Manager Assistant

Cisco Unified Communications Manager Assistant Overview

The Unified Communications Manager Assistant feature is a plug-in that an assistant can use to handle calls on behalf of a manager, intercept manager calls, and route them appropriately.

Manager Assistant supports up to 3500 managers and 3500 assistants. To accommodate this number of users, you can configure up to three Manager Assistant applications in one Unified Communications Manager cluster and assign managers and assistants to each instance of the application.

Manager Assistant supports shared line support and proxy line support.

Manager Assistant Architecture

The Manager Assistant architecture comprises the following:

- **Cisco IP Manager Assistant service**—After you install Unified Communications Manager, activate this service from the Cisco Unified Serviceability interface.

- **Assistant Console interface**—Allows assistants to access the Manager Assistant features on their computer to handle calls for managers. The Manager Assistant handles calls for an assistant and for as many as 33 managers.

- **Cisco Unified IP Phone interface:** Managers and assistants use softkeys and the Cisco Unified IP Phone Services button to access the Manager Assistant features.

For more information, see chapter Manager Assistant, in Feature Configuration Guide for Cisco Unified Communications Manager.

Manager Assistant Database Access Architecture

The database stores all Manager Assistant configuration information. When the manager or assistant logs in, the Cisco IP Manager Assistant service retrieves all data that is related to the manager or assistant from the database and stores it in memory. The database includes two interfaces:

- **Manager interface**—The manager phone makes available the manager features except Manager Configuration. Manager Assistant automatically logs in a manager in to the Cisco IP Manager Assistant service when the Cisco IP Manager Assistant service starts.

> **Note** Managers also have access to Unified Communications Manager features such as Do Not Disturb and Immediate Divert.

- **Assistant interface**—The assistant accesses the Manager Assistant features by using the Assistant Console application and the Cisco Unified IP Phone. The Assistant Console, an application, provides call-control functions such as answer, divert, transfer, and hold. The assistant uses the Assistant Console to log in and log out, to set up assistant preferences, and to display the **Manager Configuration** window that is used to configure manager preferences.

For more information, see chapter Manager Assistant, in Feature Configuration Guide for Cisco Unified Communications Manager.

Softkeys

Manager Assistant supports the following softkeys:

- Redirect
- Transfer to VoiceMail
- Do Not Disturb

Manager Assistant supports the following softkey templates:

- Standard Manager—Supports manager for proxy mode
- Standard Shared Mode Manager—Supports manager for shared mode
- Standard Assistant—Supports assistant in proxy or shared mode
- Standard User—The system makes call-processing (such as Hold and Dial) softkeys available with the Standard User template.

Manager Assistant Shared Line Overview

When you configure Manager Assistant in shared line mode, the manager and assistant share a directory number, for example, 8001. The assistant handles calls for a manager on the shared directory number. When a manager receives a call on 8001, both the manager phone and the assistant phone ring.

The Manager Assistant features that do not apply to shared line mode include Default Assistant Selection, Assistant Watch, Call Filtering, and Divert All Calls. An assistant cannot see or access these features on the Assistant Console application.

Manager Assistant Proxy Line Overview

When you configure Manager Assistant in proxy line mode, the assistant handles calls for a manager using a proxy number. The proxy number is not the directory number for the manager, but is an alternate number chosen by the system that an assistant uses to handle manager calls. In proxy line mode, a manager and an assistant have access to all features that are available in Manager Assistant, which include Default Assistant Selection, Assistant Watch, Call Filtering, and Divert All Calls.

Manager Assistant Prerequisites

- The user should install JRE on 32 or 64-bit Windows platform before the user upgrades the Manager Assistant client to a newer version for Releases 11.5(1)SU9, 12.0(1)SU4, and 14 onwards.

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Important   Before you perform the upgrade, ensure that you uninstall the Cisco Unified Communications Manager Assistant client that is currently installed on your machine. This is applicable from Releases 12.0(1)SU4 and 14 onwards.

- Manager Assistant supports the following browsers and platform:
  - Unified Communications Manager Assistant Administration and the Assistant Console are supported on Internet Explorer 11 with Windows 10 (64 bit) or later, Firefox with Windows 10 (64 bit) or later, and Safari with MacOS (10.x) or later.
  - On a computer running Windows 10 or Apple MAC OS X, customers can open one of the browsers specified above.

- To display Manager Assistant features in other languages, install the locale installer before you configure the Manager Assistant.

- The Assistant Console application is supported on computers that run Windows 10, or later.

- You must configure the phones and users, and associated the devices to the users. In addition, for shared line appearances between managers and assistants, you must configure the same directory number on the manager primary line and assistant secondary line.

- To add managers and assistants in bulk, install the Cisco Unified Communications Manager Bulk Administration Tool. For more information, see the *Bulk Administration Guide*.

Manager Assistant Task Flow for Proxy Lines

Before you begin

- Review Manager Assistant Prerequisites, on page 3.

Procedure

	Command or Action	Purpose
Step 1	Run the Cisco Unified CM Assistant Configuration Wizard, on page 4	
Step 2	Configure Manager And Assign Assistant For Proxy Line, on page 9	
Step 3	Configure Assistant Line Appearances for Proxy Line, on page 11	
Step 4	Install Assistant Console Plugin, on page 29	The assistant accesses the Unified Communications Manager Assistant features by using the Assistant Console application and the Cisco Unified IP Phone. The Assistant Console provides call-control functions such as answer, divert, transfer, and hold.
Step 5	Configure the manager and Assistant Console applications.	See Cisco Unified Communications Manager Assistant User Guide for Cisco Unified Communications Manager.

Run the Cisco Unified CM Assistant Configuration Wizard

You can run the Cisco Unified CM Assistant Configuration Wizard to automatically create partitions, calling search spaces, and route points. The wizard also creates Bulk Administration Tool (BAT) templates for the manager phones, the assistant phones, and all other user phones. You can use the BAT templates to configure the managers, assistants, and all other users. For more information about BAT, see Bulk Administration Guide for Cisco Unified Communications Manager .

Before you begin

Ensure that the configuration wizard runs on the same server (the Unified Communications Manager server) as the Bulk Administration Tool.

Procedure

Step 1   From Cisco Unified CM Administration, choose **Application** > **Cisco Unified CM Assistant Configuration Wizard**.

Step 2   Click **Next** to begin the Cisco Unified CM Assistant Configuration wizard process.

Step 3   In the **Partition for Managers** window, enter a name, provide a description, and then click **Next**. Alternatively, you can accept the default partition name and description.

Step 4   In the **Partition for CTI Route Point** window, enter a name, provide a description, and then click **Next**. Alternatively, you can accept the default CTI route point name.

Step 5   In the **Partition for All Users** window, enter a name, provide a description and then click **Next**. Alternatively, you can accept the default partition name and description for all users.

Step 6   In the **Intercom Partition** window, enter a name, provide a description, and then click **Next**. Alternatively, you can accept the default intercom partition name.

Step 7	In the **Assistant Calling Search Space** window, enter a name, and provide a description. Alternatively, you can use the default calling search space name and description.
	The Available Partitions and Selected Partitions boxes under the Route Partitions for this Calling Search Space automatically list Partitions for the Assistant Calling Search Space. You can accept the default values or you can choose the applicable partition from the Available Partitions box. Use the up and down arrows to move partitions from one box to the other.
Step 8	Click **Next**.
Step 9	In the **Everyone Calling Search Space** window, enter a name, and provide a description. Alternatively, you can accept the default calling search space name and description for everyone.
	The Available Partitions and Selected Partitions boxes under the Route Partitions for this Calling Search Space automatically list Partitions for the Assistant Calling Search Space. You can accept the default values or you can choose the applicable partition from the Available Partitions box. Use the up and down arrows to move partitions from one box to the other.
Step 10	Click **Next**.
	If you have existing calling search spaces that are configured on the system, the **Existing Calling Search Spaces** window is displayed; otherwise, proceed to the next step.
	Manager Assistant requires that the existing calling search spaces add the prefix **Generated_Route Point** and **Generated_Everyone** partitions. The Available Calling Search Spaces and Selected Calling Search Spaces boxes automatically list these partitions. Use the up and down arrows to move partitions from one box to the other.

> **Note** The prefix that is added to the existing calling search spaces may change if the administrator has changed the names of the partitions.

Step 11	Click **Next**.
Step 12	In the **CTI Route Point** window, enter a name in the CTI route point name field; otherwise, use the default CTI route point name.
Step 13	From the drop-down list, choose the appropriate device pool.
Step 14	Enter a route point directory number; otherwise, use the default route point directory number.
Step 15	From the drop-down list, choose the appropriate numbering plan and then click **Next**.
Step 16	In the **Phone Services** window, enter the primary phone service name; otherwise, use the default Phone Service name.
Step 17	From the drop-down list, choose the primary Cisco Unified Communications Manager Assistant server or enter a server name or IP address.
Step 18	Enter the secondary phone service name; otherwise, use the default phone service name.
Step 19	From the drop-down list, choose the secondary Cisco Unified Communications Manager Assistant server or enter a server name or IP address and then click **Next**.
	The **Confirmation** window is displayed. It provides all the information that you chose. If the information is not correct, you can cancel the configuration process or return to the previous configuration windows.
Step 20	Click **Finish**.
	Upon completion, a final status window is displayed.
	Any errors that the configuration wizard generates is sent to a trace file. Access this file by using the following CLI command: **file get activelog tomcat/logs/ccmadmin/log4j**

What to do next

The Cisco Unified CM Assistant Configuration Wizard only creates the Cisco IP Manager Assistant service parameters. You must enter the remaining service parameters manually. For service parameter information, see Manager Assistant Service Parameters for Proxy Line, on page 6.

