



InformaCast EX Basic Paging[®]

Administration Guide for a Cisco[®] Unified Communications Manager Environment
November 28, 2012

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InformaCast EX Basic Paging

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CHAPTER 1

Overview

InformaCast EX, Singlewire's virtual appliance application, contains InformaCast Basic Paging.

Intended Audience

This guide is intended to walk you through the administration of InformaCast EX, which runs in virtualized environments. It is written with two audiences in mind, the administrators and users of InformaCast EX.

There are also two versions of this guide: one for environments using Basic InformaCast functionality and another for Advanced InformaCast functionality. Please make sure you have the right version by looking at the environment type printed at the bottom of every page.

When you install InformaCast in a Communications Manager environment, you should:

- Be familiar with Communications Manager administration
- Have multicast and networking knowledge

Prerequisites

InformaCast EX has the following system prerequisites:

- Use of one of the following supported browsers: Firefox 15, Chrome 18, or Internet Explorer 9
- A VMware ESXi server 4.0 and later (80 GB hard drive, 4 GB RAM, 1 CPU)
- Compliance with the prerequisites and hardware/system requirements for each of the included applications

As a virtual machine (VM), InformaCast EX becomes one machine among the others that are running on a VMware host. Please use the following guidelines for allocating host resources for InformaCast EX:

- **Do not oversubscribe the CPU or memory.** It is possible to run more virtual machines than the VMware host physically supports. If this is done with InformaCast EX, audio quality and phone activation performance will be adversely affected.
- **Plan the placement of your InformaCast EX VM carefully.** Cisco has released recommendations on how to run third-party VMs, such as InformaCast EX, co-resident with other Cisco virtual machines, such as those that run Cisco Unified Communications Manager. If you choose to run InformaCast EX as co-resident with Communications Manager, please note that you may be required to either move or suspend the InformaCast EX VM during troubleshooting with

Cisco TAC. If you are running InformaCast EX to support emergency communication, this may not be acceptable to you, and you should not run InformaCast EX as co-resident with Cisco UC applications.

- **Choose the proper environment.** InformaCast EX can run off of either local disk or Storage Area Network (SAN), whichever is convenient for your installation. InformaCast EX in a default logging and load configuration performs a lower number of disk I/Os.
- **Do not use NAT'd connections.** InformaCast EX must run on a VMware vNIC configured for bridging, not NAT. InformaCast EX will not work with NAT'd connections.

A Note on Usage

Specific fonts are used to represent specific kinds of information in this guide. The fonts and their meaning are listed here:

- **Bold fonts** indicate the name of a button, text field, or other element with which you interact and any text that you must enter.
- *Italic fonts* indicate the name of an area or section on one of an application's pages.
- Angled brackets enclose text that varies with your specific environment, i.e. `http://<Your IP Address>` means that you would enter your specific IP address instead of the brackets and what they enclose.
- [Blue, underlined](#) text indicates a hyperlink.
- Underlined text indicates a tooltip in the user interface. Hover your mouse over the tooltip to see an explanation of the underlined text.

There are several kinds of notification boxes used in this guide:

- **Tip.** These offer advice or “best practices.”
- **Note.** These contain additional information, usually relevant in special cases.
- **Caution.** These contain information about a procedure that may reduce the performance of your system.
- **Warning.** These contain information about a procedure that can impair or disable your system.

Where to Start

InformaCast EX has multiple user interfaces:

- Virtual machine administrative web interface (Webmin)
- Command line interface (CLI)
- Application's web interface

**Note**

The initial login credentials for InformaCast is **admin** (login) and **changeMe** (password).

This guide deals only with administration of your server environment, and will focus on the Webmin and CLI interfaces. When installing and configuring InformaCast EX, there are many steps to ensuring that your application works correctly. Please follow the steps for implementation in the InformaCast Virtual Appliance Installation and User guide.

Virtual Machine Administrative Web Interface

The virtual machine administrative web interface is used for administering the underlying operating system of the virtual machine, e.g. configuring the network interface, stopping and starting applications and shutting down the virtual machine. You can access it at `https://<InformaCast EX IP Address>:10000`.

Command Line Interface

The command line interface is a text-based interface used for support issues and some configuration procedures (e.g. those that require manual editing of files or the running of scripts). The command line interface uses the bash command line shell, and can be accessed via a virtual machine console window or over the network through the use of an SSH (Secure Shell) client.



Note

Rudimentary knowledge of bash is required to use the command line interface. If files are to be edited on the virtual machine itself, knowledge of the vi text editor is also required. If you are not familiar with the vi editor, you can optionally transfer files that need to be modified to another machine, edit them there, and then transfer the modified file back to the InformaCast EX virtual machine. The transfer process can be achieved via an SCP (Secure Copy) client, such as PSCP on Windows. PuTTY, available as a free download (<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>) contains all the necessary tools for transferring files.

Web Interface

The InformaCast application has its own web interface. Please consult its guide for further information on how its web interface works.

Technical Support

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>.



CHAPTER 2

Manage InformaCast EX

The following sections detail how to manage InformaCast EX from the server side.

Install a Software Package

InformaCast EX is a software package that must be deployed as an OVA on your virtual server. Singlewire supports InformaCast EX on the VMware ESXi 4.0 and later platform. This platform is managed through the vSphere client. This section describes how to import InformaCast EX using the vSphere client. Your client can be downloaded from your VMware server.



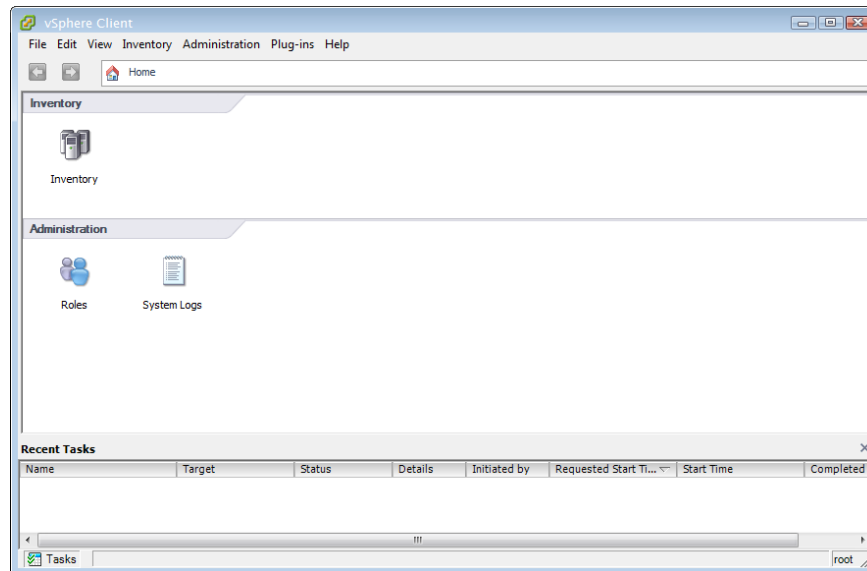
Note This guide deals only with administration of your server environment. When initially installing and configuring InformaCast EX, there are many steps to ensuring that your application works correctly. Please follow the steps for implementation in the InformaCast Virtual Appliance Installation and User guide.

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

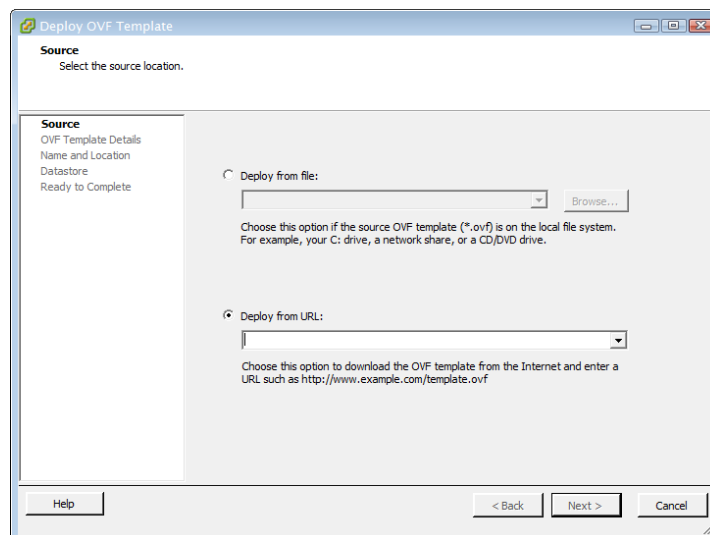


Note If you are using InformaCast on the Communications Manager Business Edition 6000, you will be supplied with a DVD in a package with an OVA on it (physical media).

