



Configuring Cisco CallManager for Personal Assistant

After installing Personal Assistant, you must complete tasks in Cisco CallManager, as described in the following sections:

- [Setting Up Cisco IP Phone Route Plans, page 3-2](#)
- [Setting Up Personal Assistant to Intercept Calls, page 3-3](#)
- [Setting Up the Personal Assistant Number, page 3-8](#)
- [Adding Personal Assistant as a JTAPI User, page 3-9](#)
- [Adding Media Ports for Personal Assistant, page 3-10](#)
- [Configuring Cisco Unity in Cisco CallManager for Integration with Personal Assistant, page 3-12](#)

Cisco Personal Assistant Configuration Wizard

The Cisco Personal Assistant Configuration Wizard is a tool that can be used to automatically configure most of the objects that Cisco CallManager needs for integration with Personal Assistant the first time that you install Personal Assistant.

Note that the wizard can only be used with Personal Assistant version 1.4(3) or later.

If you use the wizard to complete the tasks in Cisco CallManager automatically, you will still have to do the tasks in the following two sections to configure phones manually:

- [Assigning the Partition and Calling Search Space to Phones, page 3-3](#)
- [Updating the Partition for Managed Phones, page 3-8](#)

You can download the wizard for free from the Personal Assistant Software Download page at <http://www.cisco.com/cgi-bin/tablebuild.pl/assist>.

For more information on using the wizard—including instructions for installing and running it—refer to the Personal Assistant Configuration Wizard Readme file, also available on the Personal Assistant Software Download page.

Note that to access the software download page, you must be logged on to Cisco.com as a registered user.

Understanding the Cisco CallManager Examples

The setup sections in this chapter represent an example setup, with sample values included for reference only. Your particular configuration depends on the needs of your network. For the examples, the following calling search spaces and partitions are used:

- EmployeeCSS—includes the PA and Employee partitions

- PACSS—including the PAManagedEmployee and Employee partitions

The examples are based on a single Cisco CallManager cluster. If you have more than one cluster, you must repeat the configuration in each cluster. The route points and translation patterns (if applicable) will be different in each cluster, but you can use the same partition and calling search space names, and the same Personal Assistant user name.

For detailed information about how Personal Assistant uses calling search spaces and partitions, see the [“Partitions and Calling Search Spaces”](#) section on page 1-4.

Setting Up Cisco IP Phone Route Plans

Before configuring Personal Assistant, you must ensure that the Cisco IP Phones are added and registered with Cisco CallManager. Refer to the Cisco CallManager documentation and Help if you need assistance adding and registering the Cisco IP Phones.

The following sections provide an example setup for your network:

- [Creating a Phone Partition, page 3-2](#)
- [Creating a Phone Calling Search Space, page 3-2](#)
- [Assigning the Partition and Calling Search Space to Phones, page 3-3](#)
- [Using Partitions and Calling Search Spaces Without Personal Assistant, page 1-17](#)

Creating a Phone Partition

If you have not already created a partition for the Cisco IP Phones, do the following procedure to create one.

To Create a Phone Partition

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- Step 1** Navigate to the **Find and List Partitions** page of the Cisco CallManager administration interface.
 - Step 2** Click **Add a New Partition**. The Partition Configuration page opens.
 - Step 3** In the Partition Name and Description field, enter a descriptive name (for example, “Employee”). Optionally, you can include a description.
 - Step 4** Click **Insert** to add the new partition.
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Creating a Phone Calling Search Space

If you do not already have a calling search space defined for the Cisco IP Phones, do the following procedure to create one.

To Create a Calling Search Space

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- Step 1** Navigate to the **Find and List Calling Search Spaces** page of the Cisco CallManager administration interface.

- Step 2** Click **Add a New Calling Search Space**. The Calling Search Space Configuration page opens.
- Step 3** In the Calling Search Space Name field, enter a descriptive name (for example, “EmployeeCSS”).
- Step 4** In the Available Partitions list box, select the **Employee** partition and add it to the Selected Partitions list box by clicking the arrow buttons between the two list boxes.
- Step 5** Click **Insert** to add the new calling search space.
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Assigning the Partition and Calling Search Space to Phones

After you have created the Employee partition and calling search space, you must configure the IP phones to use them.

