



# Cisco CallManager Attendant Console Configuration

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Cisco CallManager Attendant Console, a client-server application, allows you to set up Cisco IP Phones as attendant consoles. Employing a graphical user interface, the attendant console uses speed-dial buttons and quick directory access to look up phone numbers, monitor line status, and direct calls. A receptionist or administrative assistant can use the attendant console to handle calls for a department or company, or another employee can use it to manage his own telephone calls.

The attendant console installs on a PC with IP connectivity to the Cisco CallManager system. The attendant console works with a Cisco IP Phone that is registered to a Cisco CallManager system. Multiple attendant consoles can connect to a single Cisco CallManager system.

The application registers with and receives call-dispatching, login, line state, and directory services from the Cisco Telephony Call Dispatcher (TCD) service.

This section describes the following configuration procedures for Cisco CallManager Attendant Console:

- [Configuring Cisco CallManager Attendant Console Users, page 26-3](#)
- [Configuring the ac User, page 26-8](#)
- [Configuring Pilot Points, page 26-9](#)
- [Associating Devices and Pilot Points with the ac User, page 26-17](#)
- [Configuring Hunt Groups, page 26-18](#)
- [Activating the Cisco Telephony Call Dispatcher Service, page 26-25](#)

- [Activating the CTIManager Service, page 26-26](#)
- [Cisco CallManager Attendant Console Server Configuration, page 26-27](#)
- [Viewing Cisco CallManager Attendant Console Performance Monitors, page 26-29](#)
- [Creating Cisco CallManager Attendant Console Dial Rules, page 26-29](#)
- [Installing the Plugin on an Attendant PC, page 26-31](#)
- [Configuring Cisco CallManager Attendant Console Settings, page 26-32](#)
- [Configuring Cisco CallManager Attendant Console System Files, page 26-35](#)

# Cisco CallManager Attendant Console Configuration Checklist

Perform the following steps to set up the attendant console:

1. In Cisco CallManager Administration, add attendant console users.
2. In Cisco CallManager Administration, configure pilot points and hunt groups.
3. Create the ac user and associate all pilot points and attendant console devices with the user.
4. Verify that the Cisco Telephony Call Dispatcher (TCD) service activates and runs on all servers that run the Cisco CallManager service.
5. Verify that the CTIManager service runs on one server in the cluster.
6. Make sure that each attendant Cisco IP Phone is set up correctly for use with the attendant console.
7. Make sure that the attendant console PC is set up correctly for use with the attendant console.
8. Install and configure the attendant console on each attendant console user PC.

## Related Topic

- [Cisco CallManager Attendant Console Configuration Checklist, Cisco CallManager System Guide](#)

# Configuring Cisco CallManager Attendant Console Users

This section covers the following procedures:

- [Finding an Attendant Console User, page 26-3](#)
- [Adding an Attendant Console User, page 26-4](#)
- [Updating or Deleting an Attendant Console User, page 26-6](#)
- [Configuring the ac User, page 26-8](#)

## Finding an Attendant Console User

### Procedure

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**Step 1** Choose **Service > Cisco CM Attendant Console > Cisco CM Attendant Console User**.

The Find and List window displays.

**Step 2** From the drop-down list box, choose one of the following criteria:

- begins with
- contains
- ends with
- is exactly
- is not empty
- is empty

**Step 3** Specify the appropriate search text, if applicable, and click **Find**. You can also specify how many items per page to display.



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**Tip** To find all attendant console users that are registered in the database, click **Find** without entering any search text.

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A list of attendant console users displays by Name.

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#### Related Topics

- [Adding an Attendant Console User, page 26-4](#)
- [Updating or Deleting an Attendant Console User, page 26-6](#)
- [Configuring the ac User, page 26-8](#)

## Adding an Attendant Console User

This section describes how to add an attendant console user. You must add users through the Cisco CallManager Attendant Console User Configuration window in Cisco CallManager Administration before the users can log in to an attendant console.



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**Note** Be aware that attendant console user IDs and passwords are *not* the same as Directory users and passwords that are entered in the User area of Cisco CallManager.

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#### Procedure

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**Step 1** Choose **Service > Cisco CM Attendant Console > Cisco CM Attendant Console User**.

**Step 2** In the upper, right corner of the window, click the **Add a New Cisco CallManager Attendant Console User** link.

The Cisco CallManager Attendant Console User Configuration window displays, as shown in [Figure 26-1](#).

*Figure 26-1 Cisco CallManager Attendant Console User Configuration Window*

The screenshot shows the Cisco CallManager Administration interface. At the top, there is a navigation menu with options: System, Route Plan, Service, Feature, Device, User, Application, and Help. Below the menu is a header bar with the Cisco CallManager Administration logo and the Cisco Systems logo. The main content area is titled "Cisco CallManager Attendant Console User Configuration" in large, bold, red text. To the right of this title are two links: "Add a New Cisco CallManager Attendant Console User" and "Back to Find/List Cisco CallManager Attendant Console Users". Below the title, the text "Cisco CallManager Attendant Console User: New" is displayed, followed by "Status: Ready". There is an "Insert" button. Below the button are three input fields: "User ID\*" with the value "example", "Password" with masked characters, and "Confirm" with masked characters. A note below the fields states "\* indicates required item".

- Step 3** Enter the appropriate configuration settings as described in [Table 26-1](#).
- Step 4** Click **Insert** to add the new user. The Cisco CallManager Attendant Console User Configuration window refreshes, and the new User ID displays in the list on the left side of the window.
- Step 5** To add additional users, repeat [Step 3](#) and [Step 4](#).