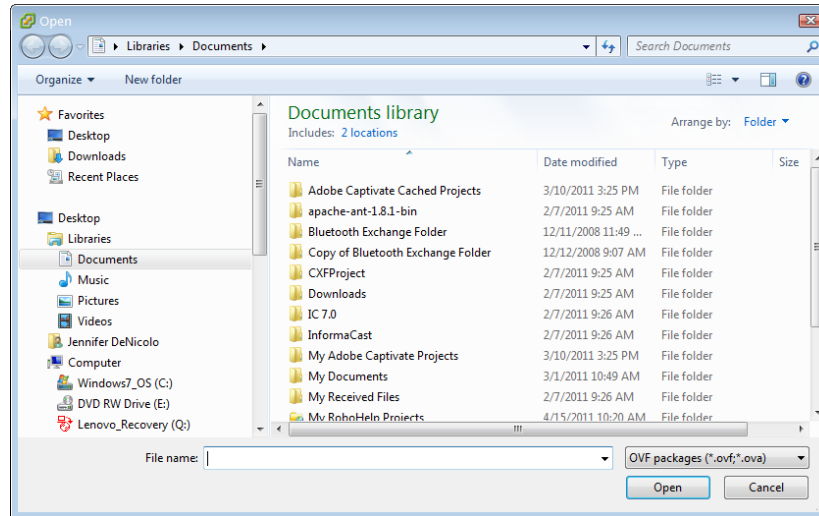
Step 2 Open and log into the vSphere client. The vSphere Client window appears.



Step 3 Go to **File | Deploy OVF Template**. The Deploy OVF Template dialog box appears.

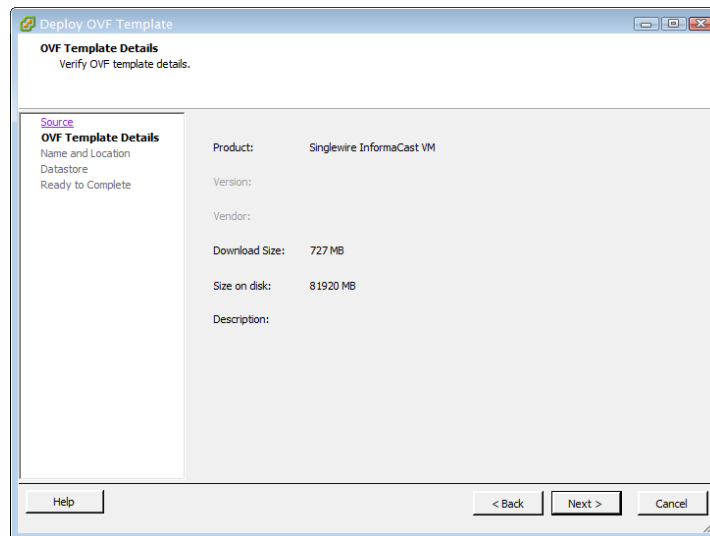


Step 4 Click the **Deploy from File** radio button and click its **Browse** button. The Open dialog box appears.

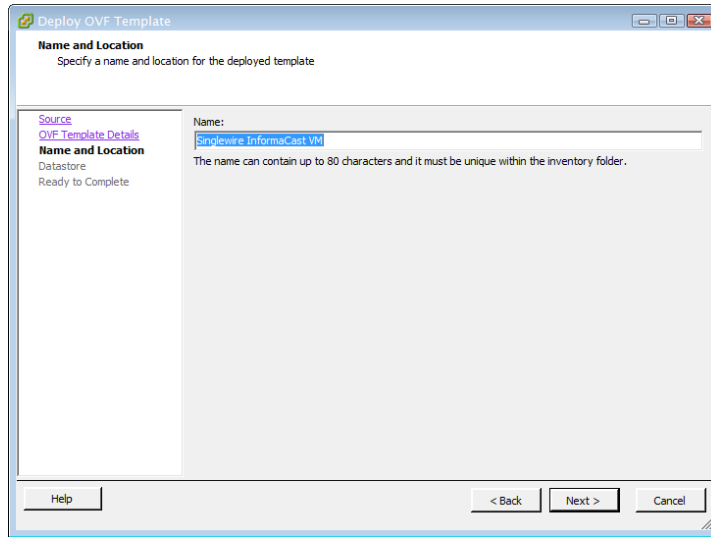


Step 5 Navigate to where you saved the Singlewire-InformaCast-VM.ova file (or to the OVA file on the supplied DVD), select it, and click the **Open** button.

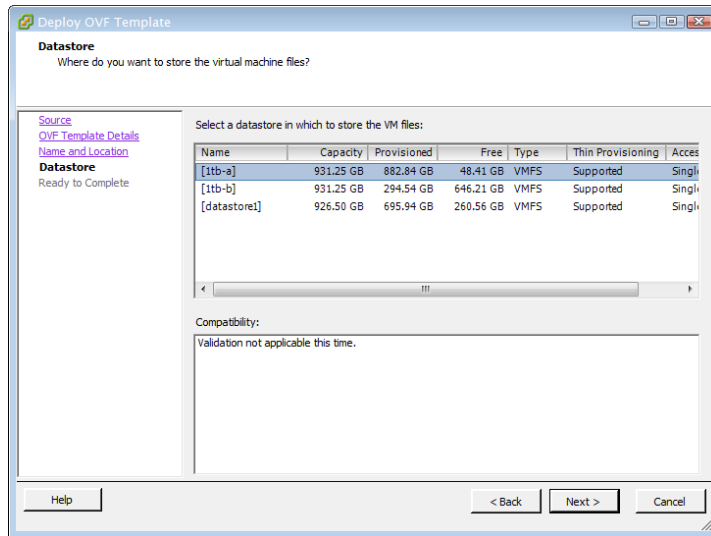
Step 6 Click the **Next** button. The Deploy OVF Template dialog box refreshes.



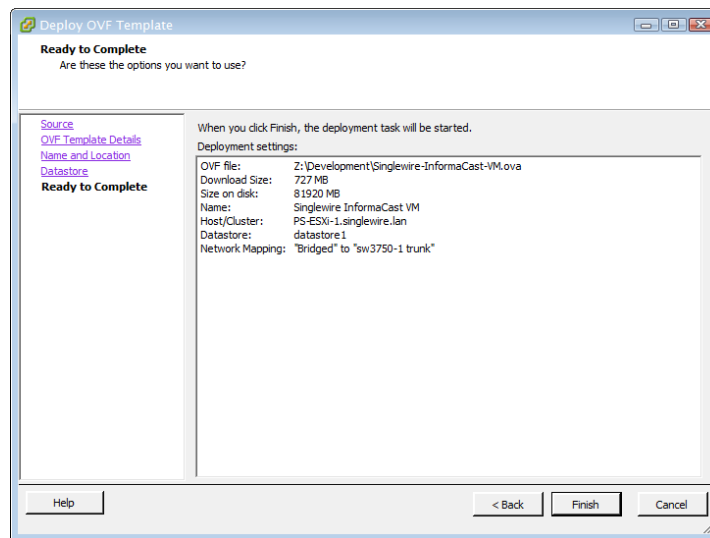
Step 7 Click the **Next** button. The Deploy OVF Template dialog box refreshes.



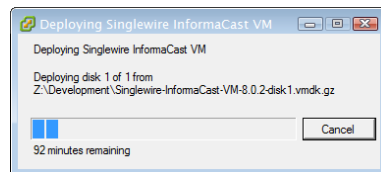
Step 8 Click the **Next** button. The Deploy OVF Template dialog box refreshes.