You can use the Bulk Administration Tool (BAT) to change the partition and calling search space on phones in much less time than it takes to make the changes to each phone individually. If you prefer to make the changes individually on each phone, do the following procedure. For instructions on using the BAT, refer to the Cisco CallManager documentation.

To Assign a Partition and Calling Search Space to Phones

- Step 1** Navigate to the **Find and List Phones** page of the Cisco CallManager administration interface.
- Step 2** In the search field, select **Device Name Is Not Empty** and click **Find**.
Cisco CallManager lists all of the phones in the bottom frame.
- Step 3** Click the phone whose configuration you want to change. The Phone Configuration page opens.
- Step 4** Click the line number you want to configure in the left-hand column. The Directory Number Configuration page opens.
- Step 5** Change the partition to **Employee**, and the calling search space to **EmployeeCSS**.
- Step 6** Click **Insert** to save your changes.
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Setting Up Personal Assistant to Intercept Calls

Personal Assistant can intercept incoming calls and route them according to user-defined rules. To enable Personal Assistant to intercept calls between two extensions, such as 1006 and 1007, you must configure two Personal Assistant partitions and a calling search space, create the Personal Assistant interceptor port route points, and update the calling search space and change the partition on the end-user phones.

The following sections describe the steps involved in configuring Cisco CallManager to enable Personal Assistant to intercept calls:

- [Creating the Personal Assistant Partitions, page 3-4](#)
- [Creating the Personal Assistant Calling Search Space, page 3-4](#)
- [Creating Personal Assistant Interceptor Ports and Configuring Error Handling, page 3-4](#)
- [Updating the Calling Search Space for End-User Phones, page 3-7](#)

- [Updating the Partition for Managed Phones, page 3-8](#)

Creating the Personal Assistant Partitions

Do the following procedure to create the two Personal Assistant partitions:

- **PA**—The partition that will contain the route points used as Personal Assistant interceptor ports. Used to intercept calls to the phones that Personal Assistant manages.
- **PAManagedEmployee**—The partition for phones whose calls will be intercepted by Personal Assistant.

To Create Personal Assistant Partitions

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- Step 1** Navigate to the **Find and List Partitions** page of the Cisco CallManager administration interface.
 - Step 2** Click **Add a New Partition**. The Partition Configuration page opens.
 - Step 3** In the Partition Name field, enter a descriptive name (for example, “PA”).
 - Step 4** Click **Insert** to add the new partition.
 - Step 5** Repeat [Step 2](#) through [Step 4](#) to create the PAManagedEmployee partition.
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Creating the Personal Assistant Calling Search Space

To Create a Personal Assistant Calling Search Space

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- Step 1** Navigate to the **Find and List Calling Search Spaces** page of the Cisco CallManager administration interface.
 - Step 2** Click **Add a New Calling Search Space**. The Calling Search Space Configuration page opens.
 - Step 3** In the Calling Search Space Name field, enter a descriptive name (for example, “PACSS”).
 - Step 4** In the Available Partitions list box, select the **PAManagedEmployee** and **Employee** partitions, and add them to the Selected Partitions list box by clicking the arrow buttons between the two list boxes. Arrange the partitions so that PAManagedEmployee is at the top of the list.
If you are using any other partitions, add them to this list.
 - Step 5** Click **Insert** to add the new calling search space.
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Creating Personal Assistant Interceptor Ports and Configuring Error Handling

When you configure the Personal Assistant servers, you assign the route points you create here to the individual servers. Thus, you should define route points based on how you will divide the managed phones between servers.

These route points coincide with the phone extensions. The most efficient way to configure Personal Assistant is to use wildcards to define a single route point that covers many extensions. For example, the single route point 1XXX covers extensions 1000 to 1999. To define a route point that covers a single extension, enclose the last digit in square brackets. For example, 240[5] covers only the extension 2405.

In addition to creating the Personal Assistant interceptor port route points, you configure interceptor port error handling to enable Cisco CallManager to route calls to Personal Assistant users when the Personal Assistant server is unavailable.