#### Related Topics

- [Finding an Attendant Console User, page 26-3](#)
- [Updating or Deleting an Attendant Console User, page 26-6](#)
- [Configuring the ac User, page 26-8](#)
- [Cisco CallManager Attendant Console, Cisco CallManager System Guide](#)

## Updating or Deleting an Attendant Console User

This section describes how to view, update, or delete a Cisco attendant console user.

### Before You Begin

To find out which hunt groups are using the attendant console user, click the **Dependency Records** link from the Cisco CallManager Attendant Console User Configuration window. If the dependency records are not enabled for the system, the dependency records summary window displays a message. For more information about dependency records, see the [“Accessing Dependency Records” section on page A-3](#). If you try to delete an attendant console user that is in use, Cisco CallManager displays an error message. To delete an attendant console user that is currently in use, you must perform either or both of the following tasks:

- Assign a different attendant console user to any hunt groups that are using the attendant console user that you want to delete. See the [“Updating or Deleting Hunt Group Members” section on page 26-22](#).
- Delete the hunt groups that are using the attendant console user. See the [“Updating or Deleting Hunt Group Members” section on page 26-22](#).

### Procedure

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- Step 1** Locate the user by using the procedure in the [“Finding an Attendant Console User” section on page 26-3](#).
  - Step 2** Click the name of the user that you want to modify or delete.
  - Step 3** To remove the user, click **Delete**.



#### Tip

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From the Find and List window, you can delete multiple users by checking the check boxes next to the appropriate users and clicking **Delete Selected**. You can delete all users in the window by checking the check box next to the Cisco CallManager Attendant Console User title and clicking **Delete Selected**.

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- Step 4** To modify the user settings, see [Table 26-1](#). To save the changes, click **Update**.
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### Related Topics

- [Finding an Attendant Console User, page 26-3](#)
- [Adding an Attendant Console User, page 26-4](#)
- [Configuring the ac User, page 26-8](#)
- [Cisco CallManager Attendant Console User Configuration Settings, page 26-7](#)
- [Understanding Cisco CallManager Attendant Console Users, Cisco CallManager System Guide](#)

## Cisco CallManager Attendant Console User Configuration Settings

[Table 26-1](#) describes Cisco CallManager Attendant Console user configuration settings.

*Table 26-1 Attendant Console User Configuration Settings*

Field	Description
User ID	Enter the login name for the attendant console user. Enter up to 50 alphanumeric characters.
Password	Enter a password of up to 50 alphanumeric characters.
Confirm	Enter the same password again.

### Related Topics

- [Finding an Attendant Console User, page 26-3](#)
- [Adding an Attendant Console User, page 26-4](#)
- [Updating or Deleting an Attendant Console User, page 26-6](#)

# Configuring the ac User

You must configure one user named “ac” and associate the attendant phones and the pilot points with the user. If you do not configure this user, the attendant console cannot interact with CTIManager, and the attendant cannot receive calls.

Perform the following procedure to configure the ac user.

## Procedure

- Step 1** From Cisco CallManager Administration, choose **User > Add a New User**. The User Information window displays, as shown in [Figure 26-2](#).

*Figure 26-2 User Information Window*

**User Configuration** [Add a New User](#)  
[Back to User List](#)

**Application Profiles of Attendant**

- Device Association
- Cisco IPMA
- Extension Mobility
- SoftPhone

**User : Attendantr Console**

Status: Ready

First Name

Last Name\*

User ID

User Password\*

PIN \*

Telephone Number

Manager User ID

Department

User Locale

Enable CTI Application Use

Call Park Retrieval Allowed

- Step 2** In the First Name and Last Name fields, enter **ac** or another name that you can remember.
- Step 3** In the User ID field, enter **ac**.
- Step 4** In the User Password field, enter **12345**.
- Step 5** In the Confirm Password field, enter **12345**.



- Step 6** Enter a PIN and telephone number.
- Step 7** Check the **Enable CTI Application Use** check box. You must check this box for the attendant console to interact with CTIManager.
- Step 8** Check the **Call Park Retrieval Allowed** check box.  
If you forget to check the check box, an error message displays when the attendant attempts to log in to the attendant PC.
- Step 9** Click **Insert**.
- Step 10** Make sure that you associate the devices by performing the procedure in [“Associating Devices and Pilot Points with the ac User”](#) section on page 26-17.
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#### Related Topics

- [Adding a New User, page 53-1](#)
- [Managing User Directory Information, Cisco CallManager System Guide](#)

## Configuring Pilot Points

Before the Cisco Telephony Call Dispatcher (TCD) can route calls, you must configure pilot points and hunt groups through Cisco CallManager Administration.



#### Note

After you configure the pilot points, make sure that you configure the ac user and associate all pilot points with the ac user.

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This section contains the following topics:

- [Finding a Pilot Point, page 26-10](#)
- [Adding a Pilot Point, page 26-11](#)
- [Updating or Deleting a Pilot Point, page 26-12](#)
- [Resetting a Pilot Point, page 26-13](#)
- [Pilot Point Configuration Settings, page 26-15](#)
- [Associating Devices and Pilot Points with the ac User, page 26-17](#)

## Finding a Pilot Point

This section describes how to find a pilot point.

### Procedure

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- Step 1** Choose **Service > Cisco CM Attendant Console > Pilot Point**.  
The Find and List window displays.
- Step 2** From the drop-down list box, choose one of the following criteria:
- begins with
  - contains
  - ends with
  - is exactly
  - exists
  - does not exist
- Step 3** Specify the appropriate search text, if applicable, and click **Find**. You can also specify how many items per page to display.



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**Tip** To find all pilot points that are registered in the database, click **Find** without entering any search text.

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A list of pilot points displays.