- Step 9** Select the datastore on which the new virtual machine will reside and click the **Next** button. The Deploy OVF template dialog box refreshes.

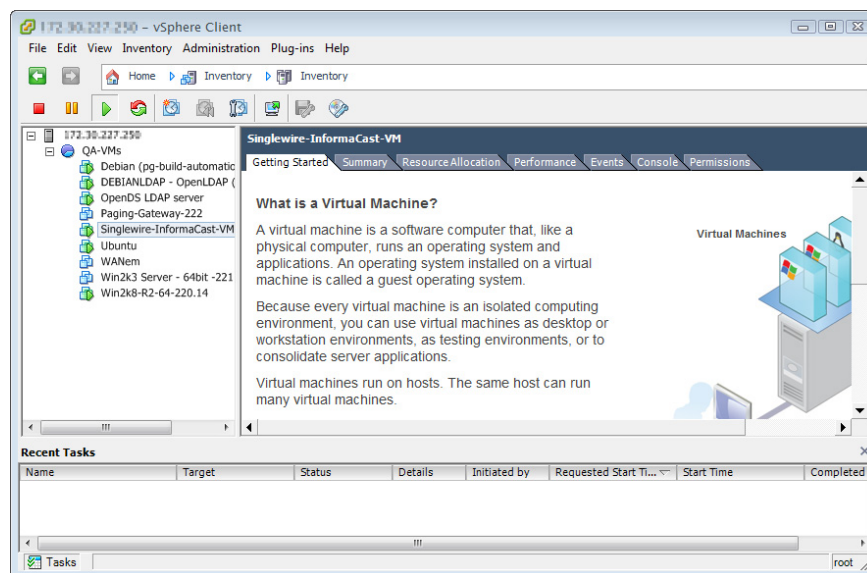


- Step 10** Click the **Finish** button. InformaCast Virtual Appliance will begin importing.



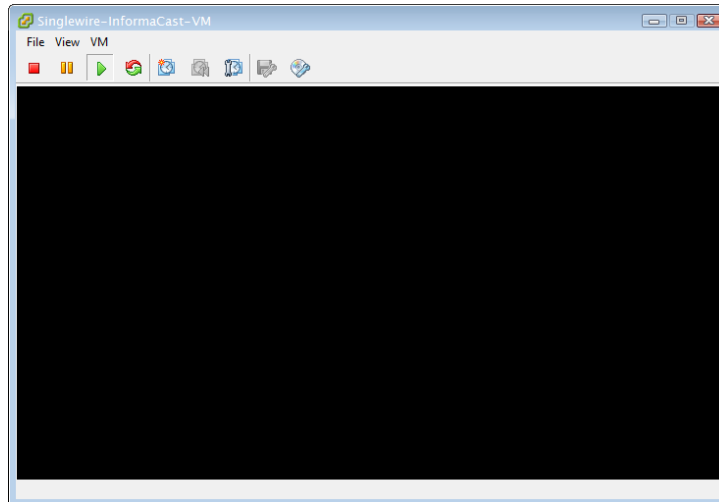
When it's finished, click the **Close** button.


- Step 11** Click the **Inventory** icon (📁) on the vSphere Client window. The vSphere Client window refreshes.

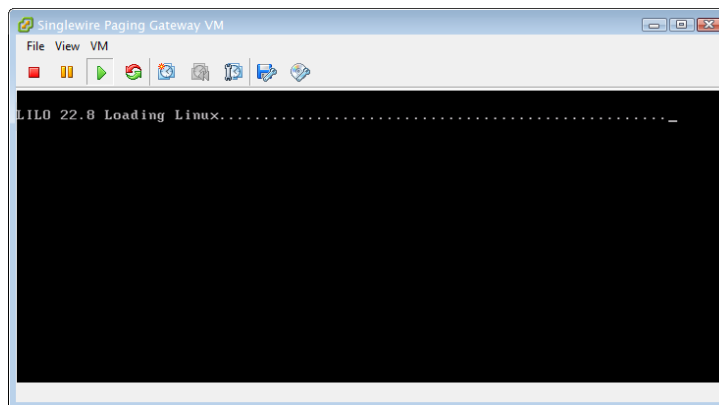


Step 12 Select your virtual machine (by default, this is Singlewire InformaCast VM).

Step 13 Go to **Inventory** | **Virtual Machine** | **Open Console**. The Singlewire InformaCast VM console window appears.

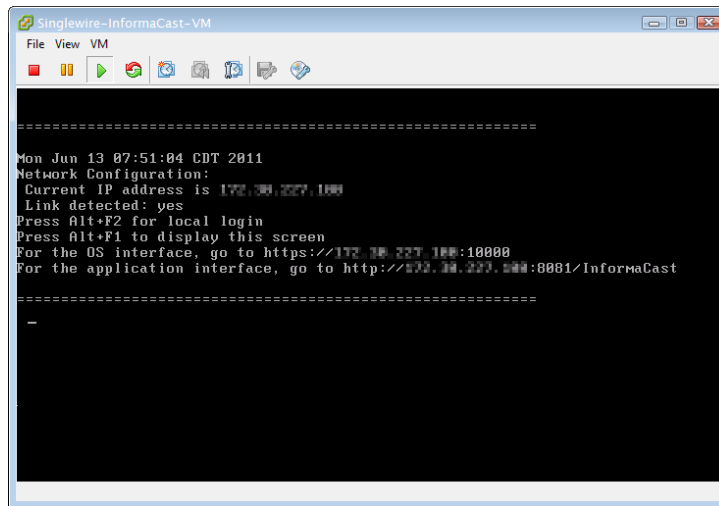


Step 14 Click the green arrow button () to turn on the virtual machine. The Singlewire InformaCast VM console window begins booting the virtual machine.

**Note**

Depending on the hardware resources available to InformaCast Virtual Appliance, it will likely boot in less than a minute.

When InformaCast Virtual Appliance is done booting, it will acquire an IP address using DHCP (if there is a DHCP server available). The acquired DHCP address can be seen in the console.



```
=====  
Mon Jun 13 07:51:04 CDT 2011  
Network Configuration:  
Current IP address is 172.30.227.100  
Link detected: yes  
Press Alt+F2 for local login  
Press Alt+F1 to display this screen  
For the OS interface, go to https://172.30.227.100:10000  
For the application interface, go to http://172.30.227.100:8081/InformaCast  
=====
```



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

SwiftStart will then start automatically, and you will see the End User License Agreement (EULA) page.



End User License Agreement

I AGREE 

IMPORTANT: PLEASE READ THIS END USER LICENSE AGREEMENT CAREFULLY. IT IS VERY IMPORTANT THAT YOU CHECK THAT YOU ARE PURCHASING CISCO SOFTWARE OR EQUIPMENT FROM AN APPROVED SOURCE AND THAT YOU, OR THE ENTITY YOU REPRESENT (COLLECTIVELY, THE "CUSTOMER") HAVE BEEN REGISTERED AS THE END USER FOR THE PURPOSES OF THIS CISCO END USER LICENSE AGREEMENT. IF YOU ARE NOT REGISTERED AS THE END USER YOU HAVE NO LICENSE TO USE THE SOFTWARE AND THE LIMITED WARRANTY IN THIS END USER LICENSE AGREEMENT DOES NOT APPLY. ASSUMING YOU HAVE PURCHASED FROM AN APPROVED SOURCE, DOWNLOADING, INSTALLING OR USING CISCO OR CISCO-SUPPLIED SOFTWARE CONSTITUTES ACCEPTANCE OF THIS AGREEMENT.

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

Step 15 Click the **I Agree** button to accept the EULA.

If you have DHCP enabled on your network, you will see the following picture:

SwiftStart

Network Configuration

An IP address of 172.30.227.144 has been chosen by the DHCP server. Do you want to make this address permanent?

Parameter Method: Use DHCP Parameters
 Enter Manually

SUBMIT →

QUIT ✕

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software

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 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. Skip to step 16 on page 11.

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.