See the applicable section, depending on the Cisco CallManager version you are using:

- [Creating Personal Assistant Interceptor Port Route Points and Configuring Error Handling—Cisco CallManager Version 4.0 and Later, page 3-5](#)
- [Creating Personal Assistant Interceptor Port Route Points and Configuring Error Handling—Cisco CallManager Version 3.x, page 3-6](#)

Creating Personal Assistant Interceptor Port Route Points and Configuring Error Handling—Cisco CallManager Version 4.0 and Later

When the system uses Cisco CallManager version 4.0 or later, you configure the error handling at the same time that you create each Personal Assistant interceptor port route point.

To Create Route Points and Configure Error Handling for the Personal Assistant Interceptor Ports

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- Step 1** Navigate to the **Find and List CTI Route Points** page of the Cisco CallManager administration interface.
 - Step 2** Click **Add a New CTI Route Point**. The CTI Route Point Configuration page opens.
 - Step 3** In the Device Name field, enter a unique meaningful name to identify this as a Personal Assistant route point interceptor number. (For example, if you are creating the 1XXX route point, “PA1XXX” or “PARP1XXX” might be useful names.)
 - Step 4** From the Device Pool menu, select the applicable device pool.
 - Step 5** From the Calling Search Space menu for the device, select the calling search space that is configured for Personal Assistant (for example, “PACSS”).
 - Step 6** Click **Insert** to add the new CTI route point.
 - Step 7** Click **OK** to add a directory number for line 1 of the CTI Route Point. The Directory Number Configuration window for line 1 opens.
 - Step 8** In the Directory Number field, enter the phone number to be used for a Personal Assistant interceptor port (for example, “1XXX”).
 - Step 9** From the Partition menu, select the phone partition that is configured for Personal Assistant (for example, “PA”).
 - Step 10** From the Calling Search Space menu for the line, select the same calling search space that you chose for the device in [Step 5](#).
Do not leave <None> as the calling search space for line 1.
 - Step 11** Click **No Voice Mail** in the Voice Mailbox Profile list. Otherwise, Personal Assistant cannot mark user messages with the sender name.
 - Step 12** In the Forward No Answer Destination field, enter the same phone number that you entered in the Directory Number field in [Step 8](#).

- Step 13** In the Calling Search Space menu for the Forward No Answer field, click the same calling search space that you chose for the directory number in [Step 10](#).
 - Step 14** Repeat [Step 12](#) and [Step 13](#) for Forward Busy and Forward on Failure.
 - Step 15** Click **Insert**.
 - Step 16** Repeat [Step 2](#) through [Step 15](#) to create any additional route points.
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Creating Personal Assistant Interceptor Port Route Points and Configuring Error Handling—Cisco CallManager Version 3.x

When the system uses Cisco CallManager version 3.x, you configure error handling by creating a corresponding translation pattern for each Personal Assistant interceptor port that you configure.

Do the following two procedures to define the route points and translation patterns that will be used as Personal Assistant interceptor ports.

To Create Route Points for the Personal Assistant Interceptor Ports

- Step 1** Navigate to the **Find and List CTI Route Points** page of the Cisco CallManager administration interface.
- Step 2** Click **Add a New CTI Route Point**. The CTI Route Point Configuration page opens.
- Step 3** In the Device Name field, enter a unique meaningful name to identify this as a Personal Assistant route point interceptor number. For example, if you are creating the 1XXX route point, “PA1XXX” or “PARP1XXX” might be useful names.
- Step 4** From the Device Pool menu, select the applicable device pool.
- Step 5** From the Calling Search Space menu for the device, select the calling search space that is configured for Personal Assistant (for example, “PACSS”).
- Step 6** Click **Insert** to add the new CTI route point.
- Step 7** Click **OK** to add a directory number for line 1 of the CTI Route Point. The Directory Number Configuration window for line 1 opens.
- Step 8** In the Directory Number field, enter the phone number to be used for a Personal Assistant interceptor port (for example, “1XXX”).
- Step 9** From the Partition menu, select the phone partition that is configured for Personal Assistant (for example, “PA”).
- Step 10** From the Calling Search Space menu for the line, select the same calling search space that you chose for the device in [Step 5](#).
Do not leave <None> as the calling search space for line 1.
- Step 11** If the system uses Cisco CallManager version 3.2 or later, click **No Voice Mail** in the Voice Mailbox Profile list. If the system uses Cisco CallManager version 3.1, leave the Voice Message Box field blank. Otherwise, Personal Assistant cannot mark user messages with the sender name.
- Step 12** Click **Insert**.
- Step 13** Repeat [Step 2](#) through [Step 12](#) to create any additional route points.

