



Paging

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Paging Overview

Unified Communications Manager can be configured to integrate with Cisco Paging Server to provide basic paging services for Cisco Unified IP Phone and a variety of endpoints. The Cisco Paging Server product is offered through the InformaCast Virtual Appliance and offers the following deployment options:

InformaCast Basic Paging

InformaCast Basic Paging provides phone-to-phone live audio paging to individual Cisco IP phones or groups of up to 50 phones simultaneously. InformaCast Basic Paging is free to all Unified Communications Manager customers and all Cisco Business Edition 6000 and Cisco Business Edition 7000 customers.

InformaCast Advanced Notification

InformaCast Advanced Notification is a full-featured emergency notification and paging solution that allows you to reach an unlimited number of Cisco IP phones and a variety of devices and systems with text and audio messages.

Some of the features include:

- Ability to reach analog PA systems and IP speakers
- Support for Cisco Jabber
- 911 emergency call monitoring, recording, and notification
- Dynamic conference call
- Event accountability with message confirmation and reporting
- Implementation with panic buttons
- Building evacuation or lockdown

- Facilities integration (control lighting, door locks)
- Security integration (motion detectors, access, fire)
- General purpose and shift or bell scheduling

Users must purchase a license key to access InformaCast Advanced Notification features.

InformaCast Mobile

InformaCast Mobile is a cloud-based service that allows users to send images, text, and pre-recorded audio to mobile devices running iOS or Android. It also has bi-directional integration with InformaCast Advanced Notification.

Some of the features include:

- The ability to send and receive InformaCast messages via mobile devices running iOS or Android
- Bi-directional integration with InformaCast Advanced Notification
- Message confirmations and read receipts
- No calling or SMS messaging fees

InformaCast Mobile must be purchased direct from Singlewire Software. Please refer to the Singlewire website for additional details and downloads.

If you have already configured Unified Communications Manager to integrate with InformaCast Advanced Notification, no further configuration of Unified Communications Manager is required.

Paging Prerequisites

Cisco Paging Server is designed to work in a multicast environment. You must configure your network for multicast.

For a list of Cisco Unified IP Phones that support paging, refer to the **Cisco Unified IP Phones** section of the Singlewire Compatibility Matrix at:

<http://www.singlewire.com/compatibility-matrix.html>.

Basic Paging Configuration Task Flow

Perform the following tasks to configure Cisco Unified Communications Manager to integrate with Cisco Paging Server for an InformaCast Basic Paging deployment.

Before you begin

- Review [Paging Prerequisites, on page 2](#)

Procedure

	Command or Action	Purpose
Step 1	Enable SNMP Service, on page 5	Configure SNMP in Cisco Unified Communications Manager.
Step 2	Set Default Codec to G.711, on page 8	Set the default codec to G.711.
Step 3	Configure a Device Pool for Paging, on page 8	Configure a device pool.
Step 4	Configure Route Partition for InformaCast Paging, on page 9	Configure a route partition for Basic Paging.
Step 5	Configure Calling Search Space for InformaCast Paging, on page 10	Configure a calling search space for Basic Paging.
Step 6	Configure CTI Ports for Paging, on page 13	Configure CTI ports.
Step 7	Configure Access Control Group with AXL Access, on page 14	Configure an AXL access control group.
Step 8	Configure Application User for Paging, on page 15	Configure an application user.
Step 9	Enable web access for the phone using one of the following procedures: <ul style="list-style-type: none"> • Enable Web Access for a Phone, on page 15 • Enable Web Access for Common Phone Profile, on page 16 	You can enable web access on a individual phone or use a Common Phone Profile to enable web access for a group of phones that use that profile.
Step 10	Configure Authentication URL, on page 16	Configure the Cisco Unified Communications Manager authentication URL to point to InformaCast so that when InformaCast pushes broadcasts to Cisco Unified IP Phones, the phones will authenticate with InformaCast.

For detailed procedures on how to configure Cisco Unified Communications Manager and Cisco Paging Server, refer to the *InformaCast Virtual Appliance Basic Paging Installation and User Guide* at: <http://www.cisco.com/c/en/us/support/unified-communications/paging-server/products-maintenance-guides-list.html>

Advanced Notification Paging Task Flow

Perform the following tasks to configure Cisco Unified Communications Manager to integrate with an InformaCast Advanced Notification paging deployment. An Advanced Notification deployment can include the following features:

- InformaCast paging
- CallAware

- PushToTalk
- Legacy paging devices
- Plugins such as Facebook, Twitter and conferencing

