



## InformaCast Virtual Appliance Basic Paging<sup>®</sup>

Quick Start Guide for a Cisco<sup>®</sup> Unified Communications Manager Environment  
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# 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 for online help or **Help | Support** for a PDF of the guide.

## 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, 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.

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

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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.

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In addition to Basic and Advanced functionality, InformaCast can also be obtained with a basic, trial, demonstration, subscription, or purchased 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 “A Note on Licensing” in the “InformaCast Virtual Appliance Installation and User Guide.”

## Prerequisites

InformaCast has the following system prerequisites:

- Meet the hardware requirements as defined in the “InformaCast Virtual Appliance Installation and User Guide”
- Use of one of the following supported browsers: Firefox 15, Chrome 18, or Internet Explorer 9
- Enable and configure multicast routing for all network segments between InformaCast and its phones
- Configure a static IP address on the InformaCast virtual appliance
- Install and maintain Cisco Unified Communications Manager server (including Business Edition 6000); the following versions are supported: 8.5, 8.6, 9.0, and 9.1
- Enable web access on any Cisco IP phones working with InformaCast
- Enable SNMP on all servers in a Communications Manager cluster
- Run the AXL service on at least one server in the Communications Manager cluster
- Run the CTIManager service 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.
- Know how to: obtain access to the command-line interface (bash prompt) of your InformaCast server, perform basic UNIX commands, and use vi for editing files

**Tip**

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Singlewire recommends a screen resolution of at least 1024x768.

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## Troubleshooting

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>.

You can also consult the “InformaCast Virtual Appliance Installation and User Guide.”



## CHAPTER 2

# Install InformaCast

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

## Prepare your Multicast Environment



### Note

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Please follow these next recommendations before configuring InformaCast. Your InformaCast environment will be more stable and configuration will proceed more smoothly.

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



### Caution

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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.

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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](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. If you have a Cisco network, you can work with the Cisco TAC or locate a local Cisco Partner.

## Integrate Communications Manager

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



### Warning

**If you fail to configure Communications Manager in Basic InformaCast, upgrading to Advanced InformaCast and then configuring Communications Manager 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 Communications Manager server.
- Step 2** Enable the following services on your Communications Manager cluster node(s): **Cisco CallManager**, **Cisco TFTP**, **Cisco CTIManager**, **Cisco AXL Web Service**, and **Cisco CallManager SNMP Service**.



**Note** **Cisco CallManager SNMP Service**, **Cisco AXL Web Service**, and **Cisco CTIManager** must be enabled on your Communications Manager cluster.

- Step 3** Create an SNMP community string named **InformaCast** with the access privilege of ReadOnly. Select the **Apply to All Nodes** checkbox, if possible.
- Step 4** Create a region, name it **InformaCast**, select **InformaCast** in the *Regions* area (as well as any other phone regions where broadcasting phones are located), and select **G.711** from the **Audio Codec** dropdown menu (for versions of Communications Manager 9.x or later, select **64kbps (G.722, G.711)** from the **Maximum Audio Bit Rate** dropdown menu).
- Step 5** Create a device pool, name it **InformaCast**, and add the InformaCast region you just created to it.
- Step 6** Create a route partition and name it **InformaCast**.



**Note** Make sure to add this partition to the calling search space your phones use or they will not be able to reach InformaCast's route points.

- Step 7** Create a route point, name it **InformaCast**, select **InformaCast** from the **Device Pool** dropdown menu, add a line to the route point, assign it a DN (which is the number that users will use to initiate a DialCast), select **InformaCast** from the **Route Partition** dropdown menu, and enter **InformaCast** in the **Display (Internal Caller ID)** and **ASCII Display (Internal Caller ID)** fields.



**Note** Add the InformaCast partition to your organization's calling search space of which the phones are using or you will not be able to dial these extensions from your phones.

- Step 8** Create a calling search space and name it **InformaCast**. Add your phones' partitions to this calling search space. InformaCast CTI ports will use this calling search space to place phone calls to record voice audio.
- Step 9** Create a CTI port. Make sure to select the **InformaCast** device pool and calling search space and **Cisco CTI Port - Standard SCCP Non-Secure Profile** as the device security profile.