- Step 14** Continue with the following “[To Create Translation Patterns to Correspond to the Personal Assistant Route Points](#)” procedure.
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To Create Translation Patterns to Correspond to the Personal Assistant Route Points

- Step 1** Navigate to the **Find and List Translation Patterns** page of the Cisco CallManager administration interface.
- Step 2** Click **Add a New Translation Pattern**. The Translation Pattern Configuration window opens.
- Step 3** In the Translation Pattern field, enter one of the directory numbers of the route points you configured (for example, “1XXX”).
- Step 4** In the Partition field, select **Employee**.
- Step 5** In the Calling Search Space field, select **PACSS**.
- Step 6** Deselect **Provide Outside Dial Tone**.
- Step 7** Click **Insert** to save your changes.
- Step 8** Repeat [Step 2](#) through [Step 7](#) for every route point you configured in the previous “[To Create Route Points for the Personal Assistant Interceptor Ports](#)” procedure.
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Updating the Calling Search Space for End-User Phones

After adding Personal Assistant to your network, you need to update the calling search space assigned to the end-user phones.

To Update a Calling Search Space for End-User Phones

- Step 1** Navigate to the **Find and List Calling Search Spaces** page of the Cisco CallManager administration interface.
- Step 2** In the search field, enter **EmployeeCSS** and click **Find**, or to list all calling search spaces, click **Find** with no search argument.
- Step 3** Select **EmployeeCSS** from the calling search space list.
The Calling Search Space Configuration page opens.
- Step 4** In the Available Partitions list box, select the PA partition, and add it to the Selected Partitions list box by clicking the arrow buttons between the two list boxes.
- Step 5** Rearrange the order of the partitions to ensure that the PA partition is first.
- Step 6** Click **Update** to update the calling search space.
- Step 7** If you are using other calling search spaces for phones, repeat [Step 2](#) through [Step 6](#) to update them.
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Updating the Partition for Managed Phones

To convert a phone to Personal Assistant management, assign the phone to the PAManagedEmployees partition. You can do a phased deployment of Personal Assistant by changing the partition of only one subset of your phones at a time.

You can use the Bulk Administration Tool (BAT) to change the partition on phones in much less time than it takes to make the changes to each phone individually. If you prefer to make the changes individually on each phone, do the following procedure. For instructions on using the BAT, refer to the Cisco CallManager documentation.

To Update the Partition for Managed Phones

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- Step 1** Navigate to the **Find and List Phones** page of the Cisco CallManager administration interface.
 - Step 2** To view all phones, select **Device Name Is Not Empty**, or enter a limited search string to view the phone subset you want to configure, and click **Find**.
Cisco CallManager lists the phones in the bottom frame.
 - Step 3** Click the phone whose configuration you want to change. The Phone Configuration page opens.
 - Step 4** In the left-hand column, click the line number you want to configure. The Directory Number Configuration page opens.
 - Step 5** Change the partition to **PAManagedEmployee**.
 - Step 6** Click **Insert** to save your changes.
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Setting Up the Personal Assistant Number

You must configure a CTI route point in Cisco CallManager to identify the phone number that is used to access Personal Assistant. If you are also setting up an automated attendant, do the following procedure to configure the automated attendant number.

To Set Up the Personal Assistant Number

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- Step 1** Navigate to the **Find and List CTI Route Points** page of the Cisco CallManager administration interface.
 - Step 2** Click **Add a New CTI Route Point**. The CTI Route Point Configuration page opens.
 - Step 3** In the Device Name field, enter a unique name (for example, "PANumber") to identify this as the Personal Assistant access number.
 - Step 4** From the Device Pool menu, select the applicable device pool.
 - Step 5** From the Calling Search Space menu for the device, select the Personal Assistant calling search space you configured (for example, "PACSS").
 - Step 6** Click **Insert** to add the new CTI route point.
 - Step 7** Click **OK** to add a directory number for line 1 of the CTI Route Point. The Directory Number Configuration window for line 1 opens.

