InformaCast Virtual Appliance Basic Paging®

Version 9.0.1

Quick Start Guide for a Cisco® Unified Communications Manager Environment

April 22, 2014

C O N T E N T S

CHAPTER 1

Introduction

For virtualized environments, InformaCast Virtual Appliance Basic Paging (InformaCast or Basic InformaCast) is Singlewire Software's IP telephony broadcast system that allows you to send a live audio stream to Cisco IP phones. InformaCast is designed to get messages quickly to large groups of people; when these messages are sent through InformaCast, they are called *broadcasts*.

This guide is designed to get you started quickly, by explaining how to complete some of the most common tasks you'll need to get the most out of InformaCast. For a more in-depth perspective of each of the sections in this guide, see the "InformaCast Virtual Appliance Installation and User Guide," available by going to **Help | Install Guide** in InformaCast.

Environments

There are three versions of this guide: one for installations using Basic Paging, one for installations using Advanced Notification in conjunction with Cisco's Unified Communications Manager (CUCM), and one for installations using Advanced Notification in conjunction with a Hybrid Runtime Environment (HRE). Please make sure you have the right version by looking at the cover page, or by looking at the environment type printed at the bottom of every page.

The versions are both separate and overlapping. Where versions overlap, *InformaCast* will be used. Where versions differ, *Advanced InformaCast* or *Basic InformaCast* will be used.

InformaCast's functionality is based on its license, and depending on the license you have, you will be able to access all of InformaCast's functionality or only parts of it. Basic InformaCast functionality includes the ability to send live audio broadcasts to up to 50 phones by dialing a number on your Cisco IP phone. Advanced InformaCast functionality includes the ability to send a number of different types of broadcasts (e.g. live audio, pre-recorded audio, pre-recorded audio and text, etc.) using your Cisco IP phone's interface and/or InformaCast's web interface, interact with InformaCast's plugins (e.g. conduct conference calls, trigger contact closures, post to Facebook and Twitter, send broadcasts to email addresses, etc.), customize scripts that can be attached to broadcasts, and receive confirmation when broadcasts are sent, among other features.

Note Upgrading from Basic to Advanced InformaCast is easily accomplished through the **Try** or **Buy** icons or by contacting Singlewire to obtain a license for a switch in functionality. Downgrading from Advanced InformaCast back to Basic is accomplished by clicking the **Stop Advanced Notification Trial** button on InformaCast's Manage License Key page (**Admin | Manage License Key**). This will cause InformaCast to reboot, as will any future change in InformaCast functionality or license type.

In addition to Basic and Advanced functionality, InformaCast can also be obtained with a basic, trial, demonstration, subscription, or perpetual license. The basic license applies only to Basic InformaCast functionality and exists in perpetuity. The rest of the licenses apply only to Advanced InformaCast and can be obtained through Singlewire Software.

For more information, see "Licensing Information" in the "InformaCast Virtual Appliance Installation and User Guide."

Prerequisites

InformaCast has the following system prerequisites:

- Compliance with the hardware requirements and port configurations as defined in the "InformaCast Virtual Appliance Installation and User Guide"

- A static IP address configured on the InformaCast Virtual Appliance

- Use of supported phones if you intend to use them as broadcast recipients (see http://www.singlewire.com/matrix/IC_CompatibilityMatrix_Cisco_Phone_20131106.html)

- Use of one of the following supported browsers: Firefox 15, Chrome 18, or Internet Explorer 9

- Multicast routing for all network segments between InformaCast and its phones

- A Cisco Unified Communications Manager (CUCM) server (including Business Edition 6000); the following versions are supported: 8.5, 8.6, 9.0, 9.1, 9.12, 10.0, and 10.5

- Web access enabled on any Cisco IP phones working with InformaCast

- SNMP enabled on all nodes in a CUCM cluster

- The AXL service running on at least one server in the CUCM cluster

- The CTIManager service running on at least one node that's also running the CallManager service. The CTIManager service can run on up to eight nodes in a cluster, and you should use more than one node with this service for redundancy.

You must also know how to access to the command-line interface (bash prompt) of InformaCast, perform basic UNIX commands, and use nano for editing files.

Tip Singlewire recommends a screen resolution of at least 1024x768.

Troubleshooting

Your first line of support is the **Help** icon. Clicking it takes you to the online help system. Accessing its dropdown menu allows you to access:

- The online help system

- Its FAQ section

- Its Troubleshooting section

- InformaCast's Support page

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly What's New in Cisco Product Documentation, which also lists all new and revised Cisco technical documentation, at: http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html.

Install InformaCast

It is expected that this application will be installed and configured by an ESXi administrator who is well versed in CUCM, as many of the concepts involved require familiarity with VMware ESXi and CUCM, and it will be necessary to configure both as part of the installation process.

Prepare your Multicast Environment

You must enable multicast across your network in order for your recipients to receive the audio portion of InformaCast broadcasts.

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Caution   Just because music on hold works on your phones does not mean that it is using multicast. Music on hold can be used with either unicast or multicast.

Plan for a Multicast Environment

Multicast is communication between a single sender and multiple receivers on a network. InformaCast has no special requirements for how multicast is enabled, and you should use your network vendor's best practices and design considerations. Multicast is typically routed with Protocol Independent Multicast (PIM) that is deployed in either sparse or dense mode. InformaCast will work with either mode.

For WAN links where your circuit provider will not route your multicast, you can configure GRE tunnels, which carry your multicast traffic from the location where the InformaCast server is located to its recipients. The only traffic that needs to traverse these GRE tunnels is the multicast traffic you might want to route. The tunnels do not need to create a full mesh between sites; they only need to be configured from the hub location to the spoke location(s). Please see the following link for details: http://www.cisco.com/en/US/tech/tk828/technologies_configuration_example09186a00801a5aa2.shtml

For recipients to receive the audio portion of InformaCast broadcasts, they make requests using Internet Group Management Protocol (IGMP). While most networks default to IGMPv2, newer recipients may use IGMPv3. If newer recipients are being deployed, be sure to enable the newer protocol version on network devices.

Network design and multicast configuration is outside the scope for which Singlewire can provide support. It is recommended that you work with your network vendor or partner.

Test Your Multicast Environment

Once you've configured multicast across your network, it's important to test that configuration to ensure that all of your recipients receive the audio portion of InformaCast's broadcasts. Singlewire offers a Multicast Testing Tool to help troubleshoot and isolate multicast routing issues. It can be downloaded from the Singlewire Support website at http://info.singlewire.com/singlewire-networking-support-tools/.

Integrate CUCM

Before you can begin using InformaCast in a telephony environment, you must configure your version of CUCM.

Tip When naming your CUCM components, it is recommended to use a standardized name or abbreviation so that the components will display together. For example, this documentation will use the abbreviation of ICVA for InformaCast Virtual Appliance.