If you do not have DHCP enabled on your network, you will see the following picture:

SwiftStart

Network Configuration

Please provide the following network parameters:

IP Address:

Netmask:

Gateway:

First DNS Server:

Second DNS Server:

SUBMIT

QUIT

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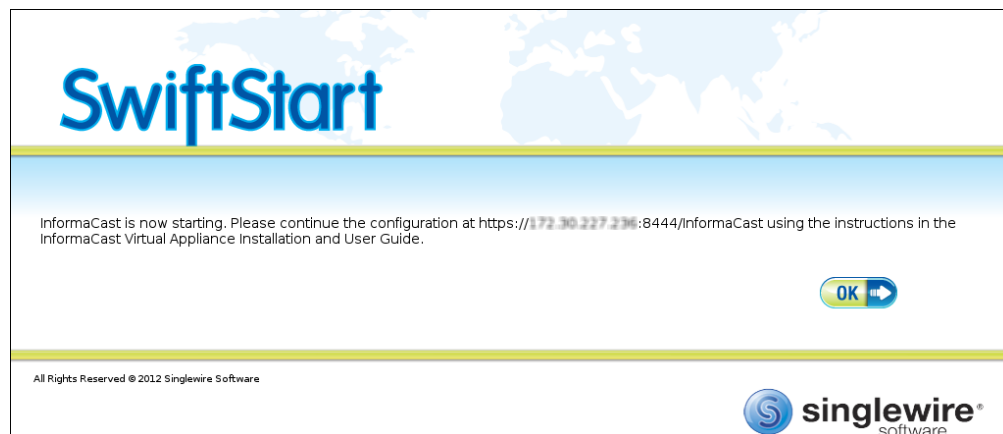
Enter a routable IP address on your network that's not currently in use, a valid netmask for that IP address, its default gateway, the IP address(es) of a DNS server(s) on your network, and click the **Submit** button.

Clicking the **Submit** button will allow SwiftStart to make static the IP address you've entered, use the network configuration information you've entered about this IP address, 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 16 Click the **Finish** button. The SwiftStart window appears with a note about starting InformaCast.



Step 17 Click the **OK** button and close your open console window.

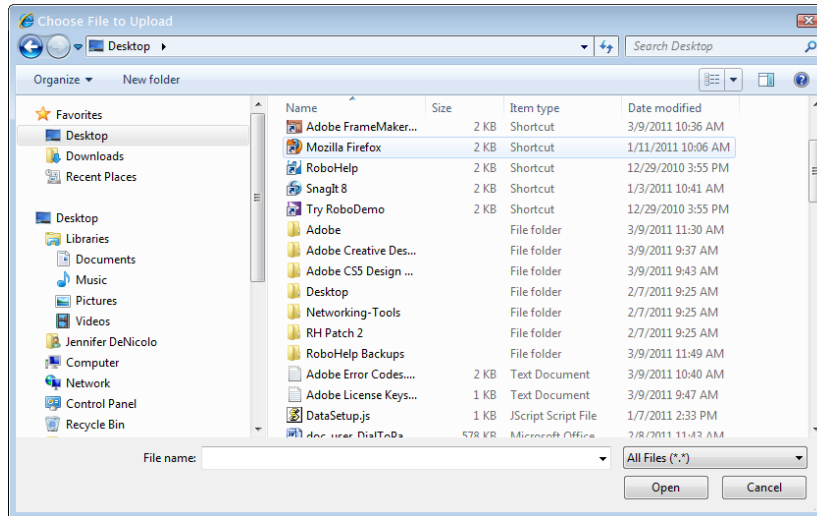
Manage Your License Key

Your InformaCast license key contains your designated functionality for InformaCast (e.g. Basic vs. Advanced, the number of phones to which you can broadcast, trial vs. demonstration vs. subscription vs. purchased, etc.). If 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 (if you remain in Basic InformaCast, there is no need for license key maintenance, and you can skip the rest of this section). The license key will be in the form of an XML file that was sent to you by email from a Singlewire sales representative. Make sure to save this XML file to a safe location that can be accessed by the machine running your web browser.

- Step 1** Open a web browser and go to `https://<InformaCast EX IP Address>:8463/LicenseManager`, where `<InformaCast EX IP Address>` is InformaCast EX's statically configured IP address. The License Manager page appears.

- 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. The Upload a New License page appears.

Step 3 Click the **Browse** button. The Choose File to Upload dialog box appears.



Step 4 Navigate to the license key file that was emailed to you. You can also enter the path to the license key file.

Step 5 Select your license key file and click the **Open** button.

- Step 6** Click the **Upload** button on the Upload a New License page. The License Status page appears and you'll see confirmation that the license has been accepted.

License Manager

Manage your license keys for all Singlewire products.
LOGOUT

License Manager

License Status

License file installed. Restart any running applications that have had their license changed.

Note: If you need assistance with your license or need a new license to enable a plugin, please contact Sales at: sales@singlewire.com

The currently installed License Keys contain the following features:

InformaCast

Issuer: [nwicksmueller](#)
Created: Mon Feb 27 15:13:09 CST 2012
Licensee: nick
IP Restriction: 172.30.227.233
Expiration: No expiration
Features: Audio, Clustering, MessageConfirmation
Parameters: MaxBellSchedules=50, MaxIPSpeakers=100, MaxPhones=500, MaxVersion=8.3, Scheme=Subscription

CallAware

Issuer: [nwicksmueller](#)
Created: Mon Feb 27 15:14:15 CST 2012
Licensee: nick
IP Restriction: 172.30.227.233
Expiration: No expiration
Features:
Parameters:

IC Plugin: ICAP

Issuer: [katie henkel](#)
Created: Fri Jan 27 11:25:12 CST 2012
Licensee: Katie for Testing
IP Restriction: Not restricted
Expiration: No expiration
Features:
Parameters:

IC Plugin: ConferenceCall

Issuer: [katie henkel](#)
Created: Mon Jun 27 10:32:10 CDT 2011
Licensee: Katie for testing
IP Restriction: Not restricted
Expiration: No expiration
Features:
Parameters:

IC Plugin: DMM

Issuer: [katie henkel](#)
Created: Wed Jul 20 13:47:30 CDT 2011
Licensee: Katie for testing
IP Restriction: Not restricted
Expiration: No expiration
Features:
Parameters:

Replace Your License(s): No file chosen

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The License Manager holds all of your Singlewire licenses, unless you are participating in your Advanced InformaCast trial, in which case your license will be on InformaCast's Manage License Key page (**Admin | Manage License Key**). Depending on the software applications you are using, you will see different licenses housed on this page.

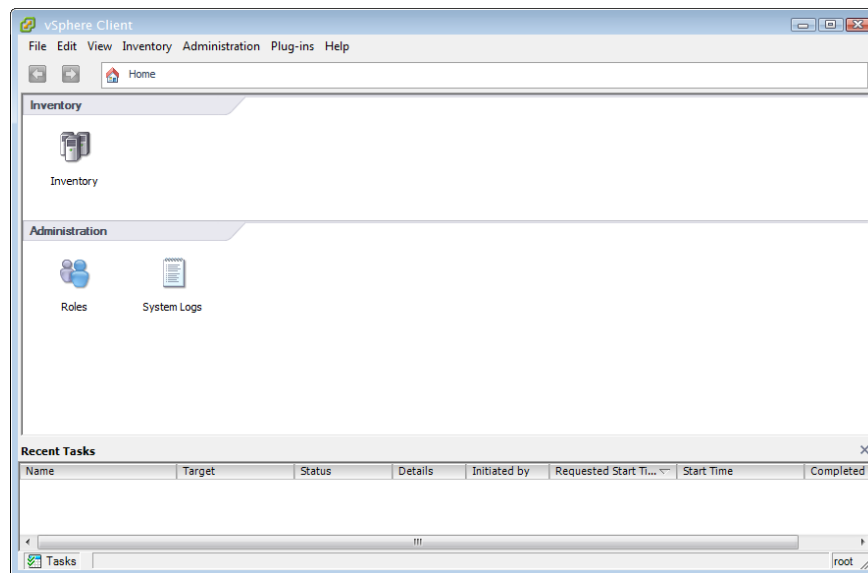
**Tip**

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.