Before you begin

- Review [Paging Prerequisites](#), on page 2

Procedure

	Command or Action	Purpose
Step 1	Configure SNMP for Paging , on page 5	Configure SNMP services in Cisco Unified Communications Manager.
Step 2	Configure Media Resources for Legacy Paging , on page 6	Optional. If you want to connect to legacy paging devices, configure a media resource group that includes an MTP.
Step 3	Configure Region for Paging , on page 8	Configure a region for paging with G.711 as the default codec and a device pool for paging devices.
Step 4	Configure Partitions and Calling Search Spaces for Paging , on page 9	Configure partitions and calling search spaces for your paging deployment.
Step 5	Configure CTI Route Points for CallAware , on page 11	If you are deploying CallAware, configure CTI route points for each CallAware redirect.
Step 6	Enable the Built in Bridge using one of the following procedures: <ul style="list-style-type: none"> • Enable Built in Bridge for Cluster, on page 12 • Enable Built in Bridge for a Phone, on page 12 	If you are deploying CallAware, enable the Built in Bridge using a clusterwide service parameter, or on the phone itself. Note The settings in the Phone Configuration window for an individual phone override the clusterwide service parameter.
Step 7	Configure CTI Ports for Paging , on page 13	Configure CTI ports for InformaCast paging and CallAware redirects.
Step 8	Configure SIP Trunk for Legacy Paging Devices , on page 14	If you are connecting to legacy paging devices, configure a SIP trunk that connects to your legacy devices.
Step 9	Configure Access Control Group with AXL Access , on page 14	Configure an access control group that includes access to the AXL API.
Step 10	Configure Application User for Paging , on page 15	Configure an application user. You must configure different application users for InformaCast, CallAware, and PushToTalk.

	Command or Action	Purpose
Step 11	Perform one of the following procedures: <ul style="list-style-type: none"> • Enable Web Access for a Phone, on page 15 • Enable Web Access for Common Phone Profile, on page 16 	Enable web access for your phones. You can enable web access on an individual phone, or use a Common Phone Profile to enable web access for a group of phones.
Step 12	Configure Authentication URL, on page 16	Configure the Cisco Unified Communications Manager authentication URL to point to InformaCast so that when InformaCast pushes broadcasts to Cisco Unified IP Phones, the phones will authenticate with InformaCast.
Step 13	Configure PushToTalk Service Integration, on page 18	Configure PushToTalk service integration for your Cisco Unified IP Phones.
Step 14	Assign a Directory URI to a Phone, on page 25	Optional. Assign directory URIs to your paging directory numbers. This allows you to implement URI dialing in your paging deployment.

For detailed information on the InformaCast Advanced Notification deployment options, refer to your InformaCast Advanced Notification product documentation. For help, visit Singlewire's website at <http://www.singlewire.com>.

Configure SNMP for Paging

Perform the following tasks to configure SNMP services in the cluster.

Procedure

	Command or Action	Purpose
Step 1	Enable SNMP Service, on page 5	Enable the SNMP and other services in the cluster.
Step 2	Create an InformaCast SNMP Community String, on page 6	Configure an SNMP community string.

Enable SNMP Service

To configure paging, you must enable SNMP on every node in the cluster. In addition, you must enable the following services:

- Cisco CallManager SNMP Service—Enable on all nodes in the cluster.
- Cisco CallManager—Enable on at least one node.
- Cisco AXL Web Services—Enable on at least one node.
- Cisco CTIManager—Enable on at least one node.

Procedure

- Step 1** From Cisco Unified Serviceability, choose **Tools > Service Activation**.
 - Step 2** From the **Server** drop-down list, choose the server on which you want to configure SNMP.
 - Step 3** Check the check boxes that correspond to the **Cisco CallManager SNMP Service**.
 - Step 4** For at least one server in the cluster, check the check boxes that correspond to **Cisco CallManager**, **Cisco CTIManager**, and **Cisco AXL Web Service** services.
 - Step 5** Click **Save**.
 - Step 6** Click **OK**.
 - Step 7** Repeat the previous steps for all nodes in the cluster.
-

Create an InformaCast SNMP Community String

Perform this procedure for Basic Paging to set up an SNMP community string.

Before you begin

[Enable SNMP Service, on page 5](#)

Procedure

- Step 1** From Cisco Unified Serviceability, choose **SNMP > V1/V2c > Community String**.
 - Step 2** From the **Server** drop-down list, choose a server and click **Find**.
 - Step 3** Click **Add New**.
 - Step 4** In the **Community String Name** field, enter **ICVA**.
 - Step 5** From the **Access Privileges** drop-down list, select **ReadOnly**.
 - Step 6** Check the **Apply to All Nodes** check box if the check box is active.
 - Step 7** Click **Save**.
 - Step 8** Click **OK**.
-

What to do next

[Set Default Codec to G.711, on page 8](#)

Configure Media Resources for Legacy Paging

If you are implementing an Advanced Notification deployment that includes legacy paging devices, perform these tasks to configure media resources with an MTP so that InformaCast can send broadcasts to your legacy paging devices.

Procedure

	Command or Action	Purpose
Step 1	Create a Media Resource Group, on page 7	Configure a media resource group that includes an MTP.
Step 2	Create a Media Resource Group List, on page 7	Add your media resource group to a media resource group list.

Create a Media Resource Group

Perform this procedure if you are configuring an Advanced Notification deployment that connects to legacy paging devices. You must configure a media resource group that includes an Media Termination Point (MTP) resource. The MTP is required to connect the legacy paging interface.

Procedure

-
- Step 1** From Cisco Unified CM Administration, choose **Media Resources > Media Resource Group**.
 - Step 2** Click **Add New**.
 - Step 3** Enter a **Name** and **Description** for the group.
 - Step 4** Use the arrows to move **MTP** from the **Available Media Resources** area to the **Selected Media Resources** area.
 - Step 5** Click **Save**.
-

What to do next

[Create a Media Resource Group List, on page 7](#)

Create a Media Resource Group List

If you have configured a media resource group with an MTP to connect to a legacy paging interface, configure a media resource group that includes your media resource group.