In the past, CTI route points were recommended for use with DialCast functionality (see "Manage DialCast Functionality" in the "InformaCast Virtual Appliance Installation Guide" for more information). It is now recommended that DialCast functionality be used in conjunction with SIP instead (see "Manage SIP Functionality" in the "InformaCast Virtual Appliance Installation Guide" for more information). CTI route points are no longer recommended for DialCast configurations; this section has been removed from the documentation. You should update your DialCast configurations accordingly.

Warning **If you fail to configure CUCM in Basic InformaCast, upgrading to Advanced InformaCast and then configuring CUCM before downgrading to Basic InformaCast will require you to perform all the steps in this section again.**

Step 1 Open a web browser and log into the administration interface of the CUCM server.

Step 2 Enable the following services on your CUCM cluster node(s): **Cisco CallManager**, **Cisco CTIManager**, **Cisco AXL Web Service**, and **Cisco CallManager SNMP Service**.

Step 3 Create an SNMP community string named **ICVA** with the access privilege of ReadOnly. Select the **Apply to All Nodes** checkbox, if possible.

Step 4 Create a region, name it **ICVA**, select all of your regions in the *Regions* area, and select **64kbps (G.722, G.711)** from the **Maximum Audio Bit Rate** dropdown menu. Also, select the **None** radio button in the *Max Video Call Bit Rate (Includes Audio)* area.

Step 5 Create a device pool, name it **ICVA**, and add the ICVA region you just created to it.

Step 6 Create a route partition and name it **ICVA-CTIOutbound,ICVA-Do not add to any phone CSS**.

Step 7 Create a calling search space and name it **ICVA**. Select the partition you created in Step 6 and move it from the *Available Partitions* area into the *Selected Partitions* area using the down arrow.

Tip Do not add your voicemail platform to the *Selected Partitions* area.

Step 8   Create CTI ports for InformaCast, entering an appropriate name in the **Device Name** field, e.g. ICVA-IC-1, ICVA-IC-2, ICVA-IC-3, etc. Select **ICVA** from the **Device Pool** and **Calling Search Space** dropdown menus, and select **Cisco CTI Port - Standard SCCP Non-Secure Profile** from the **Device Security Profile** dropdown menu.

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> **Note**   In CUCM 10 and later, the **Owner ID** field is required. Select the **Anonymous/Public Shared Space** radio button above the **Owner ID** field, which will remove the required setting.

Add directory numbers (DNs) to your CTI port(s), making sure to choose a number for your DN that will not be used for any other purpose at your organization, and which is not within a direct-inward-dialing range. Select the **ICVA-CTIOutbound** route partition and enter **InformaCast** for the **Display (Internal Caller ID)** and **ASCII Display (Internal Caller ID)** fields.

Step 9   Create an AXL user group/access control group, name it **ICVA User Group**, and add the **Standard AXL API Access** role to it.

Step 10   Create an application user for InformaCast broadcasts, name it **ICVA InformaCast**, add the CTI ports you created in Step 8 to its *Controlled Devices* area, and add this user to the following user groups: **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**, and **Standard CTI Enabled**.

Step 11   Ensure that the phone profile assigned to your phones that will work with InformaCast has the **Web Access** dropdown menu set to **Enabled** or that web access is enabled at the device level itself.

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> **Note**   You can skip this step if you selected the **Standard CTI Allow Control of All Devices** checkbox in Step 10.

Step 12   Reset your phones.

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> **Note**   You will have to reset your phones to make these changes permanent. However, you will also have to reset your phones in "Configure InformaCast" on page 3-1. If you have a lot of phones, this process can be time-consuming. If you only want to reset your phones once, wait to do so until after configuring your default CUCM cluster.

Install InformaCast Virtual Appliance

Use the following steps to install InformaCast Virtual Appliance.

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> **Note**   Singlewire supports InformaCast Virtual Appliance on the VMware ESXi 4.0 - 5.5 platforms, which are managed through the vSphere client. This section describes how to import InformaCast Virtual Appliance using the vSphere client.

Step 1   Download the OVA file from the Singlewire website or Cisco's website.

> **Note** If you are using InformaCast on the Communications Manager Business Edition 6000, you will be supplied with a DVD in a package with an OVA on it (physical media).

Step 2 Open and log into the vSphere client.

Step 3 Go to **File | Deploy OVF Template**.

Step 4 Click the **Deploy from File** radio button, click its **Browse** button, navigate to where you saved the Singlewire-InformaCast-VM.ova file (or to the OVA file on the supplied DVD), select it, and click the **Open** button.

Step 5 Click the **Next** button three times.

Step 6 Select the datastore on which the new virtual machine will reside and click the **Next** button.

Step 7 Click the **Finish** button. InformaCast Virtual Appliance will begin importing. When it's finished, click the **Close** button.

Step 8 Click the **Inventory** icon () on the vSphere Client window and select your virtual machine (by default, this is Singlewire InformaCast VM).

Step 9 Go to **Inventory | Virtual Machine | Open Console**.

Step 10 Click the green arrow button () to turn on the virtual machine. The Singlewire InformaCast VM console window begins booting the virtual machine.

When InformaCast Virtual Appliance is done booting, it will acquire an IP address using DHCP (if there is a DHCP server available).

> **Note** Singlewire recommends that you configure a static IP address for InformaCast Virtual Appliance. For specifics on IP addresses and packet routing, please see your network administrator.

Once you've downloaded the InformaCast OVA file, deployed it, and opened a console window to the virtual machine, SwiftStart will start automatically.

> **Note** SwiftStart will only automatically start on the initial boot of InformaCast Virtual Appliance.

Step 11 Click the **I Agree** button to accept the End User License Agreement.

Step 12 Determine if you will use DHCP or manual entry to set the static IP address of InformaCast:

- Selecting the **Use DHCP Parameters** radio button will allow SwiftStart to make static the IP address it has detected, pull the relevant network configuration information from this IP address, and configure your network to work with InformaCast.

- Selecting the **Enter Manually** radio button will allow you to enter a routable IP address on your network that's not currently in use, a valid netmask for that IP address, its default gateway, the IP address(es) of a DNS server(s) on your network.

Step 13 Click the **Submit** button. SwiftStart will make the IP address you've configured/entered static and configure your network to work with InformaCast.

When your network configuration is successful, the Network Configuration page will refresh with a statement confirming the success.

Step 14 Click the **Finish** button. The SwiftStart window appears with a note about starting InformaCast.

Step 15 Close your open console window.

Access InformaCast Virtual Appliance

If you completed all of the SwiftStart steps in "Install InformaCast Virtual Appliance" on page 2-3, the InformaCast Virtual Appliance should be running and you can access the Singlewire Start page, which houses the links to the Virtual Appliance's user interfaces.