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**Note** Most organizations will only need one port. If you require more, use a numbering scheme of **InformaCast**, **InformaCast2**, **InformaCast3**, etc.

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- Step 10** 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 **InformaCast** route partition and enter **InformaCast** for the **Display (Internal Caller ID)** and **ASCII Display (Internal Caller ID)** fields.
- Step 11** Create a user group, name it **InformaCast AXL User Group**, and assign it the **Standard AXL API Access** role.
- Step 12** Create an application user for InformaCast broadcasts, name it **InformaCast**, add the route points and CTI ports you just created to its *Controlled Devices* area, and add this user to the following user groups: **Standard CTI Enabled**, **InformaCast AXL User Group**, **Standard CTI Allow Control of Phones supporting Connected Xfer and conf**, and **Standard CTI Allow Control of Phones supporting Rollover Mode**.
- Step 13** 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.
- Step 14** 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 Communications Manager cluster.

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## 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 and later platform. This platform is managed through the vSphere client. This section describes how to import InformaCast Virtual Appliance using the vSphere client.

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- Step 1** Download the OVA file from the [Singlewire website](#) or [Cisco's website](#).





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**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).

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- 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).



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**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.

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



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

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- Step 11** Click the **I Agree** button to accept the End User License Agreement.
- If you have DHCP enabled on your network, you will be able to choose between the **Use DHCP Parameters** or **Enter Manually** radio buttons:
- Clicking the **Submit** button with the **Use DHCP Parameters** radio button selected will allow SwiftStart to make the IP address you've entered static, pull the relevant network configuration information from this IP address, and configure your network to work with InformaCast. Continue with Step 13.
  - Clicking the **Submit** button with the **Enter Manually** radio button selected will allow you to enter an IP address manually. Continue with the following steps.
- Step 12** 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, and click the **Submit** button.
- When your network configuration is successful, the Network Configuration page will refresh with a statement confirming the success.
- Step 13** Click the **Finish** button. The SwiftStart window appears with a note about starting InformaCast.
- Step 14** Close your open console window.
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## Start InformaCast



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**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 to “Log into InformaCast” on page 2-5.

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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 machine is started.



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**Note** To avoid complications, make sure InformaCast’s IP address has been statically configured before starting InformaCast for the first time.

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- Step 1** Open a web browser, enter the IP address of your InformaCast Virtual Appliance server, and press the **Enter** key. The Singlewire Start page appears.
  - Step 2** Click the **Access System Management Tools with Webmin** link. A separate tab/window opens to the Login to Webmin page. Leave your Singlewire Start page tab/window open.
  - 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**, click its link, and click the **Start Now** button. It will take a minute or so for InformaCast to start. From now on, InformaCast will start automatically when the virtual machine boots.
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## Log into InformaCast

The Singlewire Start page is accessible through a web browser addressed with the IP address of your Virtual Appliance server, and it contains links to your applications’ user interfaces, the Toolbox, and Webmin.

- 
- Step 1** Open a web browser, enter the IP address of your InformaCast Virtual Appliance server, and press the **Enter** key. The Singlewire Start page appears.
  - Step 2** Click the **InformaCast** link. A separate tab/window opens to InformaCast’s Startup page. If this is the first time you’ve started InformaCast, and depending on your system, there may be a delay of several minutes while InformaCast initializes.
  - Step 3** Log into InformaCast, entering **admin** in the **Login** field and **changeMe** in the **Password** field.
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## CHAPTER 3

# Configure InformaCast

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

## Configure your InformaCast Servers

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

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- 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 12 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 Communications Manager, 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.

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- Step 6** Enter the IP address of the Communications Manager server(s) in the **Communications Manager IP Address(es)** field, which will be used when establishing a CTI (JTAPI) connection with Communications Manager. You can enter any and all Communications Managers 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 Communications Manager 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 Communications Manager based on what you entered in the **Communications Manager IP Address(es)** field. If you have Communications Manager 8.5 or newer, you can continue using InformaCast Basic Paging. If you have a version of Communications

Manager 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 purchased 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 Communications Manager.
  - 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** field 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 Server IP Address>:8081/InformaCast/phone/auth**.