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### Related Topics

- [Adding a Pilot Point, page 26-11](#)
- [Updating or Deleting a Pilot Point, page 26-12](#)
- [Resetting a Pilot Point, page 26-13](#)
- [Pilot Point Configuration Settings, page 26-15](#)
- [Configuring the ac User, page 26-8](#)
- [Associating Devices and Pilot Points with the ac User, page 26-17](#)

- [Configuring Hunt Groups](#), page 26-18
- [Understanding Pilot Points and Hunt Groups](#), *Cisco CallManager System Guide*

## Adding a Pilot Point

This section describes how to add a pilot point.

### Procedure

- 
- Step 1** Choose **Service > Cisco CM Attendant Console > Pilot Point**.
  - Step 2** Enter the appropriate settings as described in [Table 26-2](#).
  - Step 3** Click **Insert**.

Now that the pilot point is created, the Pilot Point Configuration window refreshes to display the name of the new pilot point in the list on the left. The new pilot point and its settings display.

After the pilot point is created, you must configure a hunt group to specify how the calls that come in to the pilot point are redirected.



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**Tip** After you configure the pilot points, remember to configure the ac user and associate the devices/pilot points with the ac user. See the [“Configuring the ac User”](#) section on page 26-8 and the [“Associating Devices and Pilot Points with the ac User”](#) section on page 26-17 for more information.

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### Related Topics

- [Finding a Pilot Point](#), page 26-10
- [Updating or Deleting a Pilot Point](#), page 26-12
- [Resetting a Pilot Point](#), page 26-13
- [Pilot Point Configuration Settings](#), page 26-15
- [Configuring the ac User](#), page 26-8

- [Associating Devices and Pilot Points with the ac User](#), page 26-17
- [Configuring Hunt Groups](#), page 26-18
- [Understanding Pilot Points and Hunt Groups](#), *Cisco CallManager System Guide*

## Updating or Deleting a Pilot Point

This section describes how to view, update, or delete a pilot point.

### Before You Begin

To find out which virtual directory numbers are using the pilot point, click the **Dependency Records** link from the Pilot Point Configuration window. If the dependency records are not enabled for the system, the dependency records summary window displays a message. For more information about dependency records, see the [“Accessing Dependency Records” section on page A-3](#). If you try to delete a pilot point that is in use, Cisco CallManager displays an error message. To delete a pilot point that is currently in use, you must delete the virtual directory numbers that are using the pilot point. See [Step 4](#).



#### Note

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You do not have to restart Cisco TCD or Cisco CallManager after you delete a pilot point for the deletion to take effect.

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### Procedure

- Step 1** Locate the pilot point by using the procedure in the [“Finding a Pilot Point” section on page 26-10](#).
- Step 2** Click the name of the pilot point that you want to modify or delete. The window refreshes to display information for the chosen pilot point.
- Step 3** To remove the pilot point, click **Delete**.

Approximately 10 minutes after you delete a pilot point, Cisco TCD stops directing calls to any hunt group members that are associated with that pilot point.

**Tip**

From the Find and List window, you can delete multiple pilot points by checking the check boxes next to the appropriate pilot points and clicking **Delete Selected**. You can delete all pilot points in the window by checking the check box next to the Cisco CallManager Attendant Console Pilot Point title and clicking **Delete Selected**.

**Step 4** To modify the pilot point settings, see [Table 26-2](#).

**Step 5** To save the modifications, click **Update**.

**Related Topics**

- [Finding a Pilot Point, page 26-10](#)
- [Adding a Pilot Point, page 26-11](#)
- [Resetting a Pilot Point, page 26-13](#)
- [Configuring the ac User, page 26-8](#)
- [Associating Devices and Pilot Points with the ac User, page 26-17](#)
- [Pilot Point Configuration Settings, page 26-15](#)
- [Configuring Hunt Groups, page 26-18](#)
- [Understanding Pilot Points and Hunt Groups, \*Cisco CallManager System Guide\*](#)

## Resetting a Pilot Point

You must reset the pilot point after you update pilot point configuration settings. When you reset the pilot point, the Cisco CallManager service continues to run, and call processing continues to occur. Perform the following procedure to reset the pilot point:

## Procedure

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- Step 1** Choose **Service > Cisco CM Attendant Console > Pilot Point**.
- The Pilot Point Configuration window displays, and the list on the left side of the window shows all currently configured pilot points.
- Step 2** Click the name of the pilot point that you want to modify or delete. The window refreshes to display information for the chosen pilot point.
- Step 3** Make the desired changes. See [Table 26-2](#) for a description of pilot point configuration settings.
- Step 4** Click **Update**.
- Step 5** Click **Reset**.
- The Reset window displays.
- Step 6** Click one of the following buttons:
- **Restart**—Restarts the selected device for the pilot point without shutting the device down (reregisters the phones with Cisco CallManager).
  - **Reset**—Shuts down the selected device for the pilot point and brings it back up (performs a complete shutdown and reinitialization of the phone).
  - **Close**—Returns you to the previous window without restarting or resetting the selected device.
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## Related Topics

- [Finding a Pilot Point, page 26-10](#)
- [Adding a Pilot Point, page 26-11](#)
- [Updating or Deleting a Pilot Point, page 26-12](#)
- [Configuring the ac User, page 26-8](#)
- [Associating Devices and Pilot Points with the ac User, page 26-17](#)
- [Pilot Point Configuration Settings, page 26-15](#)
- [Configuring Hunt Groups, page 26-18](#)
- [Understanding Pilot Points and Hunt Groups, \*Cisco CallManager System Guide\*](#)

## Pilot Point Configuration Settings

Table 26-2 describes pilot point configuration settings.