Open a web browser, enter the IP address of the InformaCast Virtual Appliance (which you set in Step 12 on page 2-4, and press the **Enter** key.

Tip The Singlewire Start page allows you to easily access all of your Virtual Appliance user interfaces along with application- and system-level management tools. You may find it helpful to keep this tab/window open during the time that you're working with the Virtual Appliance.

Start Applications Initially on the Virtual Appliance

Note If you completed all of the SwiftStart steps in "Install InformaCast Virtual Appliance" on page 2-3, InformaCast will have already been started for you and you can skip this section.

If you didn't complete all of the SwiftStart steps in "Install InformaCast Virtual Appliance" on page 2-3, InformaCast will not yet be started. Once you initially start InformaCast (and there are no startup problems), it will automatically start when the Virtual Appliance is started.

Note To avoid complications, make sure the InformaCast Virtual Appliance's IP address has been statically configured before starting it for the first time.

Step 1 Click the **Access Application Management Tools with Control Center** link on the Singlewire Start page.

Step 2 Click the **Access System Management Tools** link.

Step 3 Enter your login credentials and click the **Login** button. By default, your username is **admin** and your password is **changeMe**.

Step 4 Go to **System | Bootup and Shutdown**, scroll down the list of actions until you come to **singlewireInformaCast**.

Step 5   Select its checkbox, scroll to the bottom of the page and click the **Start Now and On Boot** button. It will take a minute or so for InformaCast to start. From now on, it will start automatically when the virtual machine boots.

Log into InformaCast for the First Time

Once the Virtual Appliance is started and you've accessed the Singlewire Start page, you can log into InformaCast.

Step 1   Click the **InformaCast** link on the Singlewire Start page. A separate tab/window opens to InformaCast's Startup page. Depending on your system, there may be a delay of several minutes while InformaCast initializes. Once InformaCast initializes, you will be presented with InformaCast's Login page.

Step 2   Enter **admin** in the **Login** field and **changeMe** in the **Password** field. Both fields are case sensitive.

Step 3   Click the **Log In** button. The InformaCast Welcome page appears.

C H A P T E R **3**

Configure InformaCast

To optimize your installation, several aspects of InformaCast must be customized and you must update JTAPI.

Configure InformaCast's Telephony

Once you've installed InformaCast, you must configure the integration of InformaCast with CUCM.

Step 1   Go to **Admin | Telephony | CUCM Cluster** and click the **Edit** button next to Default Configuration.

Step 2   Enter the application user's username in the **Communications Manager Application User** field. You created this user in Step 10 on page 2-3.

Step 3   Enter the application user's password in the **Communications Manager Application Password** and **Confirm Application Password** fields.

Step 4   Make sure the **Use Application User for AXL** checkbox is selected, meaning that your application user credentials are used when building InformaCast's phone cache.

Step 5   Enter your AXL IP address(es) in the **AXL IP Address(es)** field. Separate addresses with commas. If you leave this field blank, InformaCast will attempt to find a server running the AXL service among those servers running the CallManager service.

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> **Tip**   You can find which cluster members are running the AXL service by logging into your CUCM, selecting **Cisco Unified Serviceability** from the **Navigation** dropdown menu, and going to **Tools | Service Activation**. Scroll down the Service Activation page to see whether the **Cisco AXL Web Service** checkbox is selected.

Step 6   Enter the IP address of the CUCM server(s) in the **Communications Manager IP Address(es)** field, which will be used when establishing a CTI (JTAPI) connection with CUCM. You can enter any and all CUCMs running the CTI Manager service. Use the numeric IP addresses rather than DNS names.

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> **Caution**   InformaCast Basic Paging requires that your version of CUCM be 8.5 or newer. After completing the fields on the Edit Telephony Configuration page and clicking the **Update** button, InformaCast will determine your version of CUCM based on what you entered in the **Communications Manager IP Address(es)** field. If you have CUCM 8.5 or newer, you can continue using InformaCast Basic Paging. If you have a version of CUCM prior to 8.5, you will be redirected to a new page where you can decide

between the following options: click the **Try** icon and start your 60-day free trial of InformaCast Advanced Notification or click the **Buy** icon to obtain a demonstration, subscription, or perpetual license for InformaCast Advanced Notification.

Step 7 Enter the appropriate name in the **SNMP Community Name** and **Confirm SNMP Community Name** fields (see Step 3 on page 2-2).

Step 8 Leave your InformaCast window open, open a new window, and log into CUCM.

Step 9 Go to **System | Enterprise Parameters**.

Step 10 Scroll down the page to the *Phone URL Parameters* section and note the current value of the **URL Authentication** field. Make sure to use the *exact* value InformaCast displays on the Edit Telephony Configuration page.

Step 11 Change the value of Communication Manager's **URL Authentication** and **Secured Authentication URL** fields to the value displayed in the *XML Push Authentication* section on InformaCast's Edit Telephony Configuration page. This will usually be in the format **http://<InformaCast IP Address>:8081/InformaCast/phone/auth**.

Step 12 Click the **Save** button to confirm the CUCM change.

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Note You *must* reboot your phones for the new authentication URL to take affect.

Step 13 Click the **Update** button on InformaCast's Edit Telephony Configuration page.

Step 14 Refresh your recipient group list by clicking the **refresh the Recipient Group** list link.

Step 15 Click the **Update** button.

Step 16 Click the **Update** button again.

Update JTAPI

Once basic functionality has been confirmed, you need to update the JTAPI library used by InformaCast to the same version used by your CUCM server.

Step 1 Click the **Access Application Management Tools with Control Center** link on the Singlewire Start page.

Step 2 Click the **Access System Management Tools with Webmin** link and enter your login credentials. By default, your username is **admin** and your password is **changeMe**.

Step 3 Go to **System | Bootup and Shutdown,** scroll down the list of actions until you come to **singlewireInformaCast**, click its link, and click the **Stop Now** button. It will take a minute or so for InformaCast to stop.

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Note Leave this window open. You will come back to it.

Step 4 Use an SSH client, like [PuTTY](), to access InformaCast's command line interface. The following directions use PuTTY's interface.

Step 5 Enter InformaCast's IP address in the **Host Name (or IP address)** field, leave the **Port** field at its default of 22, click the **SSH** radio button, and click the **Open** button.

Step 6 Enter **admin** at the prompt and press the **Enter** key.

Step 7 Enter **changeMe** at the prompt and press the **Enter** key.

Step 8 Enter **updateJTAPI** at the prompt and press the **Enter** key.

Step 9 Enter **exit** at the prompt and press the **Enter** key.

Step 10 Go back to your Stop Action page and click the **Return to action** link.

Step 11 Click the **Start Now** button. It will take a minute or so for InformaCast to start.

Use InformaCast

In order to effectively use InformaCast, it is useful to understand the following terms:

- A *broadcast* is an audio message that is sent to phones.