Before you begin

[Create a Media Resource Group, on page 7](#)

Procedure

-
- Step 1** From Cisco Unified CM Administration, choose **Media Resources > Media Resource Group List**.
 - Step 2** Click **Add New**.
 - Step 3** Enter a **Name** and **Description** for the list.
 - Step 4** Use the arrows to move the media resource group that you created to the **Selected Media Resource Groups** area.

Step 5 Click **Save**.

What to do next

[Set Default Codec to G.711, on page 8](#)

Configure Region for Paging

For Basic Paging, you must set up a region for your paging deployment.

Procedure

	Command or Action	Purpose
Step 1	Set Default Codec to G.711, on page 8	Create a region that uses the G.711 codec for calls to other regions.
Step 2	Configure a Device Pool for Paging, on page 8	Set up a device pool for paging and assign the region that you created to that device pool.

Set Default Codec to G.711

You must create an InformaCast region that uses G.711 as the default codec for calls to other regions.

Before you begin

[Configure SNMP for Paging, on page 5](#)

Procedure

-
- Step 1** From Cisco Unified CM Administration, choose **System > Region Information > Region**.
 - Step 2** Click **Add New**.
 - Step 3** In the **Name** field, enter **ICVA**.
 - Step 4** Click **Save**.
 - Step 5** In the **Regions** text box, select all regions by pressing the **CTRL** key and clicking all of the selected regions.
 - Step 6** From the **Maximum Audio Bit Rate** drop-down list, select **64 kbps (G.722, G.711)**.
 - Step 7** From the **Maximum Session Bit Rate for Video Calls** column click the **None** radio button.
 - Step 8** Click **Save**.
-

Configure a Device Pool for Paging

Perform this procedure to configure a device pool for your paging deployment.

Before you begin

[Set Default Codec to G.711, on page 8](#)

Procedure

-
- Step 1** From Cisco Unified CM Administration, choose **System > Device Pool**.
- Step 2** Click **Add New**.
- Step 3** In the **Device Pool Name** field, enter **ICVA**.
- Step 4** From the **Cisco Unified Communications Manager Group** drop-down list, select the group that contains the Cisco Unified Communications Manager cluster with which the InformaCast Virtual Appliance will communicate.
- Step 5** From the **Date/Time Group** drop-down list, select a date/time group. Select **CMLocal** unless you are performing dialing restrictions by the time of day.
- Step 6** From the **Region** drop-down list, choose **ICVA**.
- Step 7** From the **SRST Reference** drop-down list, select **Disable**.
- Step 8** Click **Save**.
-

Configure Partitions and Calling Search Spaces for Paging

Perform the following tasks to configure a partition and calling search space (CSS) for paging as follows:

- For Basic Paging deployments, create a single partition and CSS for InformaCast paging.

Procedure

	Command or Action	Purpose
Step 1	Configure Route Partition for InformaCast Paging, on page 9	Configure a route partition for InformaCast paging.
Step 2	Configure Calling Search Space for InformaCast Paging, on page 10	Configure a calling search space for InformaCast paging.

Configure Route Partition for InformaCast Paging

Create a route partition for InformaCast paging.

Before you begin

[Configure a Device Pool for Paging, on page 8](#)

Procedure

-
- Step 1** From Cisco Unified CM Administration, choose **Call Routing > Class of Control > Route Partitions**.
- Step 2** Click **Add New**.
- Step 3** In the **Name** field, enter the following name and description for the partition:
ICVA-CTIOutbound, ICVA-Do not add to any phone CSS.

Step 4 Click **Save**.

Configure Calling Search Space for InformaCast Paging

Perform this procedure to configure a calling search space for InformaCast paging.

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 **ICVA**.
- Step 4** In the **Available Partitions** list box, use the arrows to move the following partitions to the **Selected Partitions** list box.
- The partition that you created for InformaCast paging
 - The partitions that contain your users' extensions and any analog paging extensions
- Step 5** Click **Save**.
-

Configure Route Partitions for CallAware

If you are deploying CallAware in an Advanced Notification paging deployment, perform this procedure to set up a unique partition for each CallAware redirect.

Procedure

- Step 1** In Cisco Unified CM Administration, choose **Call Routing > Class of Control > Partition**.
- Step 2** Click **Add New**.
- Step 3** In the **Name** field, enter the following name and description for the partition: **ICVA-Redirect1-CA, ICVA Redirect 1 CallAware**.
- Step 4** Click **Save**.
- Step 5** For each additional call redirect, create a new partition, incrementing the redirect number that you enter in the **Name** field. For example, **ICVA-Redirect2-CA**.
-

Configure Calling Search Spaces for CallAware

If you are deploying CallAware in an Advanced Notification deployment, you must configure a unique calling search space (CSS) for each CallAware redirect.

Procedure

- Step 1** In 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 **ICVA-Redirect1-CA**.
- Step 4** Click **Save**.
- Step 5** Repeat the above steps until you have a separate CSS for each call redirect. For each CSS, increment the redirect number in the **Name** field. For example, **ICVA-Redirect2-CA**.
-

Configure CTI Route Points for CallAware

Perform this procedure only if you have an Advanced Notification paging deployment that includes CallAware. You must configure CTI route points for each CallAware redirect.