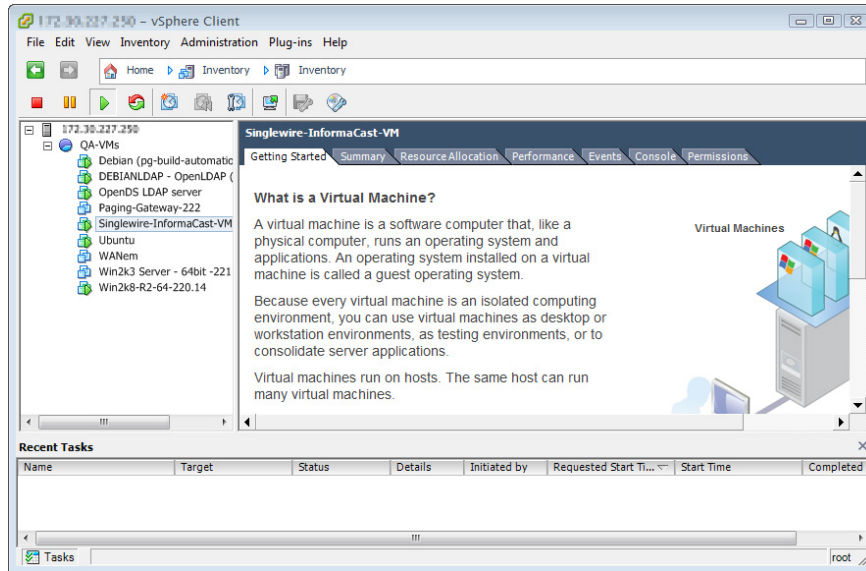
Change the InformaCast EX Server's Password

For tighter security, you may want to change the InformaCast EX server's default password.

- Step 1** Open and log into the vSphere client. The vSphere Client window appears.

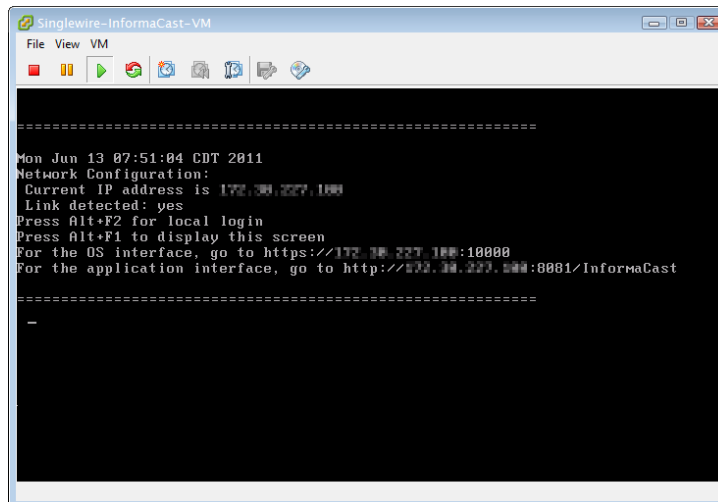


Step 2 Click the **Inventory** icon () on the vSphere Client window. The vSphere Client window refreshes.



Step 3 Select your virtual machine (by default, this is Singlewire InformaCast VM).

Step 4 Go to **Inventory** | **Virtual Machine** | **Open Console**. The Singlewire InformaCast VM console window appears.



Stop an Application on InformaCast EX

Follow these steps to stop individual applications on InformaCast EX.

- Step 1** Open a web browser and go to `https://<InformaCast EX IP Address>:10000`, where <InformaCast EX IP Address> is InformaCast EX's statically configured IP address. The Login to Webmin page appears.

- Step 2** Enter your login credentials. By default, your username is **admin** and your password is **changeMe**. The InformaCast EX server's homepage appears.

| | |
|-----------------------|---|
| System hostname | singlewire |
| Operating system | Debian Linux 5.0 |
| Webmin version | 1.530 |
| Time on system | Thu Jun 16 15:48:10 2011 |
| Kernel and CPU | Linux 2.6.30-voyage on i686 |
| Processor information | Quad-Core AMD Opteron(tm) Processor 2382, 1 cores |
| System uptime | 3 days, 7 hours, 57 minutes |
| Running processes | 48 |
| CPU load averages | 0.00 (1 min) 0.00 (5 mins) 0.00 (15 mins) |
| CPU usage | 0% user, 0% kernel, 0% IO, 100% idle |
| Real memory | 2.97 GB total, 32.40 MB used |
| Virtual memory | 3.73 GB total, 0 bytes used |
| Local disk space | 75.07 GB total, 1.78 GB used |

Step 3 Go to **System | Bootup and Shutdown**. The Bootup and Shutdown page appears.

Login: admin

System

- Bootup and Shutdown
- Scheduled Cron Jobs
- Software Packages
- Networking
- Hardware
- System Time

Search:

System Information

Logout

Module Config

Bootup and Shutdown

Create a new bootup and shutdown action.

| Action | At boot? | Description |
|--|----------|--|
| <input type="checkbox"/> alsa-utils | No | This script stores and restores mixer levels on |
| <input type="checkbox"/> asterisk | No | Controls the Asterisk PBX |
| <input type="checkbox"/> atftpd | No | Launch atftpd server, a TFTP server useful |
| <input type="checkbox"/> awds | No | This script is used to start the AWDS daemon which provides |
| <input type="checkbox"/> batmand | No | /etc/init.d/batmand: start batmand |
| <input type="checkbox"/> bootlogd | No | Starts or stops the bootlogd log program |
| <input type="checkbox"/> bootmisc.sh | No | Some cleanup. Note, it need to run after mountnfs-bootclean.sh. |
| <input type="checkbox"/> checkfs.sh | No | Check all filesystems. |
| <input type="checkbox"/> checkroot.sh | No | Check to root file system. |
| <input type="checkbox"/> cron | Yes | cron is a standard UNIX program that runs user-specified |
| <input type="checkbox"/> dahdi | No | dahdi - load and configure DAHDI modules |
| <input type="checkbox"/> dnsmasq | No | DHCP and DNS server |
| <input type="checkbox"/> ebttables | No | Saves and restores the state of the ebttables rulesets. |
| <input type="checkbox"/> flashybrid | No | Flashybrid is a system to help in setting up and managing hybrid |
| <input type="checkbox"/> glibc.sh | No | |
| <input type="checkbox"/> gpsd | No | Start the GPS (Global Positioning System) daemon |
| <input type="checkbox"/> halt | No | |
| <input type="checkbox"/> hostapd | No | Userspace IEEE 802.11 AP and IEEE 802.1X/WPA/WPA2/EAP |
| <input type="checkbox"/> flashybrid | No | Flashybrid is a system to help in setting up and managing hybrid |
| <input type="checkbox"/> glibc.sh | No | |
| <input type="checkbox"/> gpsd | No | Start the GPS (Global Positioning System) daemon |
| <input type="checkbox"/> halt | No | |
| <input type="checkbox"/> single | No | executed by init(8) upon entering runlevel 1 (single). |
| <input type="checkbox"/> singlewireInformaCast | No | InformaCast application from Singlewire |

Create a new bootup and shutdown action.

Start Stop Restart Start On Boot Disable On Boot Start Now and On Boot Disable Now and On Boot

Change to runlevel: Click this button to switch your system from the current runlevel to the selected one. This will cause all the actions in the current level to be stopped, and then all the actions in the new runlevel to be started.

Reboot System Click on this button to immediately reboot the system. All currently logged in users will be disconnected and all services will be re-started.

Shutdown System Click on this button to immediately shutdown the system. All services will be stopped, all users disconnected and the system powered off (if your hardware supports it).

Step 4 Scroll down the list of actions until you come to your application's name (e.g. **singlewireInformaCast**). Click its link. The Edit Action page appears.