- A *message* contains the audio that will be broadcast and the recipients that will receive the broadcast.

- A *recipient* is an endpoint such as a digital phone. More than one recipient can be organized into *recipient groups*.

Add a Recipient Group

If you'd like to be able to send messages to smaller groups of recipients (rather than all the endpoints in your system), you must set up appropriate recipient groups within InformaCast.

Note By default, InformaCast initially creates an "(All Recipients)" group, which contains all the recipients that can be discovered.

Step 1 Go to **Recipients | Edit Recipient Groups**. This page shows the number of phones for each group.

Step 2 Click the **Add** button, name your recipient group, and decide whether you will add members to the group by selecting individual recipients or by making rules (a third option of selecting multiple, existing recipient groups is only available once you've created recipient groups and is discussed further in the "InformaCast Virtual Appliance Installation and User Guide"):

- If you have chosen to select recipients, select the **Individually** checkbox, click its **Edit** button, and move your recipients from the *Available Recipients* area to the *Selected Recipients* area in the Select Individual Recipients pop-up window that appears. Filter your list by entering text in the **Filter** field. This text will be matched to values of the constraints described in the table on page 4-2. Click the **Submit** button to save your selection(s).

- If you have chosen to make rules, select the **Filter with Rules** checkbox, click its **Edit** button, and use the dropdown menus/fields to create rules to which recipients will/will not match and thus be included or excluded from the recipient group. The rule parameters are described in the table on page 4-2.

Matching Parameter	Description
Communications Manager Calling Search Space	Phones that match (or don't match) the specified search space.[a]
Communications Manager Cluster Name	Phones that match (or don't match) the specified CUCM cluster name.
Communications Manager Device Pool	Phones that match (or don't match) the specified pool.
Communications Manager Device Type	Phones that match (or don't match) the specified model, as reported by the CUCM server.
	If you choose **Equal** as your constraint, you get a dropdown menu with human-oriented model names. Otherwise, you will see the underlying numeric code number assigned by Cisco.
Can Display Text	Recipients that match (or don't match) in their ability to display text. Recipients that can display text are typically IP phones.[b]
Description	Recipients that match (or don't match) the supplied description value. This is often a useful grouping tool because you have control over the description of the recipients in your system, so you can set up your descriptions in ways that facilitate grouping.
	The text you enter will be compared against the Device Description entries of phones registered with your CUCM server. Any recipients whose descriptions match with the rule you've specified will be considered part of the recipient group.
Directory Numbers	Phones that match (or don't match) the supplied phone number(s) assigned to them in the CUCM server.[b]
IP Address	Recipients that match (or don't match) the supplied subnet boundaries. When choosing this parameter, you are given a new Comparison Type choice, **Belong to Subnet**, which allows you to enter a subnet mask like 172.17.30.0/8. See "Subnet Matching" in the "InformaCast Virtual Appliance Installation and User Guide" for more information about this approach.
InformaCast Device Type	Recipients that match (or don't match) in their functionality as an IP phone.
Location	Recipients that match (or don't match) the supplied location value.

Matching Parameter	Description
MAC Address	Recipients that match (or don't match) the supplied network hardware address of the recipient, which is guaranteed to be unique across your network.
Name	Recipients that match (or don't match) the supplied name. Like the **Description** parameter, you have control over names, so they may useful for grouping, but should be concise.
Partition Names	Phones that match (or don't match) the supplied dial plan partition assigned to each directory number, a.k.a. phone number, assigned to an IP phone in CUCM
Profile Description	Phones that match (or don't match) the CUCM's user device profile description. Phones that are using extension mobility or a profile when logged out are eligible to be filtered in this way.

a. Warning: If your site is using extension mobility, bear in mind that the calling search space, and even the directory number, assigned to a phone can change when a user logs in. Because of this, you should avoid using **Communications Manager Calling Search Space** as the criterion for setting up any recipient groups that are supposed to reflect geographic (rather than personnel) divisions. For such geographic divisions, **IP Address** is likely a better choice when extension mobility is a factor.

b. The recipient must be currently registered for this parameter to match. InformaCast has no information about the detailed features of unregistered recipients.

Step 3 Click the **Update** button when you are done creating your recipient group. Your recipient group is added to InformaCast.

Add a New Message

Messages are the basis of any InformaCast broadcast. A message predefines the characteristics of the broadcast.

A message can be composed of text, audio, or both; however, with Basic InformaCast functionality, you only have access to Live Audio broadcasts. In these messages, the audio is not recorded at all; it is streamed to recipient groups in real time when the message is broadcast. These broadcasts will skip any phones that are in use when the broadcast occurs, wait until all recipients capable of playing audio are ready to play the broadcast, play the broadcast at the volume at which the phone is set when the broadcast occurs, and if there are simultaneous broadcasts attempted, will play the first broadcast first (the second broadcast will be bumped).

Click the **Messages** icon or go to **Messages | Send or Edit Messages**. The Send or Edit Messages page appears.

Note With Basic InformaCast functionality, you can view all of the potential InformaCast messages, but you cannot configure any of them unless you have Advanced InformaCast functionality. Contact Singlewire to obtain an Advanced InformaCast license, which is available as a free trial or for purchase, and gain access to all of InformaCast's functionality.

Aside from viewing potential InformaCast messages, you can also view active broadcasts by clicking the **View** button (only visible on the Send or Edit Messages page when there is an active broadcast) and cancel any ongoing broadcasts.

Manage SIP Functionality

Note Knowledge of SIP is required for completion of this section. If you have any questions, the "InformaCast Virtual Appliance Installation and User Guide" has more comprehensive instructions.

Session Initiation Protocol (SIP) is supported by a growing number of PBXs and telephony devices, and provides InformaCast with the capability to receive SIP calls, allowing other SIP devices to locate and call InformaCast.

In order to configure SIP functionality, you will need to configure a SIP trunk and InformaCast's SIP pages.

Note In the past, CTI route points were recommended for use with DialCast functionality. For easier troubleshooting, it is now recommended that DialCast functionality be used in conjunction with SIP instead. You should update your DialCast configurations accordingly.

Configure a SIP Trunk

Configuring a SIP trunk is comprised of three basic components: a SIP trunk security profile, the SIP trunk itself, and a route pattern.

Step 1 Open and log into the administration interface of the CUCM server.

Step 2 Go to **System | Security | SIP Trunk Security Profile** and click the **Find** button, which returns a list of SIP trunk security profiles.

Step 3 Click the **Copy** icon in the row of your default profile, **Non Secure SIP Trunk Profile**, enter a unique name for your SIP trunk security profile, enter a description of your SIP trunk security profile, and select **Non Secure** from the **Device Security Mode** dropdown menu.

Note If you would like to use the TLS protocol with your environment, follow the steps in "Manage SIP Certificates to Facilitate TLS Protocol" on page 4-7.