Procedure

- Step 1** From Cisco Unified CM Administration, choose **Device > CTI Route Point**.
- Step 2** Click **Add New**.
- Step 3** In the **Device Name** field, enter a name for your route point. This name must match the corresponding route point name that you configure in the InformaCast Virtual Appliance.
- Step 4** Enter a **Description** for the route point. For example, **ICVA Redirect 1 CallAware**.
- Step 5** From the **Device Pool** drop-down list box, choose **ICVA**.
- Step 6** From the **Calling Search Space** drop-down list box, choose the calling search spaces that you set up for this CallAware redirect.
- Step 7** Click **Save**.
- Step 8** In the **Association** area, click **Line [1] - Add a new DN**.
- Step 9** In the **Directory Number** field, enter the directory number that CallAware will monitor.
- Step 10** From the **Route Partition** drop-down list box, select the partition that you set up for this CallAware redirect.
- Step 11** In the **Call Forward and Call Pickup Settings** area, leave the **Forward All** field empty.
- Step 12** For each of the remaining call forward options, configure the following settings:
- In the **Destination** text box, enter the directory number to which you want to redirect calls.
 - From the **Calling Search Space** drop-down list box, select the CSS that you created for this redirect.
 - Click **Save**.
- Step 13** Repeat this procedure for each CallAware redirect.

Note Perform one of the following procedures to enable the Built in Bridge on the phone:

- Enable Built in Bridge for Cluster
 - Enable Built in Bridge for a Phone
-

Enable Built in Bridge for Cluster

Perform this procedure if you have an Advanced Notification paging deployment that includes CallAware. When you use this procedure to enable the Built in Bridge using a clusterwide service parameter, the Built in Bridge default setting for all phones in the cluster is changed to enabled. However, the Built in Bridge setting in the **Phone Configuration** window for an individual phone overrides the clusterwide setting.

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 CallManager service is running.
 - Step 3** From the **Service** drop-down list, choose **Cisco CallManager**.
 - Step 4** Set the **Built in Bridge Enable** service parameter to **On**.
 - Step 5** Click **Save**.
-

Enable Built in Bridge for a Phone

If you have an Advanced Notification paging deployment that uses CallAware, perform this procedure to enable an individual phone's Built in Bridge.

You can also use a service parameter to set the Built in Bridge clusterwide default setting to enabled. However, an individual phone's Built in Bridge setting in the **Phone Configuration** window overrides the clusterwide service parameter default.

Before you begin

[Enable Built in Bridge for Cluster, on page 12](#)

Procedure

- Step 1** From Cisco Unified CM Administration, choose **Device > Phone**.
 - Step 2** Click **Find** to select the agent phone.
 - Step 3** From the **Built in Bridge** drop-down list, choose one of the following options:
 - **On**—The Built in Bridge is enabled.
 - **Off**—The Built in Bridge is disabled.
 - **Default**—The setting of the clusterwide **Built in Bridge Enable** service parameter is used.
 - Step 4** Click **Save**.
-

What to do next

[Configure CTI Ports for Paging, on page 13](#)

Configure CTI Ports for Paging

Perform this procedure to configure CTI ports for your paging deployment. The number of CTI ports that you need depends on your deployment type and your applications' usage:

- For Basic Paging deployments, you must create a minimum of two CTI ports for InformaCast paging.

Before you begin

[Configure Calling Search Space for InformaCast Paging, on page 10](#)

Procedure

- Step 1** From Cisco Unified CM Administration, choose **Device > Phone**.
- Step 2** Click **Add New**.
- Step 3** From the **Phone Type** drop-down list, choose **CTI Port**.
- Step 4** In the **Device Name** field, enter a name for the CTI Port. For example, **ICVA-IC-001** for an InformaCast port.
- Step 5** In the **Description** field, enter a description for the port. For example, **InformaCast Recording Port for Call Monitoring**.
- Step 6** From the **Device Pool** drop-down list, select **ICVA**.
- Step 7** From the **Calling Search Space** drop-down list, select **ICVA**.
- Step 8** From the **Device Security Profile** drop-down list, select **Cisco CTI Port - Standard SCCP Non-Secure Profile**.
- Step 9** Click **Save**.
- Step 10** Click **OK**.
- Step 11** In the left association area, click **Line [1] - Add a new DN**.
- Step 12** In the **Directory Number** field, enter a directory number. This directory number should not be used for any purpose other than making paging calls. It should not be assigned to a phone and should not be within a direct-inward-dialing range.
- Step 13** In the **Route Partition** drop-down list, select the following ports:
- For InformaCast ports, select **ICVA-CTIOutbound**.
- Step 14** In the **Display (Internal Caller ID)** text box, enter **InformaCast**.
- Step 15** In the **ASCII Display (Internal Caller ID)** text box, enter **InformaCast**.
- Step 16** Click **Save**.
- Step 17** Repeat this procedure for each CTI port that you need.
-

What to do next

Configure SIP Trunk for Legacy Paging Devices

Perform this procedure if you have an Advanced Notification paging deployment and you want to connect to legacy paging devices. You must configure a SIP trunk to enable the Legacy Paging Interface.