Login: admin

System

- Bootup and Shutdown
- Change Passwords
- Scheduled Cron Jobs
- Software Packages
- Networking
- Hardware
- System Information
- Logout

Module Index

Edit Action

Action Details

Name:

Action Script

```
#!/bin/sh
### BEGIN INIT INFO
# Short-Description: InformaCast
# Description: InformaCast application from Singlewire
### END INIT INFO

# Author: Jeff Ramin <jjeff.ramin@singlewire.com>
#

# Do NOT "set -e"

# PATH should only include /usr/* if it runs after the mountnfs.sh script
PATH=/sbin:/usr/sbin:/bin:/usr/bin
DESC="InformaCast"
NAME=singlewireInformaCast
```

Start at boot time? Yes No

Save Start Now Show Status Stop Now Delete

[Return to bootup and shutdown actions](#)

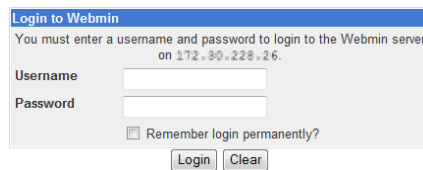
Step 5 Click the **Stop Now** button. It will take a minute or so for the application to stop.



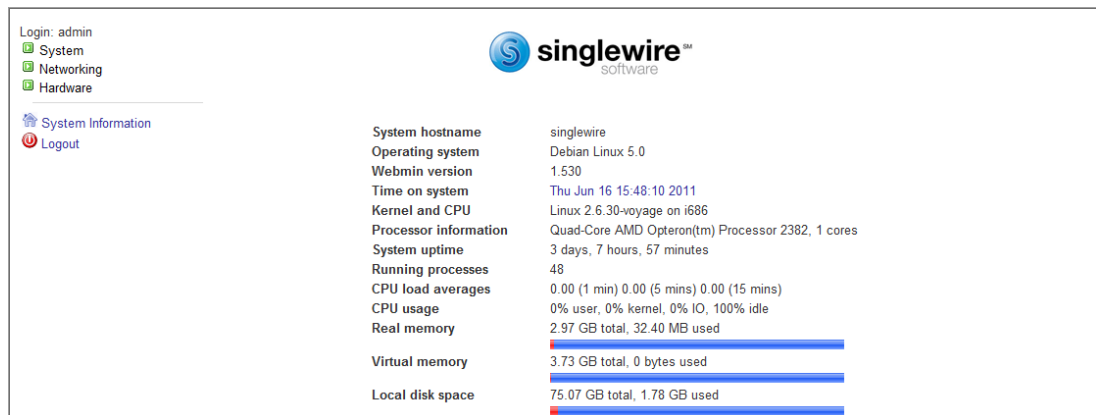
Start an Application on InformaCast EX

Follow these steps to start individual applications on InformaCast EX.

Step 1 Open a web browser and go to `https://<InformaCast EX IP Address>:10000`, where `<InformaCast EX IP Address>` is InformaCast EX's statically configured IP address. The Login to Webmin page appears.



Step 2 Enter your login credentials. By default, your username is **admin** and your password is **changeMe**. The InformaCast EX server's homepage appears.



Step 3 Go to **System | Bootup and Shutdown**. The Bootup and Shutdown page appears.

Login: admin

System

- Bootup and Shutdown
- Scheduled Cron Jobs
- Software Packages
- Networking
- Hardware
- System Time

Search:

System Information

Logout

Module Config

Bootup and Shutdown

Create a new bootup and shutdown action.

| Action | At boot? | Description |
|--|----------|--|
| <input type="checkbox"/> alsa-utils | No | This script stores and restores mixer levels on |
| <input type="checkbox"/> asterisk | No | Controls the Asterisk PBX |
| <input type="checkbox"/> atftpd | No | Launch atftpd server, a TFTP server useful |
| <input type="checkbox"/> awds | No | This script is used to start the AWDS daemon which provides |
| <input type="checkbox"/> batmand | No | /etc/init.d/batmand: start batmand |
| <input type="checkbox"/> bootlogd | No | Starts or stops the bootlogd log program |
| <input type="checkbox"/> bootmisc.sh | No | Some cleanup. Note, it need to run after mountnfs-bootclean.sh. |
| <input type="checkbox"/> checkfs.sh | No | Check all filesystems. |
| <input type="checkbox"/> checkroot.sh | No | Check to root file system. |
| <input type="checkbox"/> cron | Yes | cron is a standard UNIX program that runs user-specified |
| <input type="checkbox"/> dahdi | No | dahdi - load and configure DAHDI modules |
| <input type="checkbox"/> dnsmasq | No | DHCP and DNS server |
| <input type="checkbox"/> ebttables | No | Saves and restores the state of the ebttables rulesets. |
| <input type="checkbox"/> flashybrid | No | Flashybrid is a system to help in setting up and managing hybrid |
| <input type="checkbox"/> glibc.sh | No | |
| <input type="checkbox"/> gpsd | No | Start the GPS (Global Positioning System) daemon |
| <input type="checkbox"/> halt | No | |
| <input type="checkbox"/> hostapd | No | Userspace IEEE 802.11 AP and IEEE 802.1X/WPA/WPA2/EAP |
| <input type="checkbox"/> flashybrid | No | Flashybrid is a system to help in setting up and managing hybrid |
| <input type="checkbox"/> glibc.sh | No | |
| <input type="checkbox"/> gpsd | No | Start the GPS (Global Positioning System) daemon |
| <input type="checkbox"/> halt | No | |
| <input type="checkbox"/> single | No | executed by init(8) upon entering runlevel 1 (single). |
| <input type="checkbox"/> singlewireInformaCast | No | InformaCast application from Singlewire |

Create a new bootup and shutdown action.

Start Stop Restart Start On Boot Disable On Boot Start Now and On Boot Disable Now and On Boot

Change to runlevel: Click this button to switch your system from the current runlevel to the selected one. This will cause all the actions in the current level to be stopped, and then all the actions in the new runlevel to be started.

Reboot System Click on this button to immediately reboot the system. All currently logged in users will be disconnected and all services will be re-started.

Shutdown System Click on this button to immediately shutdown the system. All services will be stopped, all users disconnected and the system powered off (if your hardware supports it).

Step 4 Scroll down the list of actions until you come to your application's name (e.g. **singlewireInformaCast**). Click its link. The Edit Action page appears.

Login: admin

System

- Bootup and Shutdown
- Change Passwords
- Scheduled Cron Jobs
- Software Packages
- Networking
- Hardware
- System Information
- Logout

Module Index

Edit Action

Action Details

Name: singlewireInformaCast

Action Script

```
#!/bin/sh
### BEGIN INIT INFO
# Short-Description: InformaCast
# Description: InformaCast application from Singlewire
### END INIT INFO

# Author: Jeff Ramin <jeff.ramin@singlewire.com>
#

# Do NOT "set -e"

# PATH should only include /usr/* if it runs after the mountnfs.sh script
PATH=/sbin:/usr/sbin:/bin:/usr/bin
DESC="InformaCast"
NAME=singlewireInformaCast
```

Start at boot time? Yes No

Save Start Now Show Status Stop Now Delete

[Return to bootup and shutdown actions](#)

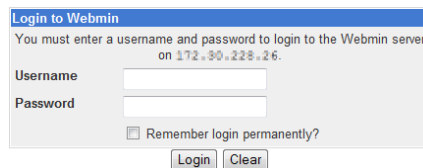
Step 5 Click the **Start Now** button. It will take a minute or so for the application to start.