*Table 26-2 Pilot Point Configuration Settings*

Field	Description
Pilot Name	Enter up to 50 alphanumeric characters, including spaces, to specify a descriptive name for the pilot point.
Device Pool	The device pool comprises a group of Cisco CallManagers in prioritized order. The first Cisco CallManager in the list represents the primary Cisco CallManager for the pilot point.
Partition	<p>Choose the partition to which the pilot point belongs. Make sure that the pilot point that you enter in the Pilot Number field is unique within the partition that you choose. If you do not want to restrict access to the pilot number, choose &lt;None&gt; for the partition.</p> <p>If more partitions exist than the number that are configured in the Max List Box Items enterprise parameter, the ellipsis (...) button displays next to the drop-down list box. Click the ... button to display the Select Partition window. Enter a partial partition name in the <b>List items where Name contains</b> field. Click the desired partition name in the list of partitions that displays in the Select item to use box, and click <b>OK</b>.</p>
Calling Search Space	To designate the partitions that the pilot point searches when it attempts to route a call, choose a calling search space from the drop-down list.

*Table 26-2 Pilot Point Configuration Settings (continued)*

Field	Description
Pilot Number (DirN)	<p>Enter a directory number in this field to designate a directory number for this pilot point.</p> <p>Make sure that this number is unique throughout the system (that is, it cannot be a shared line appearance).</p>
Route Calls To	<p>From the drop-down list, choose the <b>First Available Hunt Group Member</b> option to route incoming calls to the first available member of a hunt group.</p> <p>From the drop-down list, choose the <b>Longest Idle Hunt Group Member</b> option to order members based on the time that each directory number or line remains idle.</p> <p>If the voice-mail number is the longest idle member of the group, Cisco TCD will route the call to voice mail without first checking the other members of the group.</p> <p>If you want to use the Circular Hunting or Broadcast Hunting routing options, use the Attendant Console Configuration Tool as described in the <a href="#">“Using the Attendant Console Configuration Tool”</a> section on page 26-36.</p>

**Related Topics**

- [Adding a Pilot Point, page 26-11](#)
- [Updating or Deleting a Pilot Point, page 26-12](#)
- [Understanding Pilot Points and Hunt Groups, Cisco CallManager System Guide](#)



# Associating Devices and Pilot Points with the ac User

Before the attendant uses the attendant console, you must associate the attendant console phones and pilot points to the ac user. Perform the following procedure:

## Procedure

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- Step 1** Make sure that the ac user information appears in the User Information window. If it does not display, perform a search for the user. See the [“Searching the Global Directory” section on page 54-1](#) for more information on how to perform this task.
- Step 2** In the Application Profiles column of the User Information window, click **Device Association**.
- Step 3** Perform one of the following tasks:
- To view all devices, click **Select Devices**, and go to [Step 4](#).
  - To limit the list of available devices to a specific selection, enter the criteria by which you want to search by using the following methods:
    - Choose device name, description, or directory number.
    - Choose the comparison operator.
    - Enter a text or number entry.
    - Click **Select Devices**, and go to [Step 4](#).
- Step 4** Check the check box(es) of the attendant console phones/pilot points that you must associate with the user.
- Step 5** Click **Update** to assign the phones/pilot points to the ac user.
- 

## Related Topics

- [Configuring the ac User, page 26-8](#)
- [Adding a New User, page 53-1](#)

# Configuring Hunt Groups

After you configure the pilot point, you must configure the hunt group. A hunt group comprises a list of destinations (either directory numbers or attendant console user/line numbers) that determine the call redirection order.

This section covers the following procedures:

- [Adding Hunt Group Members, page 26-18](#)
- [Configuring Linked Hunt Groups, page 26-21](#)
- [Updating or Deleting Hunt Group Members, page 26-22](#)
- [Hunt Group Configuration Settings, page 26-24](#)

## Adding Hunt Group Members

This section describes how to add hunt group members.

### Procedure

---

**Step 1** Choose **Service > Cisco CM Attendant Console > Hunt Group**.

The Hunt Group Configuration window displays.

[Figure 26-3](#) shows an example of the Hunt Group Configuration window.

Figure 26-3 Hunt Group Configuration Window

**Hunt Group Configuration**

[Pilot Point Configuration](#)  
[Cisco CallManager Attendant Console User Configuration](#)  
[Cisco CallManager Attendant Console Server Configuration](#)

**Pilot Points**

AC1	5503
AC2	5504

**Pilot Point: Select a Pilot Point**  
**Pilot Number (DirN): Not Assigned**

Status: Ready

Add Member Update Delete Member

**Hunt Group Members**

Device Member Information

Partition: < None >

Directory Number:

Always Route Member:

User Member Information

User Name: < None >

Line Number: < None >

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- Step 2** Click the pilot point for which you want to add hunt group members. A list of available pilot points appears on the left side of the Hunt Group Configuration window.
- Step 3** Click **Add Member**. The Hunt Group Members list initially displays the text <<Not Configured>>.

- Step 4** Decide whether the hunt group member that you want to add will be a directory number (device member) or a user and line number (user member):
- If you specify a directory number, Cisco TCD always attempts to route the call to that number.



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**Note** Cisco TCD handles overflow conditions by routing calls to multiple attendant consoles or voice-mail numbers. In the Hunt Group Configuration window, check the Always Route Member check box, so the voice-mail number receives multiple calls at the same time.

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- If you specify an attendant console user and line number, Cisco TCD first checks whether the attendant console user is logged in to an attendant console and online before attempting to route the call. When you specify a user and line number, the user can log in to and receive calls on any Cisco IP Phone in the cluster that the attendant console controls.

- Step 5** Enter the appropriate configuration settings for the new hunt group member as described in [Table 26-3](#):

- If the hunt group member is a directory number, fill in only the Partition and Directory Number fields in the **Device Member Information** section. The optional Always Route Member check box only applies to directory numbers.
- If the hunt group member is a user and line number, fill in only the User Name and Line Number fields in the **User Member Information** section.