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**Note** If you are using Communications Manager 8.x or later, you will need to enter this IP address in the **Secured Authentication URL** field as well.

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- Step 12** Click the **Save** button to confirm the Communications Manager change.




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

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- 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.
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## 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 Communications Manager server.

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- Step 1** Open a web browser, enter the IP address of your InformaCast Virtual Appliance server, and press the **Enter** key. The Singlewire Start page appears.
  - Step 2** Click the **Access System Management Tools** with Webmin link. A separate tab/window opens to the Login to Webmin page.

- Step 3** Enter your login credentials. 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**, 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.

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- Step 5** Use an SSH client, like [PuTTY](#), to access InformaCast's command line interface. The following directions use PuTTY's interface.
- Step 6** 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 7** Enter **admin** at the prompt and press **Enter**.
- Step 8** Enter **changeMe** at the prompt and press **Enter**.
- Step 9** Enter **updateJTAPI** at the prompt and press **Enter**.
- Step 10** Enter **exit** at the prompt and press **Enter**.
- Step 11** Go back to your Stop Action page and click the **Return to action** link.
- Step 12** Click the **Start Now** button. It will take a minute or so for InformaCast to start.
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## CHAPTER 4

# 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

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

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**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 following table.

Matching Parameter	Description
Communications Manager Calling Search Space	Phones that match (or don't match) the specified search space. <sup>a</sup>
Communications Manager Cluster Name	Phones that match (or don't match) the specified Communications Manager cluster name.
Communications Manager Device Pool	Phones that match (or don't match) the specified pool.
Communications Manager Device Type	<p>Phones that match (or don't match) the specified model, as reported by the Communications Manager server.</p> <p>If you choose <b>Equal</b> 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.</p>
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. <sup>b</sup>
Description	<p>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.</p> <p>The text you enter will be compared against the Device Description entries of phones registered with your Communications Manager server. Any recipients whose descriptions match with the rule you've specified will be considered part of the recipient group.</p>
Directory Numbers	Phones that match (or don't match) the supplied phone number(s) assigned to them in the Communications Manager Server. <sup>b</sup>
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, <b>Belong to Subnet</b> , 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.

Matching Parameter	Description
Location	Recipients that match (or don't match) the supplied location value.
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 <b>Description</b> parameter, you have control over names, so they may be 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 Communications Manager.
Profile Description	Phones that match (or don't match) the Communications Manager'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. This option is only available when using Communications Manager v6 or later.

- 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.

Configuring SIP functionality allows you to access DialCast functionality without the use of Communications Manager—although you can still use Communications Manager if you wish—by using SIP/SIP devices to communicate with InformaCast.

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

### Configure a SIP Trunk

If you would rather use SIP for telephony communication with InformaCast instead of Communications Manager's route points (created in Step 7 on page 2-2) in combination with CTI or JTAPI, you need create a SIP trunk, which has three basic components: a SIP trunk security profile, a SIP trunk, and a route pattern.

**Note**

The following sections should be used with Communications Manager 7.0 and later.

- Step 1** Open and log into the administration interface of the Communications Manager server.
- Step 2** Go to **System | Security Profile | 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, create the SIP trunk as directed here and also 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.



---

**Note** Changing this port number necessitates you changing it on the InformaCast Virtual Appliance’s firewall as well to allow inbound traffic on the new port. Please [contact our support staff](#) to assist you with this change.

---

**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 8 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 Communications Manager 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** Open and log into InformaCast (see “Log into InformaCast” on page 2-5).

**Step 2** Go to **Admin | SIP | SIP Access** and select the **Allow** radio button to allow SIP calls to be answered.

**Step 3** Click the **Add** button to add exceptions to the SIP calls that are allowed.

**Step 4** 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 5** 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 Communications Manager 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 made note of/entered on the SIP Realm Configuration page of Communications Manager (i.e. **Realm**, **User**, **Digest Credentials**, and **Confirm Digest Credentials**, respectively).
- 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 modify it and its security profile to 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 a SIP device by going **Admin | SIP | SIP Certificates**, click the **Download** button followed by the **Save** button. Select a location accessible to your Communications Manager server(s) and click the **Save** button.
- 



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

---

- Step 2** Go back to your Communications Manager 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 Communications Manager server used by the SIP trunk.