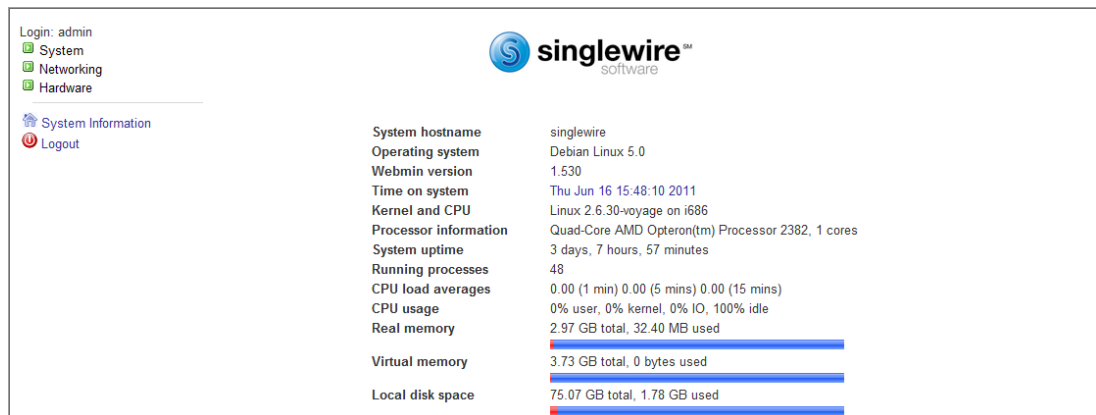
Restart an Application on InformaCast EX

Follow these steps to restart individual applications on InformaCast EX.

Step 1 Open a web browser and go to `https://<InformaCast EX IP Address>:10000`, where `<InformaCast EX IP Address>` is InformaCast EX's statically configured IP address. The Login to Webmin page appears.



Step 2 Enter your login credentials. By default, your username is **admin** and your password is **changeMe**. The InformaCast EX server's homepage appears.



Step 3 Go to **System | Bootup and Shutdown**. The Bootup and Shutdown page appears.

Login: admin

System

- Bootup and Shutdown
- Scheduled Cron Jobs
- Software Packages
- Networking
- Hardware
- System Time

Search:

System Information

Logout

Module Config

Bootup and Shutdown

Create a new bootup and shutdown action.

| Action | At boot? | Description |
|---|----------|--|
| <input type="checkbox"/> alsa-utils | No | This script stores and restores mixer levels on |
| <input type="checkbox"/> asterisk | No | Controls the Asterisk PBX |
| <input type="checkbox"/> atftpd | No | Launch atftpd server, a TFTP server useful |
| <input type="checkbox"/> awds | No | This script is used to start the AWDS daemon which provides |
| <input type="checkbox"/> batmand | No | /etc/init.d/batmand: start batmand |
| <input type="checkbox"/> bootlogd | No | Starts or stops the bootlogd log program |
| <input type="checkbox"/> bootmisc.sh | No | Some cleanup. Note, it need to run after mountnfs-bootclean.sh. |
| <input type="checkbox"/> checkfs.sh | No | Check all filesystems. |
| <input type="checkbox"/> checkroot.sh | No | Check to root file system. |
| <input type="checkbox"/> cron | Yes | cron is a standard UNIX program that runs user-specified |
| <input type="checkbox"/> dahdi | No | dahdi - load and configure DAHDI modules |
| <input type="checkbox"/> dnsmasq | No | DHCP and DNS server |
| <input type="checkbox"/> ebttables | No | Saves and restores the state of the ebttables rulesets. |
| <input type="checkbox"/> flashybrid | No | Flashybrid is a system to help in setting up and managing hybrid |
| <input type="checkbox"/> glibc.sh | No | |
| <input type="checkbox"/> gpsd | No | Start the GPS (Global Positioning System) daemon |
| <input type="checkbox"/> halt | No | |
| <input type="checkbox"/> hostapd | No | Userspace IEEE 802.11 AP and IEEE 802.1X/WPA/WPA2/EAP |
| <input checked="" type="checkbox"/> singlewireInformaCast | No | Flashybrid is a system to help in setting up and managing hybrid |
| <input type="checkbox"/> glibc.sh | No | |
| <input type="checkbox"/> gpsd | No | Start the GPS (Global Positioning System) daemon |
| <input type="checkbox"/> halt | No | |
| <input type="checkbox"/> single | No | executed by init(8) upon entering runlevel 1 (single). |
| <input type="checkbox"/> singlewireInformaCast | No | InformaCast application from Singlewire |

Create a new bootup and shutdown action.

Start Stop Restart Start On Boot Disable On Boot Start Now and On Boot Disable Now and On Boot

Change to runlevel: 2 Click this button to switch your system from the current runlevel to the selected one. This will cause all the actions in the current level to be stopped, and then all the actions in the new runlevel to be started.

Reboot System Click on this button to immediately reboot the system. All currently logged in users will be disconnected and all services will be re-started.

Shutdown System Click on this button to immediately shutdown the system. All services will be stopped, all users disconnected and the system powered off (if your hardware supports it).

Step 4 Scroll down the list of actions until you come to your application's name (e.g. **singlewireInformaCast**). Select it by placing a checkmark in its Action column and click the **Restart** button. The Restarting Actions page appears.

Login: admin

System

- Bootup and Shutdown
- Change Passwords
- Scheduled Cron Jobs
- Software Packages
- Networking
- Hardware

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Logout

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Restarting Actions

Executing /etc/init.d/singlewireInformaCast restart..

Restarting InformaCast: singlewireInformaCast

It will take a minute for your application to restart.

Reboot the InformaCast EX Server

Follow these steps to reboot the InformaCast EX server.

- Step 1** Open a web browser and go to `https://<InformaCast EX IP Address>:10000`, where <InformaCast EX IP Address> is InformaCast EX's statically configured IP address. The Login to Webmin page appears.

- Step 2** Enter your login credentials. By default, your username is **admin** and your password is **changeMe**. The InformaCast EX server's homepage appears.

| | |
|-----------------------|---|
| System hostname | singlewire |
| Operating system | Debian Linux 5.0 |
| Webmin version | 1.530 |
| Time on system | Thu Jun 16 15:48:10 2011 |
| Kernel and CPU | Linux 2.6.30-voyage on i686 |
| Processor information | Quad-Core AMD Opteron(tm) Processor 2382, 1 cores |
| System uptime | 3 days, 7 hours, 57 minutes |
| Running processes | 48 |
| CPU load averages | 0.00 (1 min) 0.00 (5 mins) 0.00 (15 mins) |
| CPU usage | 0% user, 0% kernel, 0% IO, 100% idle |
| Real memory | 2.97 GB total, 32.40 MB used |
| Virtual memory | 3.73 GB total, 0 bytes used |
| Local disk space | 75.07 GB total, 1.78 GB used |

Step 3 Go to **System | Bootup and Shutdown**. The Bootup and Shutdown page appears.

Login: admin

System

- Bootup and Shutdown
- Scheduled Cron Jobs
- Software Packages
- Networking
- Hardware
- System Time

Search:

System Information

Logout

Module Config

Bootup and Shutdown

Create a new bootup and shutdown action.

| Action | At boot? | Description |
|--|----------|--|
| <input type="checkbox"/> alsa-utils | No | This script stores and restores mixer levels on |
| <input type="checkbox"/> asterisk | No | Controls the Asterisk PBX |
| <input type="checkbox"/> atftpd | No | Launch atftpd server, a TFTP server useful |
| <input type="checkbox"/> awds | No | This script is used to start the AWDS daemon which provides |
| <input type="checkbox"/> batmand | No | /etc/init.d/batmand: start batmand |
| <input type="checkbox"/> bootlogd | No | Starts or stops the bootlogd log program |
| <input type="checkbox"/> bootmisc.sh | No | Some cleanup. Note, it need to run after mountnfs-bootclean.sh. |
| <input type="checkbox"/> checkfs.sh | No | Check all filesystems. |
| <input type="checkbox"/> checkroot.sh | No | Check to root file system. |
| <input type="checkbox"/> cron | Yes | cron is a standard UNIX program that runs user-specified |
| <input type="checkbox"/> dahdi | No | dahdi - load and configure DAHDI modules |
| <input type="checkbox"/> dnsmasq | No | DHCP and DNS server |
| <input type="checkbox"/> ebttables | No | Saves and restores the state of the ebttables rulesets. |
| <input type="checkbox"/> flashybrid | No | Flashybrid is a system to help in setting up and managing hybrid |
| <input type="checkbox"/> glibc.sh | No | |
| <input type="checkbox"/> gpsd | No | Start the GPS (Global Positioning System) daemon |
| <input type="checkbox"/> halt | No | |
| <input type="checkbox"/> hostapd | No | Userspace IEEE 802.11 AP and IEEE 802.1X/WPA/WPA2/EAP |
| <input type="checkbox"/> flashybrid | No | Flashybrid is a system to help in setting up and managing hybrid |
| <input type="checkbox"/> glibc.sh | No | |
| <input type="checkbox"/> gpsd | No | Start the GPS (Global Positioning System) daemon |
| <input type="checkbox"/> halt | No | |
| <input type="checkbox"/> single | No | executed by init(8) upon entering runlevel 1 (single). |
| <input type="checkbox"/> singlewireInformaCast | No | InformaCast application from Singlewire |

Create a new bootup and shutdown action.