Step 4 Select either **TCP** or **UDP** from the **Outgoing Transport Type** dropdown menu, leave the **Incoming Port** field as **5060**, and click the **Save** button.

Step 5 Go to **Device | Trunk** and click the **Add New** button.

Step 6 Select **SIP Trunk** from the **Trunk Type** dropdown menu, ensure that **SIP** appears as the **Device Protocol** dropdown menu selection, and click the **Next** button.

Step 7 Enter a name for your SIP trunk, select the device pool you created in Step 5 on page 2-2, scroll down to the *Inbound Calls* area and select the calling search space you created in Step 7 on page 2-2, scroll down to the *SIP Information* area and enter the IP address of your InformaCast server in the **Destination Address** field.

Step 8 Ensure that the value in the **Destination Port** field is the same as listed in Step 4 on page 4-5, select the SIP trunk security profile that you just created, and select **Standard** from the **SIP Profile** dropdown menu.

Step 9 Click the **Save** button.

Step 10 Go to **Call Routing | Route Hunt | Route Pattern** to create a route pattern that uses the SIP trunk you just created.

Step 11 Click the **Add New** button, enter a route pattern in the **Route Pattern** field, select the route partition you created in Step 6 on page 2-2, enter a description of your route pattern, select the SIP trunk you just created, and select the **Route This Pattern** radio button.

Step 12 Click the **Save** button.

> **Note** Leave your CUCM window open. You will come back to it.

Allow/Disable SIP Access to InformaCast

SIP access permits you to either allow or deny incoming SIP calls.

> **Note** Changes made to SIP access take effect immediately and do not require a restart of InformaCast.

Step 1 Go **Admin | SIP | SIP Access** in InformaCast and select the **Allow** radio button to allow SIP calls to be answered.

Step 2 Click the **Add** button to add exceptions to the SIP calls that are allowed.

Step 3 Enter the IP address or fully qualified domain name of the host you want to exclude from SIP access in the **Host** field.

> **Tip** When defining exceptions, make sure to specify the host that directly sends the INVITE request to InformaCast. This may be a SIP proxy server if proxies stand between InformaCast and the calling host.

Step 4 Click the **Add** button and click the **Update** button to save your changes.

Note Leave your InformaCast window open. You will come back to it.

Enable SIP Authentication for InformaCast

Note This section is optional depending on the security of your environment.

SIP authentication allows you to enable or disable digest authentication of incoming SIP requests.

Step 1 Open and log into the administration interface of the CUCM server.

Step 2 Go to **User Management | SIP Realm** and click the **Find** button. The Find and List SIP Realms page appears with a list of your configured SIP realms OR, if you have no SIP realms set up, it will display no records.

If you have a SIP realm you'd like to use, select it and make note of the values that appear in the **Realm**, **User**, and **Digest Credentials** fields on the SIP Realm Configuration page. Skip to Step 6 on page 4-6.

If you have no realms set up, continue with the following steps.

Step 3 Click the **Add New** button and enter the following values:

- **InformaCast** in the **Realm** field
- **sipuser** in the **User** field
- **changeMe** in the **Digest Credentials** field
- **changeMe** in the **Confirm Digest Credentials** field

Step 4 Click the **Save** button.

Step 5 Go back to your InformaCast window.

Step 6 Go to **Admin | SIP | SIP Authentication** and select the **Authenticate Incoming Requests** checkbox to enable SIP authentication.

Note The fields on this page come pre-filled. You only need to edit them if you want to change them.

Step 7 Ensure that the values in the **Realm, Authentication Username**, **Authentication Password**, and **Confirm Authentication Password** fields match the values you entered in Step 3.

Step 8 Select the length of time InformaCast should allow for a single authentication request from the **Nonce Duration** dropdown menu.

Step 9 Click the **Update** button to save your changes.

Enable Digest Authentication with SIP User Credentials

Note This section is optional depending on the security of your environment.

SIP peers may challenge InformaCast to provide valid credentials for its SIP realm when registering or terminating a SIP call. You should enter valid credentials for each SIP realm where you expect InformaCast to be challenged.

Step 1 Go to **Admin | SIP | SIP User Credentials** and click the **Add** button.

Step 2 Enter the name of your SIP peer's SIP realm, the username and password associated with the SIP peer's SIP realm, and click the **Add** button.

Manage SIP Certificates to Facilitate TLS Protocol

Note This section is optional depending on the security of your environment.

The TLS protocol is used by SIP to provide secure signalling between SIP endpoints. It is essential that the InformaCast certificate be downloaded and installed at each host that expects to use TLS as its SIP transport protocol with InformaCast. It is also essential that a certificate from each of those same hosts be uploaded to InformaCast. You will also need to create a SIP trunk and SIP trunk security profile that use TLS.

Note You can view InformaCast's SIP certificate by going to **Admin | SIP | SIP Certificates**, and clicking the **View** button.

Step 1 Install the InformaCast SIP certificate on CUCM by going to **Admin | SIP | SIP Certificates** in InformaCast and clicking the **Download** button. Select a location accessible to your CUCM server(s) in which to save the PEM file.

Note Leave this window open. You will come back to it.

Step 2 Go back to your CUCM window, select **Cisco Unified OS Administration** from the **Navigation** dropdown menu, click the **Go** button, and log into the OS administrative interface.

Step 3 Go to **Security | Certificate Management** and click the **Upload Certificate** button.

Step 4 Select **CallManager-trust** from the **Certificate Name** dropdown menu, click the **Browse** button, navigate to where you saved the InformaCast.pem file, select it, and click the **Open** button.

Step 5 Click the **Upload File** button on the Upload Certificate window, then click its **Close** button.

Step 6 Perform these steps for each CUCM server used by the SIP trunk.

> ✎
> **Note** TLS certificates are regenerated whenever CUCM is installed. So, if the server is restored from backup, these steps may need to be followed again. Also, InformaCast certificates are regenerated whenever InformaCast is installed or its IP address is changed, so this process will need to be followed again if InformaCast is re-installed or its IP address is changed.

Step 7 Create a SIP trunk security profile that uses TLS by selecting **Cisco Unified CM Administration** from the **Navigation** menu, clicking the **Go** button, and logging into the administrative interface.

Step 8 Go to **System | Security | SIP Trunk Security Profile** and click the **Find** button, which returns a list of SIP trunk security profiles.

Step 9 Click the **Copy** icon in the row of your default profile, Non Secure SIP Trunk Profile.

Step 10 Enter a unique name for your SIP trunk security profile in the **Name** field, e.g. InformaCastTLS, enter a description of your SIP trunk security profile in the **Description** field, select **Encrypted** from the **Device Security Mode** dropdown menu, select **TLS** from the **Outgoing Transport Type** dropdown menu, enter **InformaCast-<x.x.x.x>** in the **X.509 Subject Name** field, where <x.x.x.x> should be replaced with the IP address section of the common name assigned to InformaCast, and enter **5061** in the **Incoming Port** field. Click the **Save** button.