---

**Note** The User Name that you specify designates an attendant console user. This user does not duplicate a User ID that is added through the Cisco CallManager User area of Cisco CallManager Administration.

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As you make selections, the Hunt Group Members list box reflects the information that you choose. The Hunt Group Members list displays either the device directory number or the attendant console user name and line number; for example:

#1 Call directory number 35201 (directory number example)

#2 Direct Call to Mary Brown, Line 1 (user and line number example)

**Step 6** To add more hunt group members to the pilot point, repeat [Step 4](#) and [Step 5](#).



**Tip** To reorder the hunt group list, choose the member that you want to reorder from the list. Click the up and down arrows to move that member to a new position in the list.

**Step 7** Click **Update** to save the hunt group member information and complete hunt group configuration.

#### Related Topics

- [Updating or Deleting Hunt Group Members, page 26-22](#)
- [Configuring Linked Hunt Groups, page 26-21](#)
- [Hunt Group Configuration Settings, page 26-24](#)
- [Understanding Pilot Points and Hunt Groups, Cisco CallManager System Guide](#)

## Configuring Linked Hunt Groups

This section describes how to configure linked hunt groups.

#### Procedure

**Step 1** For each hunt group in the chain, use the following information when performing [Step 1](#) through [Step 5](#) from the “[Adding Hunt Group Members](#)” section on [page 26-18](#).

- For all except the last hunt group in the chain, make sure that the final member of the hunt group is the pilot point for the next hunt group.



#### Caution

Cisco strongly recommends that you do not include any other pilot point numbers (besides the final member) in the hunt group. Including other pilot point numbers in the hunt group may cause a continuous route loop.

- Check the **Always Route Member** check box for only the final member of each hunt group.
- To handle overflow conditions, choose a voice-mail or auto-attendant number as the final member of the last linked hunt group in the chain. Check the **Always Route Member** check box to ensure that voice mail can handle multiple, simultaneous calls.

**Step 2** After you configure each hunt group, click **Update** to save the information.

**Caution**

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Cisco strongly recommends that you do not link the last hunt group back to the first hunt group.

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**Step 3** Verify configuration of the linked hunt groups by reviewing the information that you entered in the previous steps.

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**Related Topics**

- [Adding Hunt Group Members, page 26-18](#)
- [Updating or Deleting Hunt Group Members, page 26-22](#)
- [Hunt Group Configuration Settings, page 26-24](#)
- [Understanding Pilot Points and Hunt Groups, Cisco CallManager System Guide](#)
- [Understanding Linked Hunt Groups, Cisco CallManager System Guide](#)

## Updating or Deleting Hunt Group Members

This section describes how to view, update, or delete hunt group members.

**Procedure**

---

**Step 1** Choose **Service > Cisco CM Attendant Console > Hunt Group**.

The Hunt Group Configuration window displays.

**Step 2** Click the name of the pilot point that is associated with the hunt group for which you want to view, modify, or delete members.

The Hunt Group Configuration window displays information for the chosen pilot point.

**Step 3** Make any desired changes. See [Table 26-3](#) for a description of hunt group configuration settings:

- To update settings for a hunt group member, choose that member name in the list; modify the settings as needed; then, click **Update** to save the changes.
- To change the order of the hunt group members, choose the name of the member that you want to move and click the arrow buttons to move it to a new position in the list.
- To delete a hunt group member, highlight that member name in the list and click **Delete Member**.
- Before you click the **Update** button, you can click **Cancel Changes** at any time to restore any settings that you changed.

**Step 4** To save the changes, click **Update**.

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#### Related Topics

- [Adding Hunt Group Members, page 26-18](#)
- [Configuring Linked Hunt Groups, page 26-21](#)
- [Hunt Group Configuration Settings, page 26-24](#)
- [Understanding Pilot Points and Hunt Groups, Cisco CallManager System Guide](#)
- [Understanding Linked Hunt Groups, Cisco CallManager System Guide](#)

## Hunt Group Configuration Settings

Table 26-3 describes hunt group configuration settings.

*Table 26-3 Hunt Group Configuration Settings*

Field	Description
Partition	<p>If a hunt group member is a directory number, fill in the <b>Partition</b> and <b>Directory Number</b> fields in the Device Member Information section.</p> <p>This field designates the route partition to which the directory number belongs:</p> <ul style="list-style-type: none"> <li>• If the directory number for this hunt group member is in a partition, you must choose a partition from the drop-down list.</li> <li>• If the directory number is not in a partition, choose None.</li> </ul>
Directory Number	<p>Enter the directory number of the hunt group member device in this field.</p> <p>When the directory number is not in the specified partition, an error dialog box displays.</p>
Always Route Member	<p>Always Route Member, an optional check box, applies only to directory numbers.</p> <p>If this check box is checked, Cisco Telephony Call Dispatcher (TCD) always routes the call to this hunt group member, whether it is busy or not.</p> <p>If this check box is checked, Cisco TCD does not check whether the line is available before routing the call.</p> <p>To manage overflow conditions, check this check box for voice-mail or auto-attendant numbers that handle multiple, simultaneous calls.</p> <p>For linked hunt groups, only check the <b>Always Route Member</b> check box when you are configuring the final member of each hunt group.</p>



*Table 26-3 Hunt Group Configuration Settings (continued)*

Field	Description
User Name	<p>If the hunt group member is a user and line number, fill in only the <b>User Name</b> and <b>Line Number</b> fields in the User Member Information section.</p> <p>From the drop-down list, choose attendant console users that will serve as hunt group members.</p> <p>Only attendant console users that are added in the Cisco CallManager Attendant Console User Configuration window appear in this list.</p>
Line Number	<p>From the drop-down list, choose the appropriate line numbers for the hunt group.</p> <p><b>Note</b> You can add the same user to the same line only once within a single hunt group. For example, you cannot add Mary Brown, Line 1, more than once in the hunt group.</p>

**Related Topics**

- [Adding Hunt Group Members, page 26-18](#)
- [Updating or Deleting Hunt Group Members, page 26-22](#)
- [Understanding Pilot Points and Hunt Groups, Cisco CallManager System Guide](#)

# Activating the Cisco Telephony Call Dispatcher Service

The following procedure describes how to activate the Cisco TCD service on each server in the cluster that runs the Cisco CallManager service.