- Step 8** In the Directory Number field, enter the phone number to be used for calling Personal Assistant (for example, “4000”).
- Step 9** From the Partition menu, select the phone partition you configured (for example, “Employees”).
- Step 10** From the Calling Search Space menu for the line, select the Personal Assistant calling search space you configured (for example, “PACSS”).
- Ensure that you set the Calling Search Space for the line to the Calling Search Space for the device. Do not leave <None> as the Calling Search Space for the line.
- Step 11** Assign the Call Forward No Answer and Call Forward Busy to the **PACSS** calling search space.
- Step 12** If you want to use load balancing and have configured multiple CTI route points, enter the extension to forward to in the Call Forward No Answer and Call Forward Busy Destination field.
- Step 13** Click **Insert and Close**.
- For additional assistance, refer to the documentation and Help included with Cisco CallManager.
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Adding Personal Assistant as a JTAPI User

You need to add Personal Assistant as a JTAPI user. The settings you enter here are used when configuring a JTAPI telephony provider in Personal Assistant.

To Add Personal Assistant as a JTAPI User

- Step 1** In Cisco CallManager, select **User > Add a New User**.
- Step 2** Complete the following required fields:
- **First Name**—Use a descriptive name (for example, “Personal”).
 - **Last Name**—Use a descriptive name (for example, “Assistant”).
 - **UserID**—Use a descriptive name (for example, “PA”).
 - **User Password and Confirm Password**—Enter and confirm a password.
 - **PIN and Confirm PIN**—Enter and confirm a PIN.
- Step 3** Check the **Enable CTI Application Use** check box.
- Step 4** Click **Insert** to create the user.
- Step 5** In the left-hand column, click **Device Association**.
- Step 6** In the User Devices Assignment window, fill in the search field and click **Select Devices** to list the route points. Check the check boxes associated with the Device Name fields for the route points used as the Personal Assistant number, the automated attendant number, and the interceptor points.
- Step 7** Click **Update** to save your changes.
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Tip

If you do not select all of the CTI route points defined for the use of Personal Assistant, callers will hear a busy tone when calling Personal Assistant or the automated attendant, or calls to certain extensions will not be intercepted.

Adding Media Ports for Personal Assistant

Media ports terminate the media between Personal Assistant and the end-user Cisco IP Phones. Add a media port for each simultaneous Personal Assistant session you require. For example, if you need 24 simultaneous sessions, add 24 ports.

After configuring these ports in Cisco CallManager, you must also enter the number of ports in the Personal Assistant administration interface (see the [“Configuring Personal Assistant Servers”](#) section on page 4-10).

You create media ports as Cisco7960 devices, even if you are using other types of phones in your network.

This section contains two procedures for adding media ports. Do the applicable procedure for your version of Cisco CallManager:

- [To Add Media Ports for Personal Assistant \(Cisco CallManager 4.0 and Later\)](#), page 3-10
- [To Add Media Ports for Personal Assistant \(Cisco CallManager 3.3 and Earlier\)](#), page 3-11

To Add Media Ports for Personal Assistant (Cisco CallManager 4.0 and Later)