Step 11 Create a SIP trunk that uses TLS by going to **Device | Trunk** and clicking the **Add New** button.

Step 12 Select **SIP Trunk** from the **Trunk Type** dropdown menu, ensure that **SIP** appears as the **Device Protocol** dropdown menu selection, leave the **Trunk Service Type** dropdown menu at its default of **None(Default)**, and click the **Next** button.

Step 13 Enter a name for your SIP trunk in the **Device Name** field, e.g. InformaCastTLS, select the device pool you created in Step 5 on page 2-2 from the **Device Pool** dropdown menu, scroll down to the *Inbound Calls* area and select the calling search space you created in Step 7 on page 2-2 from the **Calling Search Space** dropdown menu, scroll down to the *SIP Information* area and enter InformaCast's IP address in the **Destination Address** field (you entered this in Step 10), enter **5061** in the **Destination Port** field, select the SIP trunk security profile you created in Step 10 from the **SIP Trunk Security Profile** dropdown menu, and select **Standard SIP Profile** from the **SIP Profile** dropdown menu. Click the **Save** button.

Step 14 Install SIP device certificates on InformaCast by selecting **Cisco Unified OS Administration** from the **Navigation** dropdown menu, clicking the **Go** button, and logging into the OS administrative interface.

Step 15 Go to **Security | Certificate Management** and click the **Find** button.

Step 16 Click the **CallManager.pem** link in the .PEM File column and download the .pem file to a location accessible to your InformaCast server.

> ✎
> **Note** If you are using CUCM 10.5 and later, you will click the **Common Name** link of the certificate that displays "CallManager" in the **Certificate** column of the Certificate List table.

> ✎
> **Note** Perform Steps 14 through 16 for each CUCM server that will communicating with InformaCast.

Step 17 Go back to your InformaCast window.

Step 18 Go to **Admin | SIP | SIP Certificates** and click the **Upload** button. Click the **Browse** button and navigate to where you saved your CallManager.pem file, select it, and click the **Open** button. Click the **Upload** button.

Step 19 Perform Step 18 for each CallManager.pem file you downloaded.

> ✎
>
> **Note** Any changes made to InformaCast's certificate cache, including uploads and deletions, require a SIP restart before they take effect.

Step 20 Go to **Admin | SIP | Restart SIP** and click the **Restart** button. It may take a few moments for SIP to restart.

> ⚠
>
> **Caution** Restarting SIP causes all SIP calls to be dropped, i.e. any callers interacting with the DialCast IVR will have their calls dropped. Broadcasts using SIP calls will also be impacted by a restart. Live broadcasts using SIP calls will be stopped.

Manage the SIP Stack

InformaCast uses the National Institute of Standards and Technology (NIST) SIP stack to provide it with basic SIP functionality. The SIP stack (**Admin | SIP | SIP Stack**) provides InformaCast with fundamental low-level SIP functionality such as transaction handling, dialogs, utilities for SIP headers, maintenance of SIP timers, etc.

> ⚠
>
> **Caution** Caution should be exercised when enabling detailed logging in the SIP stack because of the large size of the log files it produces and the degradation of stack performance due to extensive logging. Detailed logging is intended to be used only when troubleshooting SIP problems and should not be enabled for any longer than necessary. Two log files are generated in the InformaCast logs directory: sipStackDebug.log and sipStackServer.log.

> ✎
>
> **Note** Most values on this page should not ever need to be changed. The value most likely to be changed is the logging checkbox.

The following fields/dropdown menus can be found on the SIP Stack page:

- **Enable Detailed Logging.** Controls the SIP stack logging level. When checked, extensive and detailed logging of the SIP stack's activities are enabled, likely resulting in decreased performance. When unchecked, logging is confined to reporting problems encountered by the SIP stack, and its ordinary activities. Unless told otherwise by Support personnel, it is recommended that this checkbox remain unchecked.

- **Max Forwards.** The maximum number of forwards allowed while a SIP message is being routed to its destination.

- **Read Timeout.** The read timeout for TCP connections, in milliseconds.

- **Cache Client Connections.** Controls whether the SIP stack frees the resources associated with a client transaction when it reaches its terminated state. When checked, the SIP stack will cache a transaction's resources when it terminates, thereby improving the SIP stack's performance.

- **Cache Server Connections.** Controls whether the SIP stack frees the resources associated with a server transaction when it reaches its terminated state. When checked, the SIP stack will cache a transaction's resources when it terminates, thereby improving the SIP stack's performance.

If you make any changes, click the **Update** button or click the **Restore** button to return to your default settings.

⚠
Caution   You'll need to restart SIP. Restarting SIP causes all SIP calls to be dropped, i.e. any callers interacting with the DialCast IVR will have their calls dropped. Broadcasts using SIP calls will also be impacted by a restart. Live broadcasts using SIP calls will be stopped.

Restart SIP

Changes to the SIP stack or certificates require a restart before they take effect. Other SIP changes, such as changes to access and authentication, take effect as soon as they are made.

⚠
Caution   Restarting SIP causes all SIP calls to be dropped, i.e. any callers interacting with the DialCast IVR will have their calls dropped. Broadcasts using SIP calls will also be impacted by a restart. Live broadcasts using SIP calls will be stopped.

Step 1   Go to **Admin | SIP | Restart SIP**.

Step 2   Click the **Restart** button. It may take a few moments for SIP to restart.

Configure DialCast Functionality

InformaCast's DialCast functionality allows you to dial a SIP number to trigger an InformaCast broadcast. The configured dialing pattern that matches the dialed DN determines which InformaCast message should be sent and which recipient groups should receive it.

Dialing patterns determine which recipient group will be used based on the number that is dialed.

Step 1   Go to **Admin | DialCast | Dialing Configurations**, click the **Add** button, and enter a dialing pattern (e.g. 8811) for a SIP trunk used with InformaCast in the **Dialing Pattern** field. You will need to add at least one dialing pattern configuration for each SIP trunk used with InformaCast.

🔎
Tip   It is possible to use * or #, when setting up a dial pattern, but you must add \ before the character so that InformaCast doesn't treat it as a wildcard. For example, **1 would have a dial pattern of **1.

Step 2   Select a recipient group or groups from the **Select Recipient Groups** field.

Step 3   Click the **Add** button to save your current dialing pattern configuration.

Step 4   Dial the dialing pattern and depending on what you set up, a broadcast will be immediately initiated and sent to appropriate recipient groups.

Send a Broadcast

Tip   Before you can send a broadcast, you must have DialCasts configured (see "Configure DialCast Functionality" on page 4-10) as well as a SIP trunk (see "Configure a SIP Trunk" on page 4-4).