Manager Assistant Service Parameters for Proxy Line

From Cisco Unified CM Administration, choose **System** > **Service Parameters**. Choose the server on which the Cisco IP Manager Assistant service is active and click **?** for detailed descriptions.

Setting	Description
Cisco IP Manager Assistant (Active) Parameters	
CTIManager (Primary) IP Address	This parameter specifies the IP address of the primary CTIManager that this Cisco IPMA process calls. No default value.
CTIManager (Backup) IP Address	This parameter specifies the IP address of the backup CTIManager that this Cisco IPMA process calls when primary CTIManager is down. No default value.
Route Point Device Name for Proxy Mode	This parameter specifies the device name of the CTI route point that this Cisco IPMA serve all calls to managers' primary lines for intelligent call routing. Cisco recommends that you use same CTI route point device for all servers running the IP must configure the CTI route point device name if any manager or assistant will be config mode.
CAPF Profile Instance Id for Secure Connection to CTIManager	This service parameter specifies the Instance ID of the Application CAPF Profile for the **IPMASecureSysUser** that this Manager Assistant will use to open a secure connection t Configure this parameter if **CTIManager Connection Security Flag** is enabled.
Clusterwide Parameters (Parameters that apply to all servers)	
Important Click **Advanced** to view the hidden parameters.	
Cisco IPMA Server (Primary) IP Address	This parameter specifies the IP address of the primary Cisco IPMA server. No default value.
Cisco IPMA Server (Backup) IP Address	This parameter specifies the IP address of the backup Cisco IPMA server. The backup se IPMA service when the primary IPMA server fails. No default value.
Cisco IPMA Server Port	This parameter specifies the TCP/IP port on the Cisco IPMA servers to which the IPMA A will open socket connections. You may change the parameter if a port conflict exists. Default value: 2912

Setting	Description
Cisco IPMA Assistant Console Heartbeat Interval	This parameter specifies the interval, in seconds, at which the Cisco IPMA server sends (commonly referred to as heartbeat) to the IPMA Assistant Consoles. The IPMA Assist failover when they fail to receive heartbeat from the server before the time that is specif expires. Default value: 30 seconds
Cisco IPMA Assistant Console Request Timeout	This parameter specifies the time, in seconds, that the IPMA Assistant Consoles wait t from the Cisco IPMA server. Default value: 30 seconds
Cisco IPMA RNA Forward Calls	This parameter determines whether Cisco IPMA Ring No Answer (RNA) forwarding values are **True** (Cisco IPMA forwards unanswered calls to next available assistant) or does not forward calls). This parameter works in conjunction with the **Cisco IPMA RNA Timeout** parameter after the time that is specified in the **Cisco IPMA RNA Timeout** parameter. If a voic specified for the line, unanswered calls that cannot be forwarded to an assistant are ser this timer expires. Default value: False
Alpha Numeric UserID	This parameter determines whether Cisco IPMA Assistant Phone uses an alphanumeric user ID. Default value: True
Cisco IPMA RNA Timeout	This parameter specifies the time, in seconds, that the Cisco IPMA server waits befor unanswered call to the next available assistant. This parameter works in conjunction w **RNA Forward Calls** parameter; forwarding occurs only if the **Cisco IPMA RNA Forw** is set to **True**. Default value: 10 seconds
CTIManager Connection Security Flag	This parameter determines whether security for the Cisco IP Manager Assistant servi connection is enabled. If it is enabled, Cisco IPMA opens a secure connection to CTI CAPF profile that is configured for the instance ID (as specified in the **CAPF Profile Secure Connection to CTIManager** service parameter) for the application user **IPM** Default value: Non Secure To enable security, you must select an instance ID in the **CAPF Profile Instance ID for to CTIManager** service parameter.
Redirect call to Manager upon failure to reach Assistant	This parameter determines whether the Cisco Unified IP Manager Assistant applicatio back to the intended manager if the call fails to reach the selected proxy assistant. Default value: False
Advanced Clusterwide parameters	
Important	Configure unique IP addresses for each pool so that the same Cisco IPMA server IP address does not ap one pool.

Setting	Description
Enable Multiple Active Mode	This parameter determines whether multiple instances of the Cisco IP Manager Assistant run for scalability. If it is enabled, Cisco IPMA can run on the other nodes as configured Pool 3 parameters. To enable multiple active mode, you must enter the IP addresses of the nodes on which y the additional instances of Cisco IPMA. Configure the Cisco IP Manager Assistant servi those nodes. Default value: False
Pool 2: Cisco IPMA Server (Primary) IP Address	If multiple active mode is enabled, this parameter specifies the IP address of the primary Ci of the second instance of Cisco IPMA. Configure the Cisco IP Manager Assistant service parameters on this node.
Pool 2: Cisco IPMA Server (Backup) IP Address	If multiple active mode is enabled, this parameter specifies the IP address of the backup Ci of the second instance of Cisco IPMA. The backup server provides IPMA service when th server fails. Configure the Cisco IP Manager Assistant service parameters on this node.
Pool 3: Cisco IPMA Server (Primary) IP Address	If multiple active mode is enabled, this parameter specifies the IP address of the primary Ci of the third instance of Cisco IPMA. Configure the Cisco IP Manager Assistant service parameters on this node.
Pool 3: Cisco IPMA Server (Backup) IP Address	If multiple active mode is enabled, this parameter specifies the IP address of the primary Ci of the third instance of Cisco IPMA. The backup server provides IPMA service when the server fails. Configure the Cisco IP Manager Assistant service parameters on this node.
Clusterwide Parameters (Softkey Templates)	
Important Configure these parameters if you want to use the Manager Assistant automatic configuration for managers	
Assistant Softkey Template	This parameter specifies the assistant softkey template that is assigned to assistant devices Configuration. The value that is specified in this parameter is used when the **Automatic C** check box is checked on the **Cisco IPMA Assistant Configuration** page.
Manager Softkey Template for Proxy Mode	This parameter specifies the manager softkey template for proxy mode that is assigned to during Automatic Configuration. This parameter applies only for managers that use prox
Clusterwide Parameters (IPMA Device Configuration Defaults for Proxy Mode)	
Manager Partition	This parameter defines the partition that is assigned to manager lines that IPMA handles on during Automatic Configuration. Make sure the partition you want to use has already bee Unified CM Administration. If the **Cisco IPMA Configuration Wizard** is run, it will po This parameter applies only for managers that use proxy mode.
All User Partition	This parameter specifies the partition that is configured on all proxy lines and the intercom devices, as well as the intercom line on manager devices, during Automatic Configuratio partition you want to use has already been added to Cisco Unified CM Administration. If **Configuration Wizard** is run, it will populate this value. This parameter applies only fo assistants that use proxy mode.

Setting	Description
IPMA Calling Search Space	This parameter specifies the calling search space that is configured for manager lines that IPMA handles and the intercom line, as well as the assistant intercom line on ass Automatic Configuration. Make sure the calling search space you want to use has alr Cisco Unified CM Administration. If **Cisco IPMA Configuration Wizard** is run, it value. This parameter applies only for managers or assistants that use proxy mode.
Manager Calling Search Space	This parameter defines the manager calling search space that is configured on proxy devices during Automatic Configuration. This calling search space must be a calling already exists in the system. If **Cisco IPMA Configuration Wizard** is run, it will pop parameter applies only for assistants that use proxy mode.
Cisco IPMA Primary Phone Service	This parameter defines the IP phone service to which manager/assistant devices will b Automatic Configuration. If **Cisco IPMA Configuration Wizard** is run, it will popu parameter applies only for managers or assistants that use proxy mode.
Cisco IPMA Secondary Phone Service	This parameter defines the secondary IP phone service to which manager or assistant subscribed during Automatic Configuration. If **Cisco IPMA Configuration Wizard** is this value. This parameter applies only for managers or assistants that use proxy mod
Clusterwide Parameters (Proxy Directory Number Range for Proxy Mode)	
Starting Directory Number	This parameter specifies the starting directory number that is used as the starting num generation of proxy directory numbers during IPMA assistant configuration. After an a line number is used for an assistant, the next number will be generated for the next as This parameter applies only for assistants that use proxy mode.
Ending Directory Number	This parameter specifies the ending directory number for automatic generation of prox during IPMA assistant configuration. Configuration will stop at this number. This par for assistants that use proxy mode.
Clusterwide Parameters (Proxy Directory Number Range for Proxy Mode)	
Number of Characters to be Stripped from Manager DN	This parameter specifies the number of characters to be stripped from the manager dir in the process of generating the proxy DN. Generating a proxy DN may involve stripp digits and adding a prefix. Digits are stripped starting from the left. This parameter appl that use proxy mode.
Prefix for Manager DN	This parameter specifies the prefix to be added to a manager DN in the process of ger DN. Generating a proxy DN may involve some stripping of digits and adding a prefix applies only for assistants that use proxy mode.