## Procedure

---

- Step 1** Choose **Application > Cisco CallManager Serviceability**.
- Step 2** Choose **Tools > Service Activation**.
- Step 3** From the server list on the left side of the window, choose a server that runs the Cisco CallManager service.  
The window refreshes.
- Step 4** Check the **Cisco Telephony Call Dispatcher** check box.
- Step 5** Click **Update**.  
The service activates and starts automatically on the server.
- Step 6** Perform this procedure on every server in the cluster that runs the Cisco CallManager service.
- 

## Related Topics

- [Understanding the Cisco Telephony Call Dispatcher, Cisco CallManager System Guide](#)
- [Cisco CallManager Serviceability Administration Guide](#)

# Activating the CTIManager Service

For hunt groups and the attendant console to function properly, verify that the CTIManager service runs on one server in the cluster. Perform the following procedure to activate the service if it is not activated:

## Procedure

---

- Step 1** Choose **Application > Cisco CallManager Serviceability**.
- Step 2** Choose **Tools > Control Center**.
- Step 3** From the left side of the window, choose any server from the server list.  
The window refreshes.  
The Service Name column lists all services that are configured on this server.
- Step 4** Check the **Cisco CTIManager** check box.
- Step 5** Click **Update**.  
The service activates and starts automatically on the server.
- 

## Related Topics

- *Cisco CallManager Serviceability Administration Guide*
- [Services](#), *Cisco CallManager System Guide*
- [Computer Telephony Integration](#), *Cisco CallManager System Guide*

# Cisco CallManager Attendant Console Server Configuration

The Cisco CallManager Attendant Console Server Configuration window lists service parameters and enables you to configure trace parameters for the Cisco Telephony Call Dispatcher (TCD). You obtain information about the parameters by clicking the “i” button help icon in the upper, right corner of the Cisco CallManager Attendant Console Server Configuration window.

**Caution**

---

Do not change any service parameters without permission of a Cisco Technical Assistance Center engineer. Doing so may cause system failure.

---

Perform the following steps to update Cisco TCD trace parameters.

**Procedure**

---

**Step 1** Choose **Service > Cisco CM Attendant Console > Cisco CM Attendant Console Server**.

The Cisco CallManager Attendant Console Server Configuration window appears.

**Step 2** From the Cisco CallManager Attendant Console Servers list, choose a server.

**Note**

---

You must activate the Cisco CallManager Attendant Console service on a server before the server displays in the Cisco CallManager Attendant Console Servers list. For more information on activating a service, refer to the *Cisco CallManager Serviceability Administration Guide*.

---


The window refreshes and displays all configured service parameters for the Cisco TCD. [Figure 26-4](#) shows an example of the Cisco CallManager Attendant Console Server Configuration window.

*Figure 26-4 Cisco CallManager Attendant Console Server Configuration Window*

[Pilot Point Configuration](#)  
[Trace Configuration](#)  
[Parameters for all servers](#)

[Cisco CallManager Attendant Console User Configuration](#)  
[Select Another Cisco CallManager Attendant Console Server](#)

Current Server : NRVANKAY-CM

Current Service: Cisco Telephony Call Dispatcher 

Status: Ready

Parameter Name	Parameter Value	Suggested Value
CCMLineStatePort*	<input type="text" value="3223"/>	3223
LSSAccessPassword*	<input type="text" value="private"/>	private
LSSListenPort*	<input type="text" value="3224"/>	3224
TcdSrvListenPort*	<input type="text" value="4321"/>	4321
AllowRoutingwithUnknownLineState*	<input type="text" value="False"/>	False
RedirectWithDirectingPartyCSS*	<input type="text" value="True"/>	True
KeepOriginalCalledPartyIfForwarded*	<input type="text" value="True"/>	True
ResetOriginalCalled*	<input type="text" value="True"/>	True

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**Note** After you insert or choose a server from the Cisco CallManager Attendant Console Server Configuration window, you can click **Trace Configuration** in the Cisco CallManager Attendant Console Server Configuration window and then refer to the *Cisco CallManager Serviceability Administration Guide* and the *Cisco CallManager Serviceability System Guide* to configure trace parameters.

#### Related Topic

- [Understanding Cisco CallManager Attendant Console Service Parameters, Cisco CallManager System Guide](#)

# Viewing Cisco CallManager Attendant Console Performance Monitors

Perform the following procedures to view CcmLineLinkState and other performance monitoring information for Cisco TCD and the attendant console:

## Procedure

---

- Step 1 Log in to the Cisco CallManager server.
  - Step 2 Choose **Start > Programs > Administrative Tools > Performance**.
  - Step 3 Click the View report data icon.
  - Step 4 Click the + (Add counter) icon.
  - Step 5 Choose **System Monitor**, enable **All Counters**, and choose **Cisco CallManager Attendant Console** from the Object drop-down list box.
  - Step 6 Click **Add**.
- 

## Related Topics

- [Cisco CallManager Attendant Console Configuration, page 26-1](#)
- [Cisco CallManager Attendant Console, Cisco CallManager System Guide](#)

# Creating Cisco CallManager Attendant Console Dial Rules

You can create dial rules and directory lookup rules for Cisco CallManager Attendant Console to transform directory numbers and caller IDs. Dial rules transform directory numbers to create a dialable pattern. Directory lookup rules transform caller IDs to numbers that can be looked up in the directory.