Before you begin

[Configure CTI Ports for Paging, on page 13](#)

Procedure

- Step 1** In Cisco Unified CM Administration, choose **Device > Trunk**.
 - Step 2** Click **Add New**.
 - Step 3** From the **Trunk Type** drop-down list box, select **SIP Trunk**.
 - Step 4** Click **Next**.
 - Step 5** In the **Device Name** text box, enter **ICVA**.
 - Step 6** In the **Description**, field enter a description for the trunk.
 - Step 7** From the **Device Pool** drop-down menu, select **ICVA**.
 - Step 8** From the **Calling Search Space** drop-down list box, select **ICVA**.
 - Step 9** In the **SIP Information** area, enter the InformaCast Virtual Appliance IP address in the **Destination Address** text box.
 - Step 10** From the **SIP Trunk Security Profile** drop-down list box, select **Non Secure SIP Trunk Profile**.
 - Step 11** From the **SIP Profile** drop-down list box, select **Standard SIP Profile**.
 - Step 12** Click **Save**.
-

What to do next

[Configure Access Control Group with AXL Access, on page 14](#)

Configure Access Control Group with AXL Access

Perform this procedure to create an access control group that includes AXL access.

Procedure

- Step 1** From Cisco Unified CM Administration, choose **User Management > User Settings > Access Control Group**.
- Step 2** Click **Add New**.
- Step 3** In the **Name** text box, enter **ICVA User Group**.
- Step 4** Click **Save**.
- Step 5** From the **Related Links** drop-down list, select **Back to Find/List** and click **Go**.

- Step 6** In the **Roles** column, click the **i** icon that corresponds to the new access control group.
 - Step 7** Click **Assign Role to Group**.
 - Step 8** Click **Find**.
 - Step 9** Select **Standard AXL API Access** check box, and click **Add Selected**.
 - Step 10** Click **Save**.
-

Configure Application User for Paging

Perform this procedure to configure an application user:

- For Basic Paging, configure an InformaCast application user.

Procedure

- Step 1** From Cisco Unified CM Administration, choose **User Management > Application User**.
 - Step 2** Click **Add New**.
 - Step 3** In the **User ID** text box, enter a user ID for the application user. For example, **ICVA InformaCast**.
 - Step 4** Enter a password in the **Password** and **Confirm Password** fields.
 - Step 5** In the **Available Devices** list box, click the CTI ports that you created for your deployment and use the arrows to move the devices to the **Controlled Devices** list box. For example, select **ICVA-IC-001** for InformaCast and **ICVA-CA-001** for CallAware.
 - Step 6** Click the **Add to Access Control Group**.
 - Step 7** Click **Find**.
 - Step 8** Check the following check boxes (unless otherwise indicated, select these permissions for all application users):
 - ICVA User Group
 - Standard CTI Allow Control of All Devices
 - Standard CTI Allow Control of Phones supporting Connected Xfer and conf
 - Standard CTI Allow Control of Phones supporting Rollover Mode
 - Standard CTI Enabled
 - Step 9** Click **Add Selected**.
 - Step 10** Click **Save**.
-

Enable Web Access for a Phone

Perform this procedure in Basic Paging to enable web access for a Cisco Unified IP Phone. You can also use a Common Phone Profile to enable web access for a group of phones that use that profile. For details, see [Enable Web Access for Common Phone Profile, on page 16](#).

Before you begin

[Configure Application User for Paging, on page 15](#)

Procedure

-
- Step 1** From Cisco Unified CM Administration, choose **Device > Phone**.
 - Step 2** Click **Find** and select the phone for which you want to enable web access.
 - Step 3** In the **Product Specific Configuration Layout** area, from the **Web Access** drop-down list, select **Enabled**.
 - Step 4** Click **Save**.
-

What to do next

[Configure Authentication URL, on page 16](#)

Enable Web Access for Common Phone Profile

Perform this procedure in Basic Paging to enable web access for a group of Cisco Unified IP Phones that use a Common Phone Profile. You can also enable web access on an individual phone. For details, see [Enable Web Access for a Phone, on page 15](#).

Before you begin

[Configure Application User for Paging, on page 15](#)

Procedure

-
- Step 1** From Cisco Unified CM Administration, choose **Device > Device Settings > Common Phone Profile**.
 - Step 2** Click **Find** and select the profile that applies to the group of phones for which you want to enable web access.
 - Step 3** In the **Product Specific Configuration Layout** area, from the **Web Access** drop-down list, select **Enable**.
 - Step 4** Click **Save**.
 - Step 5** Click **Apply Config** to reset the phones that use the Common Phone Profile.
 - Step 6** Click **OK**.
-

What to do next

[Configure Authentication URL, on page 16](#)

Configure Authentication URL

Perform the following tasks to configure an authentication URL that points to InformaCast so that when InformaCast pushes broadcasts to Cisco Unified IP Phones, the phones authenticate with InformaCast instead of Unified Communications Manager.

Procedure

	Command or Action	Purpose
Step 1	Set Authentication URL, on page 17	Set the Unified Communications Manager authentication URL to point InformaCast.
Step 2	Reset Your Phones, on page 17	Reset the phones in your deployment so that your phones use the new settings.
Step 3	Test Your Phones, on page 18	Verify that the phones in your deployment use the new authentication URL settings.