Configure Manager And Assign Assistant For Proxy Line

For information about configuring a new user and associating a device to the user, see Administration Guide for Cisco Unified Communications Manager.

Note Make sure you configure manager information before you configure assistant information for an assistant.

Procedure

Step 1 From Cisco Unified CM Administration, choose **User Management** > **End User**.

Step 2 Click **Find**.
The search result displays all the end users that are configured in Unified Communications Manager.

Step 3 From the **Related Links** drop-down list, choose **Manager Configuration** and click **Go**.

> **Tip** To view existing assistant configuration information, click the assistant name in the Associated Assistants list and click **View Details**. The **Cisco Unified CM Assistant - Assistant Configuration** window is displayed. To return to the manager configuration information, click the manager name in the Associated Managers list and click **View Details**.

The **Cisco Unified CM Assistant - Manager Configuration** window is displayed.

Step 4 From the **Device Name/Profile** drop-down list, choose the device name or device profile to associate a device name or device profile with a manager. For more information about Extension Mobility with Manager Assistant, see Manager Assistant Interactions, on page 30.

> **Note** If the manager telecommutes, click the **Mobile Manager** check box and optionally choose a device profile from the **Device Name/Profile** drop-down list. After you choose a device profile, the manager must log in to the phone by using extension mobility before accessing Manager Assistant.

Step 5 From the **Intercom Line** drop-down list, choose the intercom line appearance for the manager, if applicable.

> **Note** The chosen intercom line applies to the Manager Assistant and Unified Communications Manager intercom features.

Step 6 From the **Assistant Pool** drop-down list, choose the appropriate pool number (1 to 3).

Step 7 From the **Available Lines** selection box, choose a line that you want Manager Assistant to control and click the down arrow to make the line display in the Selected Lines selection box. Configure up to five Manager Assistant—controlled lines.

> **Tip** To remove a line from the Selected Lines selection box and from Manager Assistant control, click the up arrow.

Step 8 Check the **Automatic Configuration** check box to automatically configure the softkey template, subscribe to the Manager Assistant phone service, calling search space, and partition for Manager Assistant—Controlled selected lines and intercom line; and Auto Answer with Speakerphone for intercom line for the manager phone based on the Cisco IP Manager Assistant service parameters.

> **Note** Automatic Configuration for intercom applies only when using the Manager Assistant intercom feature for the Cisco Unified IP Phones 7940 and 7960.

Step 9 Click **Save**.
If you checked the **Automatic Configuration** check box and the service parameters are invalid, a message displays. Ensure that the service parameters are valid. Upon successful completion of the automatic configuration, the manager device resets. If you configured a device profile, the manager must log out and log in to the device for settings to take effect.

Configure Assistant Line Appearances for Proxy Line

A proxy line specifies a phone line that appears on the assistant Cisco Unified IP Phone. Manager Assistant uses proxy lines to manage calls that are intended for a manager. The administrators can manually configure a line on the assistant phone to serve as the proxy line, or you can enable the **Automatic Configuration** check box to generate a DN and to add the line to the assistant phone.

Note
1. Make sure that you configure manager information and assign an assistant to the manager before you configure assistant information for an assistant.

2. If you want to automatically configure proxy line on the assistant phone, configure the service parameters in **Proxy Directory Number Range** and **Proxy Directory Number Prefix** sections.

Procedure

Step 1   From Cisco Unified CM Administration, choose **User Management** > **End User**.

Step 2   Click **Find**.

Step 3   Click on the user name to display user information for the chosen assistant
The **End User Configuration** window is displayed.

Step 4   From the **Related Links** drop-down list, choose **Assistant Configuration** and click **Go**.

Note   The system automatically sets the softkey template and intercom line on the basis of the Cisco IP Manager Assistant service parameter settings when the **Automatic Configuration** check box is checked. In addition, the system also sets Auto Answer with Speakerphone for intercom line.

The **Assistant Configuration** window is displayed.

Step 5   From the **Device Name** drop-down list, choose the device name to associate with the assistant.

Step 6   From the **Intercom Line** drop-down list, choose the incoming intercom line appearance for the assistant.

Step 7   From the **Primary Line** drop-down list, choose the primary line for the assistant.

Step 8   To associate the manager line to the assistant line, perform the following steps from the Manager Association to Assistant Line selection box:

a) From the **Available Lines** drop-down list, choose the assistant line that will be associated with the manager line.

b) From the **Manager Names** drop-down list, choose the preconfigured manager name for whom this proxy line will apply.

c) From the **Manager Lines** drop-down list, choose the manager line for which this proxy line will apply.

Step 9   Click **Save**.
The update takes effect immediately. If you chose **Automatic Configuration**, the assistant device automatically resets.

Manager Assistant Task Flow for Shared Lines

Before you begin

- Review .

Procedure

	Command or Action	Purpose
Step 1	Configure Partitions for Manager Assistant Shared Line Support, on page 13	Configure a partition for lines that is used by Manager Assistant.
Step 2	Configure Calling Search Spaces for Manager Assistant Shared Line Support, on page 14	Configure calling search spaces for manager and assistant lines.
Step 3	Configure Cisco IP Manager Assistant Service Parameters, on page 15	Configure these parameters to use automatic configuration for managers and assistants.
Step 4	Configure Intercom Settings • Configure an Intercom Partition, on page 16 • Configure an Intercom Calling Search Space • Configure an Intercom Directory Number • Configure an Intercom Translation Pattern	
Step 5	Configure Multiple Manager Assistant Pool, on page 18	Configure multiple pools if you need to support a large number of managers and assistants. You can configure up to three active Cisco IP Manager Assistant servers, with each managing up to 2500 pairs of managers and assistants.
Step 6	Configure Secure TLS Connection to CTI for Manager Assistant • Configure IPMASecureSysUser Application User, on page 19 • Configure CAPF Profile, on page 19 • Configure Cisco WebDialer Web Service , on page 21	Follow these procedures if your system is running in mixed mode.
Step 7	Configure CTI Route Point, on page 22	Cisco Unified Communications Manager Assistant requires creation of CTI route point to intercept and route calls from managers.
Step 8	Configure IP Phone Services for Manager and Assistant, on page 22	

	Command or Action	Purpose
Step 9	Configure Phone Button Templates for Manager, Assistant, and Everyone, on page 25	
Step 10	Configure Manager and Assign Assistant for Shared Line Mode, on page 27	
Step 11	Configure Assistant Line Appearances for Shared Line, on page 28	
Step 12	Install Assistant Console Plugin, on page 29	The assistant accesses the Cisco Unified Communications Manager Assistant features by using the Assistant Console application and the Cisco Unified IP Phone. The Assistant Console provides call-control functions such as answer, divert, transfer, and hold.
Step 13	Configure the manager and assistant console applications.	See Cisco Unified Communications Manager Assistant User Guide for Cisco Unified Communications Manager.

Configure Partitions for Manager Assistant Shared Line Support

You must create three partitions: Generated_Everyone, Generated_Managers, and Generated_Route_Point.

Procedure

Step 1 From Cisco Unified CM Administration, choose **Call Routing** > **Class of Control** > **Partition**.

Step 2 Click **Add New** to create a new partition.

Step 3 In the **Partition Name, Description** field, enter a name for the partition that is unique to the route plan.

Partition names can contain alphanumeric characters, as well as spaces, hyphens (-), and underscore characters (_). See the online help for guidelines about partition names.

Step 4 Enter a comma (,) after the partition name and enter a description of the partition on the same line.

The description can contain up to 50 characters in any language, but it cannot include double quotes ("), percentage sign (%), ampersand (&), backslash (\), angle brackets (<>), or square brackets ([ ]).

If you do not enter a description, Cisco Unified Communications Manager automatically enters the partition name in this field.

Step 5 To create multiple partitions, use one line for each partition entry.

Step 6 From the **Time Schedule** drop-down list, choose a time schedule to associate with this partition.

The time schedule specifies when the partition is available to receive incoming calls. If you choose **None**, the partition remains active at all times.

Step 7 Select one of the following radio buttons to configure the **Time Zone**:

- **Originating Device**—When you select this radio button, the system compares the time zone of the calling device to the **Time Schedule** to determine whether the partition is available is available to receive an incoming call.

- **Specific Time Zone**—After you select this radio button, choose a time zone from the drop-down list. The system compares the chosen time zone to the **Time Schedule** to determine whether the partition is available is available to receive an incoming call.

Step 8   Click **Save**.

Partition Name Guidelines for Manager Assistant Shared Line Support

The list of partitions in a calling search space is limited to a maximum of 1024 characters. This means that the maximum number of partitions in a CSS varies depending on the length of the partition names. Use the following table to determine the maximum number of partitions that you can add to a calling search space if partition names are of fixed length.