With Basic InformaCast functionality, you only have the ability to send Live Audio messages as broadcasts. With Advanced InformaCast functionality, there are eight types of messages that can be grouped into four separate broadcast categories:

- Text, Text and Pre-recorded Audio, and Pre-recorded Audio messages

- Text and Live Audio and Live Audio messages

- Text and Ad-hoc Audio and Ad-hoc Audio messages

- Talk and Listen messages

Note   For more information on Advanced InformaCast functionality, please contact Singlewire Software.

To send a Live Audio broadcast, dial a directory number on your Cisco IP phone that corresponds to a broadcast dialing configuration (see "Configure DialCast Functionality" on page 4-10), which is tied to a SIP trunk (see "Configure a SIP Trunk" on page 4-4) in CUCM. The call will be processed, and as soon as all the recipients specified in your broadcast dialing configuration have been activated (minus the phones already in use), you will be broadcasting live.

C H A P T E R **5**

Upgrade InformaCast from Basic to Advanced

InformaCast's functionality is based on its license, and depending on the license you have, you will be able to access all of InformaCast's functionality or only parts of it. Basic InformaCast functionality includes the ability to send live audio broadcasts to up to 50 phones by dialing a number on your Cisco IP phone. Advanced InformaCast functionality includes the ability to send a number of different types of broadcasts (e.g. live audio, pre-recorded audio, pre-recorded audio and text, etc.) using your Cisco IP phone's interface and/or InformaCast's web interface, interact with InformaCast's plugins (e.g. conduct conference calls, trigger contact closures, post to Facebook and Twitter, send broadcasts to email addresses, etc.), customize scripts that can be attached to broadcasts, and receive confirmation when broadcasts are sent, among other features.

All InformaCast users start with Basic InformaCast and can upgrade to Advanced InformaCast using the **Try** or **Buy** icons or by contacting Singlewire to obtain a license for a switch in functionality.

Note Downgrading from Advanced InformaCast back to Basic is accomplished by clicking the **Stop Advanced Notification Trial** button on InformaCast's Manage License Key page (**Admin | Manage License Key**). This will cause InformaCast to reboot, as will any future change in InformaCast functionality or license type.

In addition to Basic and Advanced functionality, InformaCast can also be obtained with a basic, trial, demonstration, subscription, or perpetual license. For more information on InformaCast licenses, see the "InformaCast Virtual Appliance Installation and User Guide."

Tip If you want to learn more about InformaCast Advanced Notification, click the **Learn** icon to visit a Singlewire Software website that provides more information on the expanded functionality available to you with your upgrade.

Note the Differences

There are certain caveats to keep in mind when upgrading from Basic to Advanced InformaCast or downgrading from Advanced to Basic:

- If you upgrade from Basic to Advanced InformaCast through either the trial, demonstration, subscription or perpetual licenses and you decide to return to Basic functionality, all additional information entered during your Advanced phase will not be saved (e.g. when you revert to Basic from Advanced, any information you entered after you upgraded initially—dialing configurations, users, recipient groups, etc.—will not be available once you downgrade to Basic InformaCast). If you choose to upgrade back to Advanced InformaCast, that information will reappear; however, any new information you entered after you reverted to Basic functionality will be unavailable.

- You will need a valid license key (if you are using Advanced InformaCast as a trial, your license key is already included), which should have been provided to you by your Singlewire salesperson (contact sales@singlewire.com if you didn't receive one)

- If you are moving from Basic InformaCast to Advanced InformaCast (and you have previously had Advanced InformaCast), InformaCast will be restarted with the installation of this new license. Please plan your upgrades accordingly.

- Because of the differences between Basic and Advanced InformaCast, there are two Installation and User Guides. When upgrading to Advanced InformaCast from Basic, you should receive a new guide that contains Advanced InformaCast features. Contact Singlewire Software if you have not received a new guide.

- InformaCast's web interface changes dramatically with your move from Basic to InformaCast, adding entirely new menus and richer functionality. Depending on your access level, you'll have access to:

  - **Home.** InformaCast's homepage, complete with RSS news feed.

  - **Messages.** The message administration page, allowing you to create, edit, and send messages as broadcasts.

  - **Recipients.** The recipient group administration page, allowing you to create and manage recipient groups.

  - **Speakers.** The IP speaker administration page, allowing you to detect, add, edit, test, and listen at IP speakers.

  - **Bells.** The bell schedule overview page, allowing you to view and access the ring lists, bell schedules, and exceptions you've created.

  - **Admin.** The configuration overview page, allowing you to view scheduled updates and backups; manage the license key, voice menus, and users; and set up the system, network, and broadcast parameters, along with DialCasts.

  - **Plugins.** The plugin administration page, allowing you to add, disable, and enable plugins and access their configurations.

  - **Help.** InformaCast's help pages, allowing you access to various aspects of the online help system and providing the ability to enter a support request.

- If you change your password in Basic InformaCast, upgrade to Advanced InformaCast, then downgrade to Basic InformaCast, your password will revert to your original Basic InformaCast password.

- If you plan to switch between Basic and Advanced InformaCast and you change your IP address, you will need to redeploy the InformaCast OVA (see "Install InformaCast Virtual Appliance" on page 2-3).

- If you fail to configure CUCM in Basic InformaCast, upgrading to Advanced InformaCast and then configuring CUCM before downgrading to Basic InformaCast will require you to perform all the steps in "Integrate CUCM" on page 2-2 again.

If you have questions about your upgrade, "Troubleshooting" on page 5-5 may provide answers. Otherwise, you can contact Singlewire Support through the online support request form. Please include:

- Account contact information

- Maintenance contract number

- Detailed description of problem

- Product name and version

- CUCM version

- InformaCast logs, which are located in https://<InformaCast IP Address>:8444/InformaCast/logs/

Upgrade InformaCast

All InformaCast users start with Basic InformaCast and can upgrade to Advanced InformaCast using the **Try** or **Buy** icons or by contacting Singlewire to obtain a license for a switch in functionality.

Note You will want to obtain the "InformaCast Virtual Appliance Installation and User Guide" for Advanced Notification in order to make full use of all of InformaCast's functionality. After upgrading, it can be obtained from **Help | Install Guide**. If you are using the online help (**Help | Install Guide**) when you upgrade, you will need to close that window and reopen it to view the upgraded help.

Try Advanced Notification

By clicking the **Try** icon ( ), you start your 60-day free trial of Advanced InformaCast.

Step 1 Click the **Try** icon ( ) any time while using Basic InformaCast.

If your server is connected to the Internet, you will see a form. Fill out the required information and click the **Submit** button.

If your server is not connected to the Internet, you will see Singlewire Sales contact information, which you should use to register for support during your trial. Click the **Start Advanced Notification Trial** button.

The Singlewire InformaCast Software License Agreement page appears.