- 
- Step 1 On the Cisco CallManager Attendant Console server, open the DialRuleExamples.xml file that is located in the C:\Program Files\Cisco\CallManagerAttendant\etc directory.

- Step 2** Edit the DialRuleExamples.xml file to create the necessary dial and directory lookup rules.

The following examples show the appropriate format for the dial rules and directory lookup rules.

```
<DialRules>
<DialRule BeginsWith="408525" NumDigits="10" DigitsToRemove="5"
PrefixWith="89" />
</DialRules>
<DirectoryLookupRules>
<DirectoryLookupRule BeginsWith="5" NumDigits="5" DigitsToRemove=" "
PrefixWith="40852" />
</DirectoryLookupRules>
```

For more detailed descriptions of the dial rules and directory lookup rule parameters, refer to “[Cisco CallManager Attendant Console Dial Rules](#)” in the *Cisco CallManager System Guide*.

- Step 3** Rename the DialRuleExamples.xml file to DialRules.xml.
- Step 4** Copy the DialRules.xml file to all Cisco CallManager servers in the cluster.
- 

### Related Topics

- [Cisco CallManager Attendant Console Server Configuration, page 26-27](#)
- [Cisco CallManager Attendant Console Dial Rules, Cisco CallManager System Guide](#)

# Installing the Plugin on an Attendant PC

This section describes how to install the attendant console on a user PC.

## Procedure

---

- Step 1** If you have not already done so, add the attendant console user and the phone that you want to associate with the attendant console to the Cisco CallManager database.
- Step 2** From each Cisco CallManager Attendant Console PC, browse into a server that is running Cisco CallManager Administration and log in with administrative privileges.



---

**Tip** To browse into the server, enter `http://<CM-server-name>/CCMAdmin/main.asp`, where `<CM-server-name>` equals the name of the server, in the Address bar in the web browser.

---

- Step 3** From Cisco CallManager Administration, choose **Application > Install Plugins**.
- Step 4** Click the icon for the Cisco CallManager Attendant Console.  
The Cisco CallManager Attendant Console installation wizard runs.
- Step 5** To acknowledge the installation, click **Yes**.
- Step 6** In the initial installation wizard window, click **Next**.
- Step 7** You can install the attendant console to the default location or use the Browse button to specify a new location; after specifying a location, click **Next**.
- Step 8** In the Ready to Install window, click **Next**.
- Step 9** After the installation program finishes installing files, choose whether you want to restart the computer now or later; then, click **Finish**.
- Step 10** If prompted, restart the computer.

After you install the application, you can configure or update any attendant console settings that you did not configure during the installation process.

---



### Related Topics

- [Configuring Cisco CallManager Attendant Console Settings, page 26-32](#)
- [Cisco CallManager Attendant Console Installation and Configuration, \*Cisco CallManager System Guide\*](#)
- [Cisco CallManager Attendant Console, \*Cisco CallManager System Guide\*](#)

# Configuring Cisco CallManager Attendant Console Settings

Configure each attendant console to meet the following criteria:

- Provide the attendant console username and password.
- Connect to the correct Cisco CallManager TCD server and directory number for the Cisco IP Phone that the attendant uses with the attendant console.

After you install the attendant console, you must configure the attendant console before a user can log in to the console. Use the procedure in this section to configure settings that are not specified during installation, to view current settings, or to update the attendant console configuration.

After it is configured, the attendant console operates with the specified settings until the administrator changes them.

### Procedure

---

- Step 1** On the PC where the attendant console is installed, choose **Start > Programs > Cisco CallManager > Cisco CallManager Attendant Console** or click the Cisco CallManager Attendant Console icon on the desktop; then, click **Yes** to launch the attendant console.
  - Step 2** Click **Settings**.
  - Step 3** Enter the appropriate configuration settings, as described in [Table 26-4](#).
  - Step 4** Click **Save**. You have now configured the settings for the attendant console, and the settings can now be used for call-distribution activities.
-

### Related Topics

- [Cisco CallManager Attendant Console Server Configuration, page 26-27](#)
- [Attendant Console Configuration Settings, page 26-33](#)
- [Cisco CallManager Attendant Console, Cisco CallManager System Guide](#)

## Attendant Console Configuration Settings

[Table 26-4](#) describes Cisco CallManager Attendant Console configuration settings.

*Table 26-4 Settings Dialog Box*

Field/Check Box	Notes
<b>Basic Tab (Cisco requires that you enter the information in the appropriate fields.)</b>	
Attendant Server Host Name or IP Address	Enter the appropriate information in the field.
Directory Number of Your Phone	<p>Confirm or enter the directory number of the Cisco IP Phone that the attendant uses with the attendant console.</p> <p>If you enter a directory number that appears on more than one device, the Device Selector dialog box displays when you click <b>Save</b>. Choose the device you want to use with the attendant console from the drop-down list box and click OK.</p>
<b>Advanced Tab (You can enter information in these optional fields to change the default settings.)</b>	
Path of Local Directory File	Enter the user list file that specifies the directory information.

*Table 26-4 Settings Dialog Box (continued)*

Field/Check Box	Notes
Directory Reload Interval (in seconds)	Enter the time (in seconds) that the Cisco CallManager Attendant Console server waits before reloading the user list that displays in the Directory window of the Cisco CallManager Attendant Console.
Call Processing Server Host Name or IP Address	Enter the appropriate information in the field.
Local Host IP Address (for line state)	Enter the appropriate information in the field.  <b>Note</b> If the attendant PC has two Network Interface Cards (NICs), you can specify the IP address that will receive line state updates.
Enable Trace	Check the check box to ensure that you can troubleshoot issues that are associated with the attendant console.
Audible Alerting Ring Setting	Click the button to choose a ring setting, a “beep,” that alerts the attendant to the call through the PC sound card and speakers.