Table 1: Partition Name Guidelines

Partition Name Length	Maximum Number of Partitions
2 characters	340
3 characters	256
4 characters	204
5 characters	172
...	...
10 characters	92
15 characters	64

Configure Calling Search Spaces for Manager Assistant Shared Line Support

A calling search space is an ordered list of route partitions that are typically assigned to devices. Calling search spaces determine the partitions that calling devices can search when they are attempting to complete a call.

You must create two calling search spaces: Generated_CSS_I_E and Generated_CSS_M_E.

Procedure

Step 1   From Cisco Unified CM Administration, choose **Call Routing** > **Class of Control** > **Calling Search Space**.

Step 2   Click **Add New**.

Step 3   In the **Name** field, enter a name.

Ensure that each calling search space name is unique to the system. The name can include up to 50 alphanumeric characters and can contain any combination of spaces, periods (.), hyphens (-), and underscore characters (_).

Step 4   In the **Description** field, enter a description.

The description can include up to 50 characters in any language, but it cannot include double-quotes ("), percentage sign (%), ampersand (&), back-slash (\), or angle brackets (<>).

Step 5   From the **Available Partitions** drop-down list, perform one of the following steps:

- • For a single partition, select that partition.
- • For multiple partitions, hold down the **Control (CTRL)** key, then select the appropriate partitions.

Step 6   Select the down arrow between the boxes to move the partitions to the **Selected Partitions** field.

Step 7   (Optional) Change the priority of selected partitions by using the arrow keys to the right of the **Selected Partitions** box.

Step 8   Click **Save**.

Configure Cisco IP Manager Assistant Service Parameters

Configure Cisco IP Manager Assistant service parameters if you want to use the Manager Assistant automatic configuration for managers and assistants. You must specify the cluster-wide parameters once for all Cisco IP Manager Assistant services and general parameters for each Cisco IP Manager Assistant service that is installed.

Procedure

Step 1   From Cisco Unified CM Administration, choose **System** > **Service Parameters**.

Step 2   From the **Server** drop-down list, choose the server on which the Cisco IP Manager Assistant service is active.

Step 3   From the **Service** drop-down list, choose **Cisco IP Manager Assistant** service.
The **Service Parameter Configuration** window, which lists the parameters, is displayed.

Step 4   Configure the **Cisco IP Manager Assistant Parameters**, **Clusterwide Parameters (Parameters that apply to all servers)**, and **Clusterwide Parameters (Softkey Templates)**.

click ? for detailed descriptions.

Step 5   Click **Save**.

Configure Intercom Settings

Procedure

	Command or Action	Purpose
Step 1	Configure an Intercom Partition, on page 16	
Step 2	Configure an Intercom Calling Search Space, on page 16	
Step 3	Configure an Intercom Directory Number, on page 17	
Step 4	Configure an Intercom Translation Pattern, on page 17	

Configure an Intercom Partition

Procedure

Step 1   From Cisco Unified CM Administration, choose **Call Routing** > **Intercom** > **Intercom Route Partition**.

The **Find and List Intercom Partitions** window appears.

Step 2   Click **Add New**.

An **Add New Intercom Partition** window appears.

Step 3   Under the **Intercom Partition Information** section, in the **Name** box, enter the name and description of the intercom partition that you want to add.

> **Note**   To enter multiple partitions, use one line for each partition entry. You can enter up to 75 partitions; the names and descriptions can have up to a total of 1475 characters. The partition name cannot exceed 50 characters. Use a comma (,) to separate the partition name and description on each line. If a description is not entered, Unified Communications Manager uses the partition name as the description.

Step 4   Click **Save**.

Step 5   Locate the partition that you want to configure.
Intercom Partition Configuration window is displayed

Step 6   Configure the fields in the Intercom Partition Configuration field area. See the online help for more information about the fields and their configuration options.

Step 7   Click **Save**.

The **Intercom Partition Configuration** window appears.

Step 8   Enter the appropriate settings. For detailed information about the Intercom Partition Configuration parameters, see online help.

Step 9   Click **Save**.

Step 10   Click **Apply Config**.

Configure an Intercom Calling Search Space

Procedure

Step 1   In the menu bar, choose **Call Routing** > **Intercom** > **Intercom Calling Search Space**.

Step 2   Click the **Add New**.

Step 3   Configure the fields in the Intercom Calling Search Space field area. For more information on the fields and their configuration options, see Online Help.

Step 4   Click **Save**.

Configure an Intercom Directory Number

Procedure

Step 1   Choose **Call Routing** > **Intercom** > **Intercom Directory Number**.

The **Find and List Intercom Directory Numbers** window is displayed.

Step 2   To locate a specific intercom directory number, enter search criteria and click **Find.**
A list of intercom directory numbers that match the search criteria displayed.

Step 3   Perform one of the followings tasks:

a)   To add an intercom directory number, click **Add New**.

b)   To update an intercom directory number, click the intercom directory number to update.

The **Intercom Directory Number Configuration** window displayed.

Step 4   Configure the fields in the Intercom Directory Number Configuration field area. For more information on the fields and their configuration options, see Online Help.

Step 5   Click **Save**.

Step 6   Click **Apply Config**.

Step 7   Click **Reset Phone**.

Step 8   Restart devices.

During the restart, the system may drop calls on gateways.

Configure an Intercom Translation Pattern

Procedure

Step 1   Choose **Call Routing** > **Intercom** > **Intercom Translation Pattern**.

The **Find and List Intercom Translation Patterns** window appears.

Step 2   Perform one of the followings tasks:

a)   To copy an existing intercom translation pattern, locate the partition to configure, click **Copy** eside the intercom translation pattern to copy.

b)   To add a new intercom translation pattern, click the **Add New**.

Step 3   Configure the fields in the Intercom Translation Pattern Configuration field area. For more information on the fields and their configuration options, see Online Help.

Step 4   Click **Save**.

Ensure that the intercom translation pattern that uses the selected partition, route filter, and numbering plan combination is unique. if you receive an error that indicates duplicate entries, check the route pattern or hunt pilot, translation pattern, directory number, call park number, call pickup number, or meet-me number configuration windows.

The **Intercom Translation Pattern Configuration** window displays the newly configured intercom translation pattern.

What to do next

Refer to the Manager Assistant Task Flow for Shared Lines, on page 12 to determine the next task to complete.

Configure Multiple Manager Assistant Pool

Procedure

Step 1   From Cisco Unified CM Administration, choose **System** > **Service Parameters**.

Step 2   From the **Server** drop-down list, choose the server on which the Cisco IP Manager Assistant service is active.

Step 3   From the **Service** drop-down list, choose the **Cisco IP Manager Assistant** service.
The **Service Parameter Configuration** window, which lists the parameters, is displayed.

Step 4   Click **Advanced**.
The advanced parameters for **Clusterwide Parameters (Parameters that apply to all servers)** are displayed.

Step 5   Configure the following parameters to add multiple manager assistant pools in **Clusterwide Parameters (Parameters that apply to all servers)**:

    a) **Enable Multiple Active Mode**—The default is False. When this parameter is set to True, the administrator can configure up to 7000 managers and assistants by using multiple pools.

    b) **Pool 2: Cisco IPMA Server (Primary) IP Address**—No default. The administrator must manually enter this IP address. Administrator can assign up to 2500 managers and assistants to this address.

    c) **Pool 2: Cisco IPMA Server (Backup) IP Address**—No default. The administrator must manually enter this IP address.

    d) **Pool 3: Cisco IPMA Server (Primary) IP Address**—No default. The administrator must manually enter this IP address and can assign up to 2500 managers and assistants to this address.

    e) **Pool 3: Cisco IPMA Server (Backup) IP Address**—No default. The administrator must manually enter this IP address.

    click ? for detailed descriptions.

Step 6   Click **Save**.

What to do next

Refer to the Manager Assistant Task Flow for Shared Lines, on page 12 to determine the next task to complete.

Configure Secure TLS Connection to CTI for Manager Assistant

Manager Assistant uses WDSecureSysUser application user credentials to establish a secure TLS connection to CTI to make calls.

To configure the WDSecureSysUser application user to establish a secure TLS connection, complete the following tasks.

Before you begin

- Install and configure the Cisco CTL Client.

  For more information about CTL Client, see Security Guide for Cisco Unified Communications Manager.

- Verify that the **Cluster Security Mode** in the **Enterprise Parameters Configuration** window is **1** (mixed mode). Operating the system in mixed mode impacts other security functions in your system. If your system is not currently running in mixed mode, do not switch to mixed mode until you understand these interactions. For more information, see Security Guide for Cisco Unified Communications Manager.

-
- Activate the Cisco Certificate Authority Proxy Function (CAPF) service on the first node.