Step 2 Click the **I Accept** button. Your window refreshes with InformaCast's homepage that now shows you are in your trial of InformaCast Advanced Notification.

Buy Advanced Notification

By clicking the **Buy** icon, you start the process of obtaining InformaCast Advanced Notification through either a demonstration, subscription, or perpetual license.

Step 1 Click the **Buy** icon ( ) any time while using Basic InformaCast.

If your server is connected to the Internet, you will be redirected to a Singlewire Software website. Follow the prompts to obtain a new license.

If your server is not connected to the Internet, you will see a QR code that you can scan with your smartphone to access the Singlewire website. Once there, follow the prompts to obtain your new license.

Step 2   Continue with "Enter Your New License Key" on page 5-4.

Enter Your New License Key

> **Note**   If you are in your free trial of Advanced InformaCast, you can skip this section.

When you upgrade from Basic InformaCast to Advanced InformaCast (with the exception of your free trial of Advanced InformaCast), you will install a new license key to activate the various features of your InformaCast system.

> **Note**   If you are in participating in your free trial of Advanced InformaCast functionality, your license will already be installed for you and will be visible on InformaCast's Manage License Key page (**Admin | Manage License Key**). Your license will not appear on Singlewire's License Manager page until you upgrade to Advanced InformaCast on a demonstration, subscription, or perpetual license.

> **Note**   Bell schedules, the number of IP phones and speakers, CUCM clustering, and message confirmation are all controlled by your license key. If you are expecting certain functionality and cannot access it, contact your Singlewire salesperson.

> **Warning**   **If you are moving from Basic InformaCast to Advanced InformaCast (and you have previously had Advanced InformaCast), InformaCast will be restarted with the installation of this new license. Please plan your upgrades accordingly.**

Step 1   Click the **Access Application Management Tools with Control Center** link on the Singlewire Start page followed by the **Manage Licenses** link.

Step 2   Enter your username and password in the **Login Name** and **Password** fields, respectively. By default, your username is **admin** and your password is **changeMe**. Click the **Login** button.

Step 3   Click the **Browse** button and navigate to the license key file that was emailed to you. You can also enter the path to the license key file.

Step 4   Select your license key file and click the **Open** button.

Step 5   Click the **Upload** button on the Upload a New License page.

The License Manager holds all of your Singlewire licenses, unless you are participating in your Advanced InformaCast trial. Depending on the software applications you are using, you will see different licenses housed on this page.

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Tip   If the key is not accepted, check that you selected the proper file containing the XML key that was emailed to you, ensure that your IP address is correct, determine that your key has not expired, and ensure that the MaxVersion parameter in your license key matches or is greater than your version of InformaCast. If you're still having trouble, contact your <u>Singlewire sales representative</u> for assistance.

Troubleshooting

The following common issues may arise when you are upgrading from Basic to Advanced InformaCast.

Problem   I upgraded InformaCast (from Basic to Advanced trial/demonstration/subscription/perpetual) and I'm seeing some of the following problems:

- I can't log in

- My recipients/user accounts/dialing configurations, etc. are missing

- I'm sending out broadcasts that have worked in the past, but they're not going through now

Solution   If you upgrade from Basic to Advanced InformaCast through either the trial, demonstration, subscription, or perpetual licenses and you decide to return to Basic functionality, all additional information entered during your Advanced phase will not be saved. If you choose to upgrade back to Advanced InformaCast, that information will reappear; however, any new information you entered after you reverted to Basic functionality will be unavailable.

For the three examples cited in this problem, you have a few options:

- **I can't log in.** Did you change your administrator password while you were in Advanced InformaCast? If so, your password has reverted to what it was when you were initially in Basic InformaCast. Use that password for logging in. If you have forgotten that password, <u>contact Singlewire Support</u> to reset your password.

- **My recipients/user accounts/dialing configurations, etc. are missing.** If you added these recipients/user accounts/dialing configurations while you were in Advanced InformaCast, downgrading to Basic InformaCast reverts you to the information you last entered before your upgrade. You will need to enter this information again or upgrade again to Advanced InformaCast. Please note that any new information you entered in your second go-round with Basic InformaCast will not be available if you decide to upgrade again to Advanced InformaCast.

- **I'm sending out broadcasts that have worked in the past, but they're not going through now.** Did you change your IP address in Advanced InformaCast before reverting to Basic InformaCast? If so, your broadcasts will no longer work. You will need to redeploy the InformaCast OVA (see "Install InformaCast Virtual Appliance" on page 2-3) to fix this issue.

Problem   I just upgraded InformaCast and I have errors on the Edit Telephony Configuration page.

Solution   If you encounter errors on the Edit Telephony Configuration page, verify that the fields have the proper information entered into them. Check the following fields' information:

- **Communications Manager AXL User.** Access CUCM's administrative interface and log in with the same username/password combination. If you are unable to log in, InformaCast will be unable to log in.

- **Communications Manager IP Address(es).** Use the same test as for the **Communications Manager Admin User** field.

- **Communications Manager Application User.** Access CUCM's administrative interface and ensure that your application user's credentials in InformaCast match those in CUCM.

- **SNMP Community Name.** Verify that the value you entered here matches the value in CUCM. Use the SNMP_UpTime tool to verify SNMP functionality.

Problem   I just upgraded/downgraded InformaCast and I'm seeing the error, "Default configuration Not Connected," in the Communications Manager Versions column on the Admin Overview page.

Solution   Rebuild your phone cache. This problem occurs whenever your license changes and whenever you add/update/delete a cluster. If either the license or clusters change, the phone cache must be rebuilt to reflect those changes. The phone cache is automatically rebuilt every hour, but if you want it completed sooner than that, you can click the **Update** button on the Edit Recipient Groups page to discover current IP phone info from CUCM. Once this is done, the CUCM information appears correctly on the Admin Overview page.

Problem   I just upgraded InformaCast and there are phones missing from my recipient groups.

Solution   Phones are found from CUCM using SNMP and AXL. If you have phones missing from a recipient group, ensure the following:

- The CUCM Admin account has the correct username/password information

- SNMP is enabled on all CUCM cluster nodes

- SNMP community strings have READ permissions on all CUCM cluster nodes

- SNMP community strings are the same on all CUCM cluster nodes

- Nothing is blocking UDP port 161 from the InformaCast server to all CUCM cluster nodes

You can use the SNMP_UpTime tool to troubleshoot SNMP further.

Problem   I've upgraded InformaCast, but when I log in and try to access any functionality, I'm directed to a page where I get the message, "Missing or Invalid Application License Key."

Solution   If your license key is not accepted, check that you selected the proper file containing the XML key that was emailed to you, ensure that your IP address is correct, determine that your key has not expired, and ensure that the MaxVersion parameter in your license key matches or is greater than your version of InformaCast. If you're still having trouble, contact your Singlewire sales representative for assistance.

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