Set Authentication URL

Perform this procedure to set the Unified Communications Manager authentication URL to point to the InformaCast Virtual Appliance.

Procedure

-
- Step 1** From Cisco Unified CM Administration, choose **System > Enterprise Parameters**.
- Step 2** Scroll to the **Phone URL Parameters** area, and in the **URL Authentication** field, enter **http://<IP Address>:8081/InformaCast/phone/auth** where <IP Address> is the IP Address of the InformaCast Virtual Appliance.
- Note** Make a note of the existing URL in the **URL Authentication** field. You may need this when you configure InformaCast. See your InformaCast documentation for details.
- Step 3** Scroll to the **Secured Phone URL Parameters** area, and in the **Secured Authentication URL** field, enter **http://<IP Address>:8081/InformaCast/phone/auth** where <IP Address> is the IP Address of the InformaCast Virtual Appliance.
- Step 4** Click **Save**.
-

Reset Your Phones

After you set the authentication URL to point to the InformaCast Virtual Appliance, you must reset your phones. This procedure describes how to manually reset the phones in device pools. There are many methods for resetting your phones. For example, you can also use Bulk Administration Tool to schedule the reset during off hours. See the *Cisco Unified Communications Manager Bulk Administration Guide* for information on the Bulk Administration Tool.

Procedure

-
- Step 1** From Cisco Unified CM Administration, choose **Device > Phone**.
- Step 2** In the **From Phone Where** box, select **Device Pool**.
- Step 3** Set the other drop-down menus and field items to settings that will bring up the device pools that you contain your phones.

- Step 4** Click **Find**.
- Step 5** Select the device pools that you want to reset.
- Step 6** Click **Reset Selected**.
- Step 7** Click **Reset**.

Test Your Phones

Verify that your phones are authenticating with the InformaCast Virtual Appliance.

Procedure

- Step 1** From Cisco Unified CM Administration, choose **Device > Phone**.
- Step 2** Use the drop-down list and fields in the Find and List Phones window to filter your search for a phone that should be using the new authentication URL, and click **Find**.
- Step 3** For the phone that should be using the new settings, click the IP Address link in the **IPv4 Address** column.
- Step 4** Click Network Configuration.
The Network Configuration page appears.
- Step 5** Verify that the **Authentication URL** field displays the InformaCast Virtual Appliance IP address that you entered for the **URL Authentication** enterprise parameter. If the correct URL does not appear, you will need to set the authentication URL.

Configure PushToTalk Service Integration

If you have already configured an Advanced Notification paging deployment in Cisco Unified Communications Manager, perform the following tasks to add PushToTalk services.

Before you begin

If you have not done so, configure an application user specifically for PushToTalk. For details, see [Configure Application User for Paging, on page 15](#)

Procedure

	Command or Action	Purpose
Step 1	Create a PushToTalk Service Definition, on page 19	Set up the PushToTalk phone service in Cisco Unified Communications Manager.
Step 2	Configure PhoneGroup Parameter for PushToTalk, on page 19	Configure the Phone Group parameter for the PushToTalk service.
Step 3	Configure SkipConfirm Parameter for PushToTalk, on page 20	Configure the Skip Confirmation parameter for the PushToTalk service.
Step 4	Configure Directory Number Parameter for PushToTalk, on page 21	Configure the Directory Number Parameter for the PushToTalk service.

	Command or Action	Purpose
Step 5	Assign Phones to PushToTalk Service, on page 21	Configure your phones for the PushToTalk service.
Step 6	Configure Wireless Phones for PushToTalk, on page 22	Configure wireless phones for PushToTalk services.
Step 7	Install Audio Files for PushToTalk, on page 24	Download PushToTalk audio files from the InformaCast Virtual Appliance and upload them to Cisco Unified Communications Manager.

Create a PushToTalk Service Definition

If you want to enable PushToTalk services, you must create a service definition for PushToTalk to be able to display interactive content with text and graphics on Cisco Unified IP Phones.

Procedure

-
- Step 1** In Cisco Unified CM Administration, choose **Device > Device Settings > Phone Services**.
- Step 2** Click **Add New**.
- Step 3** Enter a **Service Name** for the service. For example, **PushToTalk**.
- Step 4** Enter a **Service Description** for the service. For example, **Intercom Functionality**.
- Step 5** In the Service URL text box, enter **http://<InformaCast Virtual Appliance IP Address>:8085/PushToTalk/PhoneMenu.action?sep=#DEVICENAME#**.
- Step 6** Check the **Enable** check box.
- Step 7** Click **Save**.
-

What to do next

Perform the following procedures to configure the parameters by which PushToTalk can be customized for each phone:

- [Configure PhoneGroup Parameter for PushToTalk, on page 19](#)
- [Configure SkipConfirm Parameter for PushToTalk, on page 20](#)
- [Configure Directory Number Parameter for PushToTalk, on page 21](#)

Configure PhoneGroup Parameter for PushToTalk

Use this procedure to configure the PhoneGroup parameter, which allows you to limit a phone subscribed to this service's parameter to only displaying a subset of the phone groups available.