Procedure

	Command or Action	**Purpose**
Step 1	Configure IPMASecureSysUser Application User, on page 19	Configure IPMASecureSysUser Application User.
Step 2	Configure CAPF Profile, on page 19	Configure Certificate Authority Proxy Function (CAPF) Profile for the IPMASecureSysUser Application User.
Step 3	Configure Cisco WebDialer Web Service , on page 21	Configure service parameters for the Cisco IP Manager Assistant service.

Configure IPMASecureSysUser Application User

Use this procedure to configure IPMASecureSysUser application user.

Procedure

Step 1 From Cisco Unified CM Administration, choose **User Management** > **Application User**.

Step 2 Click **Find**.

Step 3 From the **Find and List Application Users Application** window, choose **WDSecureSysUser**.

Step 4 Configure the fields in the **Application User Configuration** window and click **Save**.

Configure CAPF Profile

Certificate Authority Proxy Function (CAPF) is a component that performs tasks to issue and authenticate security certificates. When you create an application user CAPF profile, the profile uses the configuration details to open secure connections for the application.

Procedure

Step 1 From Cisco Unified CM Administration, choose **User Management** > **Application User CAPF Profile**.

Step 2   Perform one of the following tasks:

- Click **Add New** in the **Find** window, to add a new CAPF profile.
- Click **Copy** for that record in the **Copy** column, to copy an existing profile, and locate the appropriate profile.

To update an existing entry, locate and display the appropriate profile.

Step 3   Configure or update the relevant CAPF profile fields. See the Related Topics section information about the fields and their configuration options.

Step 4   Click **Save**.

Step 5   Repeat the procedure for each application and end user that you want to use security.

CAPF Profile Settings

Setting	Description
Application User	From the drop-down list, choose the application user for the CAPF operation. This setting displays configured application users.
	This setting does not appear in the **End User CAPF Profile** window.
End User ID	From the drop-down list, choose the end user for the CAPF operation. This setting displays configured end users.
	This setting does not appear in the **Application User CAPF Profile** window.
Instance ID	Enter 1 to 128 alphanumeric characters (a-z, A-Z, 0-9). The Instance ID identifies the user for the certificate operation.
	You can configure multiple connections (instances) of an application. To secure the connection between the application and CTIManager, ensure that each instance that runs on the application PC (for end users) or server (for application users) has a unique certificate.
	This field relates to the CAPF Profile Instance ID for Secure Connection to CTIManager service parameter that supports web services and applications.
Certificate Operation	From the drop-down list, choose one of the following options:
	• **No Pending Operation**—This message is displayed when no certificate operation is occurring. (default setting)
	• **Install/Upgrade**—This option installs a new certificate or upgrades an existing locally significant certificate for the application.
Authentication Mode	The authentication mode for the Install/Upgrade certificate operation specifies By Authentication String, which means CAPF installs, upgrades, or troubleshoots a locally significant certificate only when the user or administrator enters the CAPF authentication string in the **JTAPI/TSP Preferences** window.

Setting	Description
Authentication String	To create your own authentication string, enter a unique string. Each string must contain 4 to 10 digits. To install or upgrade a locally significant certificate, the administrator must enter the authentication string in the JTAPI/TSP preferences GUI on the applicationPC. This string supports one-time use only; after you use the string for the instance, you cannot use it again.
Generate String	To automatically generate an authentication string, click this button. The 4-to10-digit authentication string appears in the **Authentication String** field.
Key Size (bits)	From the drop-down list, choose the key size for the certificate. The default setting is 1024. The other option for key size is 512. Key generation, which is set at low priority, allows the application to function while the action occurs. Key generation may take up to 30 or more minutes.
Operation Completes by	This field, which supports all certificate operations, specifies the date and time by which you must complete the operation. The values that are displayed apply for the first node. Use this setting with the **CAPF Operation Expires in (days)** enterprise parameter, which specifies the default number of days in which the certificate operation must be completed. You can update this parameter at any time.
Certificate Operation Status	This field displays the progress of the certificate operation, such as pending, failed, or successful. You cannot change the information that is displayed in this field.

Configure Cisco WebDialer Web Service

Procedure

Step 1	From Cisco Unified CM Administration, choose **System** > **Service Parameters**.
Step 2	From the **Server** drop-down list, choose the server on which the Cisco WebDialer Web service is active.
Step 3	From the **Service** drop-down list, choose the **Cisco WebDialer Web** service. A list of parameters appears.
Step 4	Navigate to and update the CTIManager Connection Security Flag and CAPF Profile Instance ID for Secure Connection to CTIManager parameters. To view parameter descriptions, click the parameter name link. **Note** CTIManager supports IPv4 and IPv6 addresses.
Step 5	Click **Save**.
Step 6	Repeat the procedure on each server on which the service is active.

What to do next

Refer to the Manager Assistant Task Flow for Shared Lines, on page 12 to determine the next task to complete.

Configure CTI Route Point

Procedure

Step 1	From Cisco Unified CM Administration, choose **Device** > **CTI Route Point**.
Step 2	Click **Add New**. The **CTI Route Point Configuration** window is displayed.
Step 3	In the **Device Name** field, enter the device name.
Step 4	From the **Device Pool** drop-down list, choose **Default**.
Step 5	From the **Calling Search Space** drop-down list, choose **Generated_CSS_M_E**.
Step 6	Check the **Use Device Pool Calling Party Transformation CSS** check box.
Step 7	Click **Save**. `Add successful` status message is displayed.
Step 8	From the Association area, click **Line [1] - Add a new DN**. The **Directory Number Configuration** window is displayed.
Step 9	Enter a directory number in the **Directory Number** field.
Step 10	From the **Route Partition** drop-down list, choose **Generated_Route_Point**.
Step 11	Click **Save**.

Configure IP Phone Services for Manager and Assistant

Procedure

Step 1	From Cisco Unified CM Administration, choose **Device** > **Device Settings** > **Phone Services**.
Step 2	Click **Add New**. The **IP Phone Services Configuration** window is displayed.
Step 3	For each supported phone for managers and assistants, enter the required fields and click **Save**. See Cisco IP Phone Services Configuration Fields, on page 22 for more information about the fields and their configuration options. The `Update successful` message is displayed.

Cisco IP Phone Services Configuration Fields

Field	Description
Service Information	

Field	Description
Service Name	Enter the name of the service. If the service is not marked as an enterprise subscription, the service name will display in areas where you can subscribe to a service, for example, under Cisco Unified Communications Self Care Portal.
	Enter up to 128 characters for the service name.
	For Java MIDlet services, the service name must exactly match the name that is defined in the Java Application Descriptor (JAD) file.
	Note Unified Communications Manager allows you to create two or more IP phone services with identical names. Cisco recommends that you do not do so unless most or all phone users are advanced, or unless an administrator always configures the IP phone services. Be aware that if AXL or any third-party tool accesses the list of IP phone services for configuration, you must use unique names for IP phone services.
	Note When the service URL points to an external customized URL, you cannot localize the service name according to the device locale of the phone. The service name gets displayed in English alphabets only.
ASCII Service Name	Enter the name of the service to display if the phone cannot display Unicode.
Service Description	Enter a description of the content that the service provides. The description can include up to 50 characters in any language, but it cannot include double quotation marks (") or single quotation marks (').
Service URL	Enter the URL of the server where the IP phone services application is located. Make sure that this server remains independent of the servers in your Unified Communications Manager cluster. Do not specify a Unified Communications Manager server or any server that is associated with Unified Communications Manager (such as a TFTP server or directory database publisher server).
	For the services to be available, the phones in the Unified Communications Manager cluster must have network connectivity to the server.
	For Cisco-signed Java MIDlets, enter the location where the JAD file can be downloaded; for example, a web server or the back-end application server to which the Java MIDlet communicates.
	For Cisco-provided default services, the service URL is displayed as `Application:Cisco/<name of service>` by default; for example, `Application:Cisco/CorporateDirectory`. If you modify the service URL for Cisco-provided default services, verify that you configured both for the **Service Provisioning** setting, which displays in the **Phone**, **Enterprise Parameter**, and **Common Phone Profile Configuration** windows. For example, you use a custom corporate directory, so you change `Application:Cisco/CorporateDirectory` to the external service URL for your custom directory; in this case, change the **Service Provisioning** value to **Both**.

Field	Description
Secure-Service URL	Enter the secure URL of the server where the Cisco Unified IP Phone services application is located. Make sure that this server remains independent of the servers in your Unified Communications Manager cluster. Do not specify a Unified Communications Manager server or any server that is associated with Unified Communications Manager (such as a TFTP server or publisher database server). For the services to be available, the phones in the Unified Communications Manager cluster must have network connectivity to the server. **Note** If you do not provide a Secure-Service URL, the device uses the nonsecure URL. If you provide both a secure URL and a nonsecure URL, the device chooses the appropriate URL, based on its capabilities.
Service Category	Choose a service application type (XML or Java MIDlet). If you choose Java MIDlet, when the phone receives the updated configuration file, the phone retrieves the Cisco-signed MIDlet application (JAD and JAR) from the specified Service URL and installs the application.
Service Type	Choose whether the service is provisioned to the Services, Directories, or Messages button or option on the phone; that is, if the phone has these buttons or options. To determine whether your phone supports these buttons or options, see the *Cisco Unified IP Phone Administration Guide* that supports your phone model.
Service Vendor	Allows you to specify the vendor or manufacturer for the service. This field is optional for XML applications, but it is required for Cisco-signed Java MIDlets. For Cisco-signed Java MIDlets, the value that you enter in this field must exactly match the vendor that is defined in the MIDlet JAD file. This field displays as blank for Cisco-provided default services. You can enter up to 64 characters.