**Related Topics**

- [Configuring Cisco CallManager Attendant Console Settings, page 26-32](#)
- [Cisco CallManager Attendant Console, Cisco CallManager System Guide](#)

# Configuring Cisco CallManager Attendant Console System Files

Some Cisco CallManager Attendant Console configuration procedures, including configuring circular hunt groups, require that you must edit various system files.

This section covers the following procedures:

- [Configuring Held Icon Timers, page 26-35](#)
- [Using the Attendant Console Configuration Tool, page 26-36](#)

## Configuring Held Icon Timers

The color of the held icons on the attendant console indicates how long a call has been on hold. To configure the duration after which the held icons change color, perform the following procedure.

**Note**

---

Cisco recommends that you do not change the default values of the held icon timers.

---

**Procedure**

- 
- Step 1** Open the GlobalUI.properties files that are located on the attendant PC in the `..\Program Files\Cisco\CallManager Attendant Console\etc` directory.
  - Step 2** To change the time before the held icon turns yellow, edit the `WaitTimeMedium` parameter.
  - Step 3** To change the time before the held icon turns red, edit the `WaitTimeLong` parameter.
  - Step 4** Save and close the GlobalUI.properties file.
- 

**Related Topics**

- [Configuring Cisco CallManager Attendant Console System Files, page 26-35](#)
- [Cisco CallManager Attendant Console, Cisco CallManager System Guide](#)

## Using the Attendant Console Configuration Tool

This section describes how to use the Attendant Console Configuration Tool. The Attendant Console Configuration Tool enables you to perform the following tasks:

- Set the JTAPI user name and password.
- Set directory values.
- Enable call queuing for a pilot point.
- Configure circular hunt groups and broadcast hunt groups.

### Before You Begin

Before you create circular or broadcast hunt groups, create the pilot points as described in the [“Configuring Pilot Points” section on page 26-9](#).

### Procedure

---

- Step 1** Open the `acconfig.bat` file that is located in the `C:\Program Files\Cisco\CallManagerAttendant\bin` directory on the Cisco CallManager Attendant Console server.
- Step 2** Enter the appropriate values as described in [Table 26-5](#).
- Step 3** Click **Save and Close**.
- 

### Related Topics

- [Attendant Console Configuration Settings, page 26-33](#)
- [“Understanding Pilot Points and Hunt Groups”, \*Cisco CallManager System Guide\*](#)
- [“Understanding Call Queuing”, \*Cisco CallManager System Guide\*](#)

## Attendant Console Configuration Tool Configuration Settings

Table 26-5 describes Attendant Console Configuration Tool configuration settings. Use the fields on the Basic tab to enter JTAPI and directory information. Use the fields on the Advanced tab to enable call queuing and to configure circular and broadcast hunt groups.

*Table 26-5 Attendant Console Configuration Tool*

Field	Description
<b>Basic Tab</b>	
JTAPI Username	<p>Enter the JTAPI username for the Cisco CallManager Attendant Console application.</p> <p>The default specifies ac. To maximize security for your application, change the default value.</p>
JTAPI Password	<p>Enter the JTAPI password for the Cisco CallManager Attendant Console application.</p> <p>The default specifies 12345. To maximize security for your application, change the default value.</p>
Department Attribute	<p>Enter the attribute that your directory uses to store department information. The default for DC-Directory and Netscape directory specifies departmentNumber. The default for Active Directory specifies department.</p> <p>If you use a different corporate directory, enter the appropriate department attribute in this field.</p>

*Table 26-5 Attendant Console Configuration Tool (continued)*

Field	Description
LDAP Paging Size	<p>Enter the paging size for Cisco CallManager Attendant use when user lists are generated. The default specifies 500. The default search result size limit for Active Directory specifies 1000.</p> <p>If you integrate Cisco CallManager with a corporate directory with a paging size that is less than 500, enter a value that is less than 500 in the LDAP Paging Size field.</p>
<b>Advanced Tab</b>	
Pilot Points	Choose the pilot point that you want to configure.
Enable Queuing	If you want Cisco TCD to queue calls when all attendants in a hunt group are busy, check the <b>Enable Queuing</b> check box. To complete the call-queuing configuration, enter values in the Queue Size and Hold Time (in Seconds) fields.
Routing Algorithm	<p>Choose the routing option that you want to use for the pilot point that you choose in the Pilot Points drop-down list box. Available options include</p> <ul style="list-style-type: none"> <li>• Circular Hunting</li> <li>• Broadcast Hunting</li> </ul> <p><b>Note</b> The routing option that you chose when you configure the pilot point, either Longest Idle or First Available, also displays in the drop-down list box.</p>

*Table 26-5 Attendant Console Configuration Tool (continued)*

Field	Description
Queue Size	<p>This field specifies the number of calls that are allowed in the queue. If the queue is full, Cisco TCD routes calls to the “always route” hunt group member that is specified on the Hunt Group Configuration window. If you do not specify an always route member, Cisco TCD drops the call when the queue size limit is reached.</p> <p>The default specifies 32.</p>
Hold Time (in Seconds)	<p>This field specifies the maximum amount of time (in seconds) that Cisco TCD keeps a call in the queue.</p> <p>If a call remains on hold for the number of seconds entered in this field and you configured an “always route” hunt group member on the Hunt Group Configuration window, Cisco TCD sends the call to the always route member that is specified on the Hunt Group Configuration window. If you do not configure an always route member, the call remains in the queue until an attendant becomes available.</p> <p>Enter 0 in this field to keep calls in the queue until an attendant becomes available.</p> <p>The default specifies 0.</p>