Before you begin

[Create a PushToTalk Service Definition, on page 19](#)

Procedure

- Step 1** In Cisco Unified CM Administration, choose **Device > Device Settings > Phone Services**.
 - Step 2** Click **Find** and select the service that you created for PushToTalk.
 - Step 3** Click the **New Parameter** button.
 - Step 4** In the **Parameter Name** text box, enter **PhoneGroupIds**.
 - Step 5** In the **Parameter Display Name** text box, enter **Phone Group Default**.
 - Step 6** In the Parameter Description text box, enter text similar to “**If you wish to limit the phone to less than all phone groups, enter the phone group ID(s).**”
 - Step 7** Uncheck the **Parameter is Required** check box.
 - Step 8** Uncheck the **Parameter is a Password (mask contents)** check box.
 - Step 9** Click **Save**.
 - Step 10** Close the **Configure Cisco IP Phone Service Parameter** window.
 - Step 11** Click **Update Subscriptions**.
 - Step 12** Click **Save**.
-

What to do next

[Configure SkipConfirm Parameter for PushToTalk, on page 20](#)

Configure SkipConfirm Parameter for PushToTalk

Use this procedure to configure the SkipConfirm parameter for PushToTalk. The SkipConfirm parameter allows you to (in conjunction with the PhoneGroupIds parameter) immediately enter a PushToTalk session by pressing the side button on wireless phones or the **Services** button on desktop phone.

Before you begin

[Configure PhoneGroup Parameter for PushToTalk, on page 19](#)

Procedure

- Step 1** In Cisco Unified CM Administration, choose **Device > Device Settings > Phone Services**.
- Step 2** Click **Find** and select the phone service that you created for PushToTalk.
- Step 3** Click **New Parameter**.
- Step 4** In the **Parameter Name** text box, enter **SkipConfirm**.
- Step 5** In the **Parameter Display Name** text box, enter **SkipConfirmation**.
- Step 6** In the **Default Value** text box, enter **N**.
- Step 7** In the **Parameter Description** text box, enter text similar to, “**Skip (Y/N) the confirmation page when limiting to only one specific PushToTalk phone group.**”
- Step 8** Uncheck the **Parameter is Required** check box.
- Step 9** Uncheck the **Parameter is a Password (mask contents)** check box.
- Step 10** Click **Save**.

- Step 11** Close the **Configure Cisco IP Phone Service Parameter** window.
 - Step 12** Click the **Update Subscriptions** button.
 - Step 13** Click **Save**.
-

What to do next

[Configure Directory Number Parameter for PushToTalk, on page 21](#)

Configure Directory Number Parameter for PushToTalk

Use this procedure to configure the Directory Number parameter for PushToTalk services in an Advanced Notification deployment. The Directory Number parameter allows you to immediately enter a PushToTalk session by pressing the side button on wireless phones or the **Services** button on desktop phone.

Before you begin

[Configure SkipConfirm Parameter for PushToTalk, on page 20](#)

Procedure

- Step 1** In Cisco Unified CM Administration, choose **Device > Device Settings > Phone Services**.
 - Step 2** Click **Find** and select the service that you set up for PushToTalk.
 - Step 3** Click the **New Parameter** button.
 - Step 4** In the **Parameter Name** text box, enter **DN**.
 - Step 5** In the **Parameter Display Name** text box, enter **Directory Number**.
 - Step 6** In the **Parameter Description** text box, enter text similar to “**If skipping confirmation page when limiting to a specific phone group, use this directory number when starting a one-to-one or intercom session.**”
 - Step 7** Uncheck the **Parameter is Required** check box.
 - Step 8** Uncheck the **Parameter is a Password (mask contents)** check box.
 - Step 9** Click **Save**.
 - Step 10** Close the **Configure Cisco IP Phone Service Parameter** window.
 - Step 11** Click the **Update Subscriptions** button.
 - Step 12** Click **Save**.
-

What to do next

[Assign Phones to PushToTalk Service, on page 21](#)

Assign Phones to PushToTalk Service

Use this procedure to assign a phone to the PushToTalk service and to customize how the Phone Group, Skip Confirmation and Directory Number parameters are set when the user initiates a PushToTalk session.

Before you begin

[Configure Directory Number Parameter for PushToTalk, on page 21](#)

Procedure

- Step 1** In Cisco Unified CM Administration, choose **Device > Phone**.
- Step 2** Click **Find** and select the phone that you want to use with PushToTalk.
The **Phone Configuration** window opens.
- Step 3** From the **Related Links** drop-down list box, select **Subscribe/Unsubscribe** and click **Go**.
The **Cisco IP Phone Services** window opens.
- Step 4** From the **Select a Service** drop-down list box, select **PushToTalk** and click **Next**.
- Step 5** Leave the **Service Name** and **ASCII Service Name** fields with their default values.
- Step 6** If you want to limit the phone to specific phone groups for PushToTalk, in the **Phone Group Default** text box, enter the phone group IDs that you want to include.
- Note** If you leave the field empty, the **Phone Groups** menu appears whenever you initiate a PushToTalk session.
- Step 7** If you want the phone to skip the confirmation screen when entering a PushToTalk session, enter Y in the **Skip Confirmation** field.
- Note** If you enter N, the Start confirmation appears whenever you initiate a PushToTalk session.
- Step 8** If you want the phone to enter a one-to-one or intercom session immediately, in the **Directory Number** text box, enter the directory number for the one-to-one or intercom session.
- Note** If you leave the field empty, you must enter the directory number in the phone interface when you initiate a one-to-one or intercom PushToTalk session.
- Step 9** Click **Subscribe**.
- Step 10** Close the **Cisco IP Phone Services** window.
- Step 11** Click **Reset**.
The **Device Reset** window appears.
- Step 12** Click **Reset**.
-