Field	Description
Service Version	Enter the version number for the application.
	For XML applications, this field is optional and is informational only. For Cisco-signed Java MIDlets, consider the following information:
	• If you enter a version, the service version must exactly match the version that is defined in the JAD file. If you enter a version, the phone attempts to upgrade or downgrade the MIDlet if the version is different than what is installed on the phone.
	• If the field is blank, the version gets retrieved from the **Service URL**. Leaving the field blank ensures that the phone attempts to download the JAD file every time that the phone reregisters to Unified Communications Manager as well as every time that the Cisco-signed Java MIDlet is launched; this ensures that the phone always runs the latest version of the Cisco-signed Java MIDlet without you having to manually update the **Service Version** field.
	This field displays as blank for Cisco-provided default services.
	You can enter numbers and periods in this field (up to 16 ASCII characters).
Enable	Allows you to enable or disable the service without removing the configuration from Cisco Unified CM Administration (and without removing the service from the database).
	Uncheck the check box to remove the service from the phone configuration file and the phone.
Service Parameter Information	
Parameters	Lists the service parameters that apply to this IP phone service. Use the following buttons to configure service parameters for this pane:
	• **New Parameter**—Click this button to display the **Configure Cisco Unified IP Phone Service Parameter** window, where you configure a new service parameter for this IP phone service.
	• **Edit Parameter**—Highlight a service parameter that is displayed in the **Parameters** pane, then click this button to display the **Configure Cisco Unified IP Phone Service Parameter** window, where you can edit the selected service parameter for this IP phone service.
	• **Delete Parameter**—Highlight a service parameter that is displayed in the **Parameters** pane, then click this button to delete a service parameter for this IP phone service. A popup window asks you to confirm deletion.

Configure Phone Button Templates for Manager, Assistant, and Everyone

The procedures in this section describe how to configure phone button for manager and assistant.

Procedure

	Command or Action	Purpose
Step 1	Configure a Phone Button Template for Manager Assistant, on page 26	Perform this step to assign manage and assistant button features to line or speed dial keys.
Step 2	Associate a Manager Assistant Button Template with a Phone, on page 26	Perform this step to configure the manager and assistant button for a phone.

Configure a Phone Button Template for Manager Assistant

Use this procedure to configure a phone button template for the Manager Assistant feature.

Procedure

Step 1 From Cisco Unified CM Administration, choose **Device** > **Device Settings** > **Phone Button Template**.

Step 2 Click **Find** to display list of supported phone templates.

Step 3 Perform the following steps if you want to create a new phone button template; otherwise, proceed to the next step.

    a) Select a default template for the model of phone and click **Copy**.

    b) In the **Phone Button Template Information** field, enter a new name for the template.

    c) Click **Save**.

Step 4 Perform the following steps if you want to add phone buttons to an existing template.

    a) Click **Find** and enter the search criteria.

    b) Choose an existing template.

Step 5 From the **Line** drop-down list, choose feature that you want to add to the template.

Step 6 Click **Save**.

Step 7 Perform one of the following tasks:

- Click **Apply Config** if you modified a template that is already associated with devices to restart the devices.
- If you created a new softkey template, associate the template with the devices and then restart them.

Associate a Manager Assistant Button Template with a Phone

Before you begin

Configure a Phone Button Template for Manager Assistant, on page 26

Procedure

Step 1 From Cisco Unified CM Administration, choose **Device** > **Phone**.

Step 2 Click **Find** to display the list of configured phones.

Step 3	Choose the phone to which you want to add the phone button template.
Step 4	In the **Phone Button Template** drop-down list, choose the phone button template that contains the new feature button.
Step 5	Click **Save**. A dialog box is displayed with a message to press **Reset** to update the phone settings.

Configure Manager and Assign Assistant for Shared Line Mode

Procedure

Step 1	From Cisco Unified CM Administration, choose **User Management** > **End User**.
Step 2	Click **Find**. The search result displays all the end users that are configured in Unified Communications Manager.
Step 3	From the **Related Links** drop-down list, choose **Manager Configuration** and click **Go**.
Step 4	Check the **Automatic Configuration** check box to automatically configure the softkey template and Auto Answer with Speakerphone for intercom line for the manager phone based on the Cisco IP Manager Assistant service parameters.

> **Note** **Automatic Configuration** for intercom applies only when the Unified Communications Manager Assistant intercom feature is used for the Cisco Unified IP Phones 7940 and 7960.

Step 5	Check **Uses Shared Lines** check box.
Step 6	From the **Device Name/Profile** drop-down list, choose the device name or device profile to associate a device name or device profile with a manager.

> **Note** If the manager telecommutes, check the **Mobile Manager** check box and optionally choose a device profile from the **Device Name/Profile** drop-down list. When device profile is chosen, the manager must log in to the phone by using Cisco Extension Mobility before accessing Manager Assistant.

See the related topics for more information about Extension Mobility with Manager Assistant.

Step 7	From the **Intercom Line** drop-down list, choose the intercom line appearance for the manager, if applicable. The chosen intercom line applies to the Manager Assistant and Unified Communications Manager intercom features.
Step 8	From the **Assistant Pool** drop-down list, choose the appropriate pool number (1 to 3).
Step 9	Choose the name of the assistant from the Available Assistants selection box and move it to the Associated Assistants selection box by clicking the down arrow to assign an assistant to the manager. You can go to the **Assistant Configuration** window by highlighting the assistant name and clicking the **View Details** link.
Step 10	Choose the appropriate line from the Available Lines list box and move it to the Selected Lines list box by clicking the down arrow to configure the Manager Assistant controlled lines. Make sure that the controlled line is always the shared line DN.
Step 11	Click **Save**. If you checked the **Automatic Configuration** check box and the service parameters are invalid, a message is displayed. Ensure that the service parameters are valid. After successful completion of the automatic

configuration, the manager device resets. If you configured a device profile, the manager must log out and log in to the device for the changes to take effect.

Configure Assistant Line Appearances for Shared Line

Administrators can set up one or more lines with a shared line appearance. The Unified Communications Manager system considers a directory number to be a shared line if it appears on more than one device in the same partition.

Procedure

Step 1	From Cisco Unified CM Administration, choose **User Management** > **End User**.
Step 2	Click **Find**. The search result displays all the end users that are configured in Unified Communications Manager.
Step 3	Click on the username to display user information for the chosen assistant. The **End User Configuration** window is displayed.
Step 4	From the **Related Links** drop-down list, choose **Assistant Configuration** and click **Go**. The **Assistant Configuration** window is displayed. The system automatically sets the softkey template and intercom line on the basis of the Cisco IP Manager Assistant service parameter settings when you check the **Automatic Configuration** check box. In addition, the system also sets Auto Answer with Speakerphone for intercom line.
Step 5	From the **Device Name** drop-down list, choose the device name to associate with the assistant.
Step 6	From the **Intercom Line** drop-down list, choose the incoming intercom line appearance for the assistant.
Step 7	From the **Primary Line** drop-down list, choose the primary line for the assistant. a) To view existing manager configuration information, highlight the manager name in the **Associated Managers** list and click **View Details**. The **Manager Configuration** window is displayed. b) To return to the **Assistant Configuration** window, highlight the assistant name and click **View Details** link in the **Manager Configuration** window. In the **Associated Manager** selection list box, the name of the previously configured manager is displayed.
Step 8	To associate the manager line to the assistant line, perform the following steps from the Manager Association to Assistant Line selection box: a) From the **Available Lines** drop-down list, choose the assistant line that will be associated with the manager line. b) From the **Manager Names** drop-down list, choose the preconfigured manager name for whom this proxy line will apply. c) From the **Manager Lines** drop-down list, choose the manager line for which this proxy line will apply.
Step 9	Click **Save**. The update takes effect immediately. If you chose **Automatic Configuration**, the assistant device automatically resets.

Install Assistant Console Plugin

Procedure

Step 1   From Cisco Unified CM Administration, choose **Application** > **Plugins**.

The **Find and List Plugins** window is displayed.

Step 2   Click **Find**.

A list of installable application plug-ins is displayed.

Step 3   Click on the **Download** link for Cisco Unified CM Assistant Console and save the executable to a location.

Step 4   Run the executable file.

> **Note**   If you install the application on a Windows Vista PC, a security window may be displayed. Allow the installation to continue.

The **Cisco Unified CallManager Assistant Console** installation wizard is displayed.

Step 5   In the **Introduction** window, click **Next**.

Step 6   In the **License Agreement** window, click **Next**.

Step 7   Choose a location where you want the application to install and click **Next**.

> **Note**   By default, the application installs in `C:\Program Files\Cisco\ Unified CallManager Assistant Console`.