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- Step 1** In Cisco CallManager, select **Device > Add a New Device**.
- Step 2** From the Device Type drop-down list box, select **Phone**, and click **Next**.
- Step 3** From the Phone Type drop-down list box, select **Cisco7960**, and click **Next**. The Phone Configuration options page opens.
- Step 4** Enter the MAC address, as follows:
Enter the extension number, preceded by an adequate number of nines (as a place holder for all unoccupied digits to the left of the extension) so that the end result is a 12-digit number. For example, if the extension is 5001, the MAC address should be 999999995001.
- Step 5** From the Device Pool menu, select the applicable device pool.
- Step 6** From the Phone Button Template menu, select **Standard 7960**.
- Step 7** Click **Insert** to add the Device.
- Step 8** When you are asked if you want to configure line 1, click **OK**. The Directory Number Configuration page opens.
- Step 9** In the Directory Number field, enter the extension assigned to this port (for example, “5001”).
- Step 10** From the Partition menu, select the phone partition you configured (for example, “Employees”).
- Step 11** From the Voice Mail Profile menu, select **NoVoiceMail**. (Note that if you do not set this to NoVoiceMail, Personal Assistant cannot mark user messages with the sender name.)
- Step 12** From the Calling Search Space menu, select the calling search space configured for Personal Assistant (for example, “PACSS”).
- Step 13** Ensure that no values are entered for the Call Forward and Pickup settings.
- Step 14** In the Maximum Number of Calls field, enter **2**.
- Step 15** In the Busy Trigger field, enter **1**.
- Step 16** Click **Add**.
- Step 17** Repeat [Step 1](#) through [Step 16](#) for each port that you need to add.

For example, if you need 24 simultaneous sessions, follow these steps to create 24 media ports. Assign consecutive numbers to the ports (for example, “4001–4024”).

To Add Media Ports for Personal Assistant (Cisco CallManager 3.3 and Earlier)

- Step 1** In Cisco CallManager, select **Device > Add a New Device**.
 - Step 2** From the Device Type drop-down list box, select **Phone**, and click **Next**.
 - Step 3** From the Phone Type drop-down list box, select **Cisco7960**, and click **Next**. The Phone Configuration options page opens.
 - Step 4** Enter the MAC address, as follows:
Enter the extension number, preceded by an adequate number of nines (as a place holder for all unoccupied digits to the left of the extension) so that the end result is a 12-digit number. For example, if the extension is 5001, the MAC address should be 999999995001.
 - Step 5** From the Device Pool menu, select the applicable device pool.
 - Step 6** From the Phone Button Template menu, select **Standard 7960**.
 - Step 7** Click **Insert** to add the Device.
 - Step 8** When you are asked if you want to configure line 1, click **OK**. The Directory Number Configuration page opens.
 - Step 9** In the Directory Number field, enter the extension assigned to this port (for example, “5001”).
 - Step 10** From the Partition menu, select the phone partition you configured (for example, “Employees”).
 - Step 11** From the Voice Mail Profile menu, select **NoVoiceMail**. (Note that if you do not set this to NoVoiceMail, Personal Assistant cannot mark user messages with the sender name.)
 - Step 12** From the Calling Search Space menu, select the Personal Assistant calling search space you configured (for example, “PACSS”).
 - Step 13** From the Call Waiting menu, select **Off**.
 - Step 14** Ensure that no values are entered for the Call Forward and Pickup settings.
 - Step 15** Click **Insert** to save your changes.
 - Step 16** Repeat [Step 1](#) through [Step 15](#) for each port that you need to add.
For example, if you need 24 simultaneous sessions, follow these steps to create 24 media ports. Assign consecutive numbers to the ports (for example, “4001–4024”).
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**Tip**

You can use the Cisco Bulk Administrator Tool (BAT) to configure several ports at once.

Configuring Cisco Unity in Cisco CallManager for Integration with Personal Assistant

When adding Cisco Unity to Cisco CallManager, and setting the calling search space that you use for voice mail ports and for message waiting indicators, ensure that it contains the PAManagedEmployees partition, but not the PA partition. Otherwise, the message waiting indicators will not work.

You assign partitions and calling search spaces to voice mail ports on the Feature > Voice Mail > Cisco Voice Mail Port > Voice Port Configuration page of the Cisco CallManager Administration interface.

You use the Cisco CallManager Administration interface to assign partitions and calling search spaces to message waiting indicators in one of the following ways:

- On the Feature > Voice Mail > Message Waiting > Message Waiting Configuration page.
- On the Service Parameters Configuration page by going to Service > Service Parameters, and clicking Cisco Messaging Interface for the applicable server. Set the calling search spaces on the Service Parameters Configuration page only when a simplified message desk interface (SMDI)-compliant external voicemail system is used.

Refer to the documentation included with Cisco Unity and Cisco CallManager for detailed instructions on integrating Cisco Unity with Cisco CallManager.