---

**Note** TLS certificates are regenerated whenever Communications Manager 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** Modify the SIP trunk's security profile to use 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 Profile | SIP Trunk Security Profile** and click the **Find** button, which returns a list of SIP trunk security profiles.
- Step 9** Click the **Name** link for your SIP trunk security profile, then 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, enter **5061** in the **Incoming Port** field, and click the **Save** button.
- Step 10** Modify your SIP trunk to use TLS by going to **Device | Trunk** and clicking the **Find** button.
- Step 11** Click the **Name** link for your SIP trunk, scroll down to the *SIP Information* area, enter **5061** in the **Destination Port** field, click the **Save** button, and click the **Reset** button.
- Step 12** 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 13** Go to **Security | Certificate Management** and click the **Find** button.
- Step 14** Click the **CallManager.pem** link in the .PEM File column and download the .pem file to a location accessible to your InformaCast server.




---

**Note** Perform Steps 12 through 14 for each Communications Manager server that will communicating to InformaCast.

---

- Step 15** Go back to your InformaCast window.
- Step 16** 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 17** Perform Step 16 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 18** 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 values most likely to be changed are the SIP port numbers and the detailed logging checkbox.

---

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

- **UDP/TCP Port.** The port number on which the SIP stack will listen for incoming requests that use the UDP or TCP transport protocol.
- **TLS Port.** The port number on which the SIP stack will listen for incoming requests that use the TLS protocol.



---

**Note** The standard SIP port for UDP and TCP is 5060; the standard port for TLS is 5061. The stack can be configured to use non-standard ports if necessary. Changing this port number necessitates you changing it on the InformaCast Virtual Appliance's firewall as well to allow inbound traffic on the new port. Please [contact our support staff](#) to assist you with this change.

---

- **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 route point or 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 route point monitored by InformaCast in the **Dialing Pattern** field. This is the same route point you created in Step 7 on page 2-2. You will need to add at least one dialing pattern configuration for each route point line monitored by 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 either route points (see Step 7 on page 2-2) or 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 either a route point (see Step 7 on page 2-2) or a SIP trunk (see “Configure a SIP Trunk” on page 4-4) in Communications Manager. 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.



## 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

If you'd like a PDF of the "InformaCast Virtual Appliance Installation and User Guide," go to **Help | Support**.



## CHAPTER 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

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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 purchased license. For more information on InformaCast licenses, see the "InformaCast Virtual Appliance Installation and User Guide."



### Tip

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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.

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## 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 purchased 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](mailto: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 Communications Manager in Basic InformaCast, upgrading to Advanced InformaCast and then configuring Communications Manager before downgrading to Basic InformaCast will require you to perform all the steps in "Integrate Communications Manager" 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
- Communications Manager version
- InformaCast logs, which are located in `https://<InformaCast Server 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** or by going to `https://<InformaCast Server IP Address>:8444/InformaCast/doc/pdf/InformaCastAdvancedNotification.pdf` for a PDF. 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 purchased 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 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 purchased license.



**Note** Bell schedules, the number of IP phones and speakers, Communications Manager 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** Open a web browser and go to `https://<InformaCast Virtual Appliance IP Address>:8463/LicenseManager`, where `<InformaCast Virtual Appliance IP Address>` is InformaCast’s statically configured IP address.
- 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.

**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 [Singlewire sales representative](#) 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/purchased) 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 purchased 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, [contact Singlewire Support](#) 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 Communications Manager’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 Communications Manager’s administrative interface and ensure that your application user’s credentials in InformaCast match those in Communications Manager.
- **SNMP Community Name.** Verify that the value you entered here matches the value in Communications Manager. 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 Communications Manager. Once this is done, the Communications Manager 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 Communications Manager using SNMP and AXL. If you have phones missing from a recipient group, ensure the following:

- The Communications Manager Admin account has the correct username/password information
- SNMP is enabled on all Communications Manager cluster nodes
- SNMP community strings have READ permissions on all Communications Manager cluster nodes
- SNMP community strings are the same on all Communications Manager cluster nodes
- Nothing is blocking UDP port 161 from the InformaCast server to all Communications Manager 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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