server Settings for Installing the Lockdown Tool

When you install the Lockdown Tool, you are prompted to select a template that most closely matches the role of your server. Select the PROXY SERVER template. This template automatically uses the settings required by the Collaboration Server. Specifically, these include:

- Services: Web Service (HTTP) enabled.
- File Permissions for Anonymous Users: Writing to content directories enabled.
- Virtual Directories: Scripts directory enabled.
- URL Scan Filter: Not installed.

After running the tool, please make sure that account <IUSR....> is part of Admin users group on Windows. This account is used by IIS for anonymous access.

**Important:** To prevent login errors, remove the URLScan which is enabled in the ISAPI filter. Use Add/Remove Programs to remove the URLScan (listed as IIS URLScan). If URLScan was installed as a part of the Lockdown Tool installation, uninstall the LockDown Tool to remove the URLScan.

## **Customer Support Contact Information**

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### **Telephone**

If you have questions or problems, please call the Cisco Systems Technical Assistance Center:

- Within the continental U.S.: **(800) 553-2447**
- Outside the continental U.S.: **(408) 526 7209**

### **Email**

You can contact the Cisco Systems Technical Assistance Center at **tac@cisco.com**.

Please include your maintenance contract number and product serial number when writing to the Technical Assistance Center.

### **Internet**

To open a case with the Technical Assistance Center, go to:

<http://www.cisco.com/public/support/help.shtml>