What to do next

[Configure Wireless Phones for PushToTalk, on page 22](#)

Configure Wireless Phones for PushToTalk

Use this procedure to assign PushToTalk services to a wireless phone and to configure how the Phone Group, Skip Confirmation and Directory Number parameters are set when PushToTalk feature is invoked from a wireless phone.

Before you begin

[Assign Phones to PushToTalk Service, on page 21](#)

Procedure

- Step 1** In Cisco Unified CM Administration, choose **Device > Phone**.
- Step 2** Click **Find** and select the wireless phone.
The **Phone Configuration** window appears.
- Step 3** In the **Application URL** text box, enter a URL to configure the Phone Group, Skip Confirmation and Directory Number parameters and control how PushToTalk behaves when the feature is invoked from the phone. Refer to the following table for the URLs.

Desired Behavior for PushToTalk	URL to Enter
Phone Group menu prompts user to select a phone group.	<code>http://<InformaCast IP Address>:8085/PushToTalk/PhoneMenu.action?sep=#DEVICENAME#</code>
Bypass the Phone Group menu. The phone group is limited to the phone groups in the URL.	<code>http://<InformaCast IP Address>:8085/PushToTalk/PhoneMenu.action?sep=#DEVICENAME#;PhoneGroupIds=x</code> where x represents the phone group. For example, <code>PhoneGroupIds=3,5</code> .
Bypass Phone Group menu and bypass the confirmation screen for a standard PushToTalk session.	<code>http://<InformaCast IP Address>:8085/PushToTalk/PhoneMenu.action?sep=#DEVICENAME#;PhoneGroupIds=x;SkipConfirm=Y</code> where x represents the phone group. For example, <code>PhoneGroupIds=3,5</code>
Bypass Phone Group menu, confirmation screen, and directory number selection for a one-to-one or intercom PushToTalk session.	<code>http://<InformaCast IP Address>:8085/PushToTalk/PhoneMenu.action?sep=#DEVICENAME#;PhoneGroupIds=x;SkipConfirm=Y;DN=#xx</code> where x represents the phone group and xx represents the directory number for the one-to-one or intercom PushToTalk session. For example, <code>PhoneGroupIds=3,5;SkipConfirm=Y;DN=2004</code>

- Step 4** Click **Save**.
- Step 5** Click **Reset**.
The **Device Reset** window appears.
- Step 6** Click **Reset**.

What to do next

[Install Audio Files for PushToTalk, on page 24](#)

Install Audio Files for PushToTalk

Perform this procedure to install the following audio files that PushToTalk uses to indicate session activity:

- PTT_start.raw
- PTT_accept.raw
- PTT_change.raw
- PTT_end.raw
- PTT_active.raw

Before you begin

Perform one of the following procedures to set up the PushToTalk service on your phones:

- [Assign Phones to PushToTalk Service, on page 21](#)
- [Configure Wireless Phones for PushToTalk, on page 22](#)

Procedure

- Step 1** Use an SFTP client to access the five PushToTalk audio files from the following default location on the InformaCast Virtual Appliance: `/usr/local/singlewire/PushToTalk/web/sounds`.
- Step 2** Use the SFTP client to download the files to a location that the Cisco Unified Communications Manager TFTP server can access.
- Step 3** Log in to Cisco Unified Operating System Administration and choose **Software Upgrades > TFTP File Management**.
- Step 4** Click **Upload File**.
- Step 5** **Browse** to the location where you saved the PushToTalk audio files.
- Step 6** For each audio file, perform the following steps:
- a) Select the audio file.
 - b) In the **Directory** field, enter the subdirectory where the file will reside.
 - c) Click **Upload File**.
- Step 7** Restart the TFTP service by performing the following steps:
- a) From Cisco Unified Serviceability, choose **Tools > Control Center - Feature Services**.
 - b) From the **Server** drop-down list box, select the server on which the TFTP service is running.
 - c) Click the **Cisco Tftp** radio button.
 - d) Click the **Restart** button.
 - e) Click **OK**.
-

What to do next

Optional. [Assign a Directory URI to a Phone, on page 25](#)

Assign a Directory URI to a Phone

Use this procedure if you want to assign a directory URI to a phone, thereby allowing you to use URI dialing for that phone.

Procedure

- Step 1** From Cisco Unified CM Administration, choose **Device > Phone**.
 - Step 2** Click **Find** and select the phone for which you want to assign a directory URI. The **Phone Configuration** window appears.
 - Step 3** In the **Association Information** pane that appears on the left, click the phone line. The **Directory Number Configuration** window appears.
 - Step 4** In the **Directory URIs** section, enter a directory URI in the **URI** text box.
 - Step 5** Click **Save**.
-