Step 8   In the **Pre-installation Summary** window, review the summary and click **Install**.

The installation begins.

Step 9   After the installation is complete, click **Finish**.

Step 10   Provide the assistant the username and password that is required to log in to the console.

Step 11   To launch the Assistant Console, click the desktop icon or choose **Cisco Unified Communications Manager Assistant** > **Assistant Console** from the **Start...Programs** menu.

Step 12   The **Advanced** tab in the **Cisco Unified Communications Manager Assistant Settings** window allows you to enable trace for the Assistant Console.

Step 13   Provide the assistant with the port number and the IP address or hostname of the Unified Communications Manager server on which the Cisco IP Manager Assistant service is active. The first time that the assistant logs in to the console, the assistant must enter the information in the **Cisco Unified Communications Manager Assistant Server Port** and the **Cisco Unified Communications Manager Assistant Server Hostname or IP Address** fields.

Manager Assistant Interactions

Feature	Interaction
Bulk Administration Tool	You can use the Bulk Administration Tool to add many users (managers and assistants) at once instead of adding users individually. The Bulk Administration Tool templates that the **Cisco Unified CM Assistant Configuration Wizard** creates for Cisco Unified IP Phones support only the Unified Communications Manager intercom lines. For more information, see the Bulk Administration Guide for Cisco Unified Communications Manager.
Calling Party Normalization	Manager Assistant automatically supports localized and globalized calls if you configure the Calling Party Normalization feature. Manager Assistant can display localized calling party numbers on the user interfaces. In addition, for an incoming call to the manager, Manager Assistant can display localized and globalized calling party numbers when filter pattern matching occurs.
Extension Mobility	You can simultaneously use Manager Assistant with the Cisco Extension Mobility feature. When you log in to the Cisco Unified IP Phone using Extension Mobility, the Cisco IP Manager Assistant service is automatically enabled on that phone. You can then access the Manager Assistant features. For more information about Cisco Extension Mobility, see Extension Mobility Overview.
Internet Protocol Version 6 (IPv6)	Manager Assistant does not support IPv6, so you cannot use phones with an IP Addressing Mode of IPv6 Only with Manager Assistant. To use Manager Assistant with the phone, ensure that you configure the phone with an IP Addressing Mode of IPv4 Only or IPv4 and IPv6.

Feature	Interaction
Reporting tools	Manager Assistant provides statistical information in the CDR Analysis and Reporting (CAR) tool and provides a summary of changes to configurations in a change log. The administrator can view a summary of changes that are made to the Manager or Assistant Configurations in Unified CM AssistantChangeLog*.txt. A manager can change defaults by accessing the Manager Configuration from a URL. An assistant can change the manager defaults from the Assistant Console. For information about the URL and Manager Configuration, see the *Cisco Unified Communications Manager Assistant User Guide*. When the manager or assistant makes changes, the changes are sent to a log file called **ipma_changeLogxxx.log**. The log file resides on the server that runs the Cisco IP Manager Assistant service. Use the following command to obtain the log file: **file get activelog tomcat/logs/ipma/log4j/** For more information about downloading the log file, see the *Cisco Unified Real -Time Monitoring Tool Administration Guide*.
CDR Analysis and Reporting	Manager Assistant supports call-completion statistics and inventory reporting for managers and assistants. The CAR tool supports call-completion statistics. Cisco Unified Serviceability supports inventory reporting. For more information, see the following guides: • *Cisco Unified Serviceability Administration Guide* • Call Reporting and Billing Administration Guide for Cisco Unified Communications Manager
Multilevel Precedence and Preemption (MLPP)	The following points describe the interactions between Manager Assistant with shared line support and MLPP: • The system preserves call precedence in the handling of calls by Manager Assistant. For example, when an assistant diverts a call, the system preserves the precedence of the call. • Filtering of precedence calls occurs in the same manner as all other calls. The precedence of a call will not affect whether a call is filtered. • Because Manager Assistant does not have information about the precedence of a call, it does not provide any additional indication of the precedence of a call on the Assistant Console.

Feature	Interaction
Intercom	Manager Assistant supports the following two types of intercom: • Manager Assistant intercom (used with Cisco Unified IP Phones 7940 and 7960). You can configure this intercom feature using the DN configuration and end user (manager and assistant) configuration windows. • Unified Communications Manager intercom (used with Cisco Unified IP Phones 7940 and 7960). You can configure this intercom feature using the intercom partition, intercom calling search space, intercom directory number, intercom translation pattern, DN, and end user (manager and assistant) configuration windows.
Message Waiting Indicator	The Message Waiting Indicator feature interacts with proxy line support only. The Message Waiting Indicator (MWI) on and off numbers should have the partition of the manager line in their calling search space. The partition can exist in any order of priority within each calling search space.
Time-of-Day Routing	The Time-of-Day feature interacts with proxy line support only. Time-of-Day routing routes calls to different locations based on the time that the call gets made; for example, during business hours, calls get routed to a manager office, and after hours, the calls go directly to voicemail service. For more information about Time-of-Day Routing, see the System Configuration Guide for Cisco Unified Communications Manager.

Manager Assistant Restrictions

Feature	Restriction
Assistant Console Application	To install the Assistant Console application on a computer with Microsoft Internet Explorer 7 (or later), install the Microsoft Java Virtual Machine (JVM) before the Assistant Console installation.
Call Management features	The Assistant Console does not support hunt groups or queues, recording and monitoring, one-touch Call Pickup, and On-Hook transfer (the ability to transfer a call by pressing the Transfer softkey and going on hook to complete the transfer).

Feature	Restriction
Cisco IP Phones	Manager Assistant supports SIP on Cisco Unified IP Phones 7900 Series, except for Cisco Unified IP Phones 7940 and 7960.
	Manager Assistant supports up to 3500 managers and 3500 assistants by configuring multiple Cisco IP Manager Assistant servers (pools). When you enable multiple pools, the manager and all configured assistants for that manager should belong to the same pool.
	Cisco Unified IP Phones 7960 and 7940 support only the Unified Communications Manager Assistant Intercom lines feature. Cisco Unified IP Phones 7900 (except 7940 and 7960) support only the Unified Communications Manager Intercom feature.
	One manager can have up to ten assigned assistants and one assistant can support up to 33 managers (if each manager has one Unified Communications Manager–controlled line).
	Only one assistant at a time can assist a manager.
	Manager Assistant supports up to 3500 managers and 3500 assistants per Unified Communications Manager cluster.
Intercom	After an upgrade, Manager Assistant users that use the incoming intercom line do not get upgraded automatically to the Unified Communications Manager Intercom feature.
	The system does not support calls between the Unified Communications Manager Intercom feature and regular lines (which may be configured as Manager Assistant Intercom lines).
Single Sign-On	Manager Assistant is not supported in the Single Sign-On environment.
Speed Dial	Cisco Unified IP Phones 7940, 7942, and 7945 support only two lines or speed-dial buttons.

Cisco Unified Communications Manager Assistant Troubleshooting

This section describes the troubleshooting tools for Manager Assistant and the client desktop, and troubleshooting information for Manager Assistant.

Tool Description	Location
Cisco Unified CM Assistant server trace files	The trace files reside on the server that runs the Cisco IP Manager Assistant service. You can download these files from the server using one of the following methods: • Use the CLI command **file get activelog tomcat/logs/ipma/log4j**. • Use the trace collection features in the Cisco Unified Real-Time Monitoring Tool (RTMT). For more information, see the *Cisco Unified Real-Time Monitoring Tool Administration Guide*. You can enable debug tracing by choosing **Cisco Unified Serviceability** > **Trace** > **Configuration**.
Cisco IPMA client trace files	**$INSTALL_DIR\logs\ACLog*.txt** on the client desktop, in the same location where the Unified CM Assistant assistant console resides. To enable debug tracing, go to the **Settings** dialog box in the Assistant Console. In the **Advanced** panel, check the **Enable Trace** check box. **Note** This check box enables only debug tracing. Error tracing always remains On.
Cisco IPMA client install trace files	**$INSTALL_DIR\InstallLog.txt** on the client desktop, in the same location where the Assistant Console resides.
Cisco IPMA Client AutoUpdater trace files	**$INSTALL_DIR\UpdatedLog.txt** on the client desktop, in the same location where the Unified CM Assistant Console resides.
Install directory	By default—`C:\Program Files\Cisco\Unified Communications Manager Assistant Console\`

Calling Party Gets Reorder Tone

Problem

Calling party gets a reorder tone or a message:

`This call cannot be completed as dialed.`

Possible Cause

The calling search space of the calling line may not be configured correctly.

Solution

Check the calling search space of the line. For more information about configuration, see the System Configuration Guide for Cisco Unified Communications Manager.

You can also use the Cisco Dialed Number Analyzer service to check for flaws in the calling search space. For more information, see the *Cisco Unified Communications Manager Dialed Number Analyzer Guide*.

Calls Do Not Get Routed When Filtering Is On or Off

Problem

Calls are not routed properly.

Possible Cause 1

Cisco CTI Manager service may have stopped.

Solution 1

Restart the Cisco CTI Manager and Cisco IP Manager Assistant services from **Cisco Unified Serviceability** > **Tools** > **Control Center—Feature Services**.

Possible Cause 2

The Unified Communications Manager Assistant route point was not configured properly.

Solution 2

Use wildcards to match the directory number of the Unified Communications Manager Assistant CTI route point and the primary directory numbers of all managers that are configured for Unified Communications Manager Assistant.

Possible Cause 3

The status window on the manager phone displays the message `Filtering Down`. This message can indicate that Unified Communications Manager Assistant CTI route point may be deleted or may not be in service.

Solution 3

Use the following procedure to configure the CTI route point and restart the Cisco IP Manager Assistant service:

1. From Cisco Unified CM Administration, choose **Device** > **CTI Route Point**.

2. Find the route point, or add a new route point. For more information about configuration, see the System Configuration Guide for Cisco Unified Communications Manager.

3. Restart the Cisco CTI Manager and Cisco IP Manager Assistant services from **Cisco Unified Serviceability** > **Tools** > **Control Center—Feature Services**.

Cisco IP Manager Assistant Service Unreachable

Problem

After you open the Assistant Console, the following message is displayed:

```
Cisco IPMA Service Unreachable
```

Possible Cause 1

Cisco IP Manager Assistant service may have stopped.

Solution 1

Restart the Unified Communications Manager Assistant from **Cisco Unified Serviceability** > **Tools** > **Control Center—Feature Services**.

Possible Cause 2

The server address for the primary and secondary Unified Communications Manager Assistant servers may be configured as DNS names, but the DNS names are not configured in the DNS server.

Solution 2

Use the following procedure to replace the DNS name.

1. From Cisco Unified CM Administration, choose **System** > **Server**.

2. Replace the DNS name of the server with the corresponding IP address.

3. Restart the Unified Communications Manager Assistant from **Cisco Unified Serviceability** > **Tools** > **Control Center—Feature Services**.

Possible Cause 3

The Cisco CTI Manager service may have stopped.

Solution 3

Restart the Unified Communications Manager Assistant from **Cisco Unified Serviceability** > **Tools** > **Control Center—Feature Services**.

Possible Cause 4

The Unified Communications Manager Assistant service might be configured to open a CTI connection in secure mode, but the security configuration may not be complete.

If this scenario occurs, the following message is displayed in the alarm viewer or in the Unified Communications Manager Assistant service logs:

```
IPMA Service cannot initialize - Could not get Provider.
```

Solution 4

Check the security configuration in the service parameters of Cisco IP Manager Assistant service.

Restart the Unified Communications Manager Assistant from **Cisco Unified Serviceability** > **Tools** > **Control Center—Feature Services**.

Cannot Initialize Cisco IP Manager Assistant Service

Problem

The Cisco IP Manager Assistant service cannot open a connection to CTI Manager, and the following message is displayed:

```
IPMA Service cannot initialize - Could not get Provider
```

Possible Cause

The Cisco IP Manager Assistant service cannot open a connection to CTIManager. You can see the message in the alarm viewer or in the Unified CM Assistant service logs.

Solution

Restart the Cisco CTI Manager and Cisco IP Manager Assistant services from **Cisco Unified Serviceability** > **Tools** > **Control Center—Feature Services**.

Assistant Console Installation from Web Fails

Problem

Assistant Console installation from the web fails. The following message is displayed:

```
Exception: java.lang.ClassNotFoundException: InstallerApplet.class
```

Possible Cause

Using the Sun Java plug-in virtual machine instead of the Microsoft JVM with the standard Unified Communications Manager Assistant Console install causes failures.

Solution

The administrator directs the user to the following URL, which is a JSP page that supports the Sun Java plug-in:

```
https://<servername>:8443/ma/Install/IPMAConsoleInstallJar.jsp
```

HTTP Status 503—This Application Is Not Currently Available

Problem

http://<server-name>:8443/ma/Install/IPMAConsoleInstall.jsp displays the following error message:

```
HTTP Status 503—This application is not currently available
```

Possible Cause

Cisco IP Manager Assistant service has not been activated or is not running.

Solution

Ensure that the Cisco IP Manager Assistant service has been activated by checking the activation status of the service from **Cisco Unified Serviceability** > **Tools** > **Service Activation**.

If the Cisco IP Manager Assistant service has already been activated, restart the Unified Communications Manager Assistant from **Cisco Unified Serviceability** > **Tools** > **Control Center—Feature Services**.

Manager Is Logged Out While the Service Is Still Running

Problem

Although the manager is logged out of Unified Communications Manager Assistant, the service still runs. The display on the manager IP phone disappears. Calls do not get routed, although filtering is On. To verify that the manager is logged out, view the application log using the Cisco Unified Real-Time Monitoring Tool. Look for a warning from the Cisco Java Applications that indicates that the Cisco IP Manager Assistant service logged out.

Possible Cause

The manager pressed the softkeys more than four times per second (maximum limit allowed).

Solution

The Unified Communications Manager administrator must update the manager configuration. Perform the following procedure to correct the problem:

1. From Cisco Unified CM Administration, choose **User Management** > **End User**.

   The **Find and List Users** window is displayed.

2. Enter the manager name in the search field and click **Find**.

3. From the search results list, choose the manager that you want to update.

   The **End User Configuration** window is displayed.

4. From the **Related Links** drop-down list, choose **Cisco IPMA Manager** and click **Go**.

5. Make the necessary changes to the manager configuration and click **Update**.

Manager Cannot Intercept Calls That Are Ringing on the Assistant Proxy Line

Problem

The manager cannot intercept the calls that are ringing on the assistant proxy line.

Possible Cause

The calling search space of the proxy line is not configured properly.

Solution

Check the calling search space of the proxy line for the assistant phone. Perform the following procedure to correct the problem:

1. From Cisco Unified CM Administration, choose **Device** > **Phone**.

   The **Find and List Phones** search window is displayed.

2. Click the assistant phone.

   The **Phone Configuration** window is displayed.

3. Verify the calling search space configuration for the phone and for the directory number (line) and update as appropriate.

No Page Found Error

Problem

`http://<server-name>:8443/ma/Install/IPMAConsoleInstall.jsp` displays the following error message:

`No Page Found Error`

Possible Cause 1

Network problems.

Solution 1

Ensure that the client has connectivity to the server. Ping the server name that is specified in the URL and verify that it is reachable.

Possible Cause 2

Misspelled URL.

Solution 2

Because URLs are case sensitive, ensure that the URL matches exactly with the URL in the instructions.

System Error - Contact System Administrator

Problem

After you open the Assistant Console, the following message is displayed:

`System Error - Contact System Administrator`

Possible Cause 1

You may have upgraded the Unified Communications Manager. The system does not upgrade the Assistant Console automatically when you upgrade the Unified Communications Manager.

Solution 1

Uninstall the console by choosing `Start > Programs > Cisco Unified Communications Manager Assistant > Uninstall Assistant Console` and reinstall the console from URL **https://<server-name>:8443/ma/Install/IPMAConsoleInstall.jsp**.

Possible Cause 2

The user is not configured correctly in the database.

Solution 2

Ensure that the user ID and the password are run as a Unified Communications Manager user through Cisco Unified CM Administration.

Possible Cause 3

When you deleted a manager from an assistant, Cisco Unified CM Administration left a blank line for the assistant.

Solution 3

From the **Assistant Configuration** window, reassign the proxy lines.

Unable to Call Manager When Cisco IP Manager Assistant Service is Down

Problem

Calls do not get routed properly to managers when Cisco IP Manager Assistant service goes down.

Possible Cause

The Unified Communications Manager Assistant CTI route point does not have Call Forward No Answer enabled.

Solution

Perform the following procedure to properly configure the Unified Communications Manager Assistant route point.

1. From Cisco Unified CM Administration, choose **Device** > **CTI Route Point**.

   The **Find and List CTI Route Point** search window is displayed.

2. Click **Find**.

   A list of configured CTI route points is displayed.

3. Choose the Unified Communications Manager Assistant CTI route point that you want to update.

4. In the **CTI Route Point Configuration** window, click the line to update from the **Association** area.

5. In the **Call Forward and Pickup Settings** section, check the **Forward No Answer Internal** and the **Forward No Answer External** check box and enter the CTI route point DN in the **Coverage/Destination** field (for example, CFNA as 1xxx for the route point DN 1xxx).

6. In the **Calling Search Space** drop-down list, choose **CSS-M-E** (or appropriate calling search space).

7. Click **Update**.

User Authentication Fails

Problem

User authentication fails when you sign in using the login window from the Assistant Console.

Possible Cause

The following probable causes can apply:

- Incorrect management of the user in the database

- Incorrect management of the user as an assistant or a manager

Solution

Ensure that the user ID and the password are ran as a Unified Communications Manager user through Cisco Unified CM Administration.

You must run the user as an assistant or a manager by associating the Unified Communications Manager Assistant user information, which you access through Cisco Unified CM Administration under **User Management** > **End User**.