Start Stop Restart Start On Boot Disable On Boot Start Now and On Boot Disable Now and On Boot

Change to runlevel: 2 Click this button to switch your system from the current runlevel to the selected one. This will cause all the actions in the current level to be stopped, and then all the actions in the new runlevel to be started.

Reboot System Click on this button to immediately reboot the system. All currently logged in users will be disconnected and all services will be re-started.

Shutdown System Click on this button to immediately shutdown the system. All services will be stopped, all users disconnected and the system powered off (if your hardware supports it).

Step 4 Scroll to the bottom of the page and click the **Reboot System** button. The Reboot page appears.

Login: admin

System

- Bootup and Shutdown
- Change Passwords
- Scheduled Cron Jobs
- Software Packages
- Networking
- Network Configuration
- Hardware

System Information

Logout

Module Index

Reboot

Are you sure you want to reboot the system with the command `reboot` ?

Reboot System

Return to bootup and shutdown actions

Step 5 Click the **Reboot System** button. The server will shutdown, then restart.

Change InformaCast EX's IP Address

When changing the IP address of the InformaCast EX server, use the following steps.



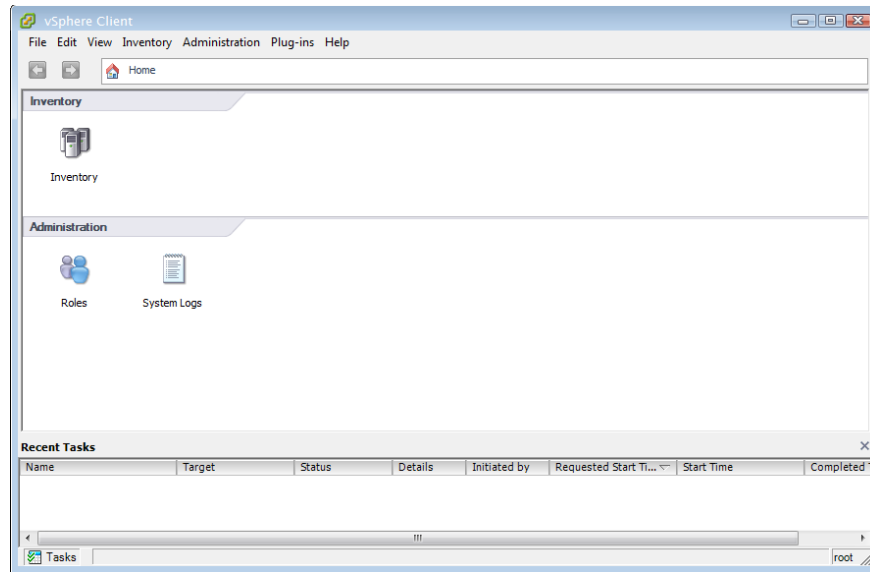
Note


Performing these steps will set all of your Singlewire applications to start when the server boots.

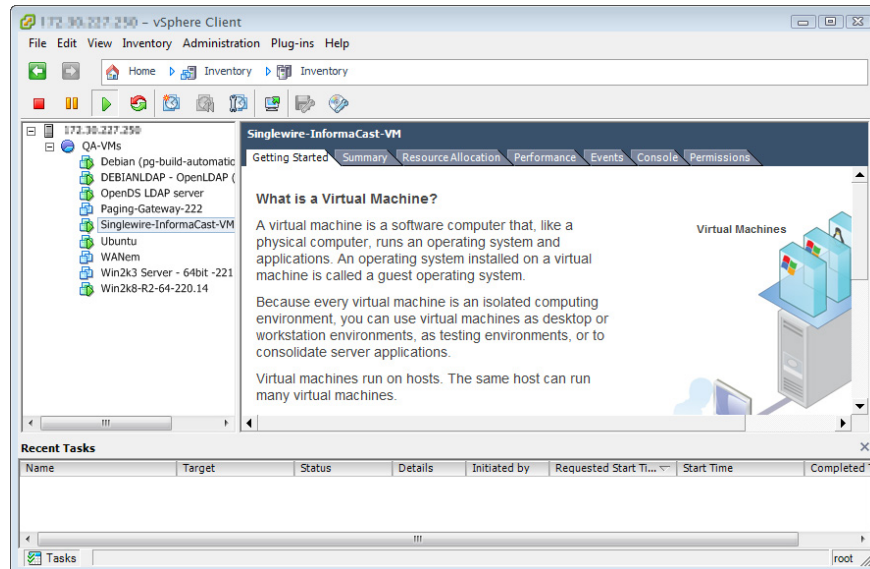
**Warning**

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 a Software Package” on page 1).

- Step 1** Stop your Singlewire applications (see “Stop an Application on InformaCast EX” on page 18).
- Step 2** Open and log into the vSphere client. The vSphere Client window appears.

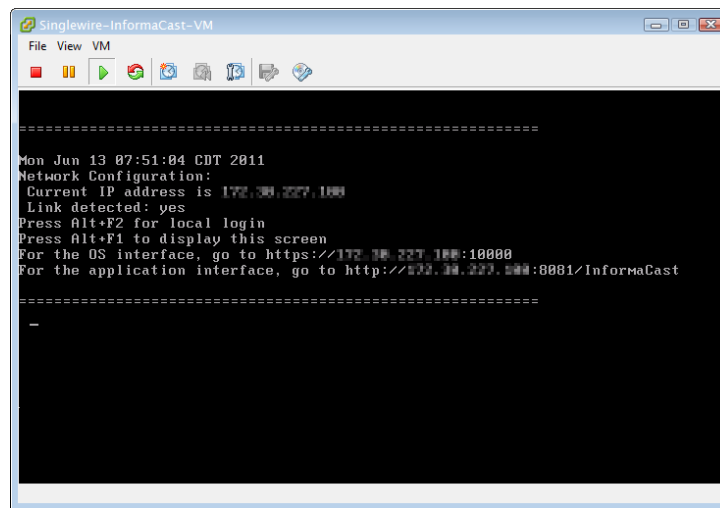


- Step 3** Click the **Inventory** icon () on the vSphere Client window. The vSphere Client window refreshes.

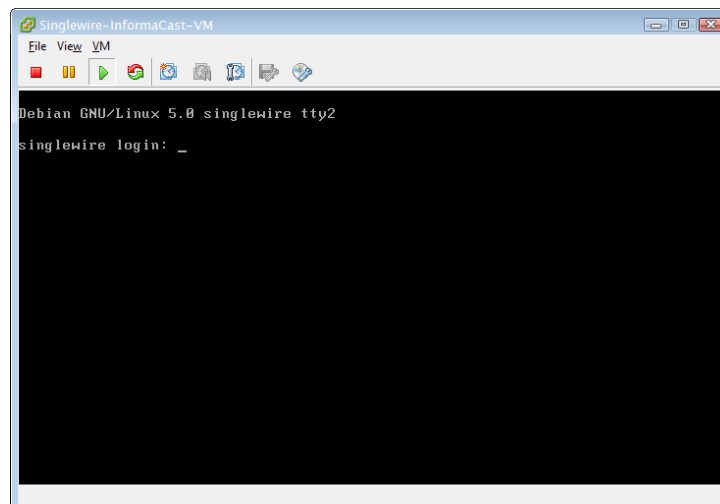


- Step 4** Select your virtual machine (by default, this is Singlewire InformaCast VM).

Step 5 Go to **Inventory** | **Virtual Machine** | **Open Console**. The Singlewire InformaCast VM console window appears.

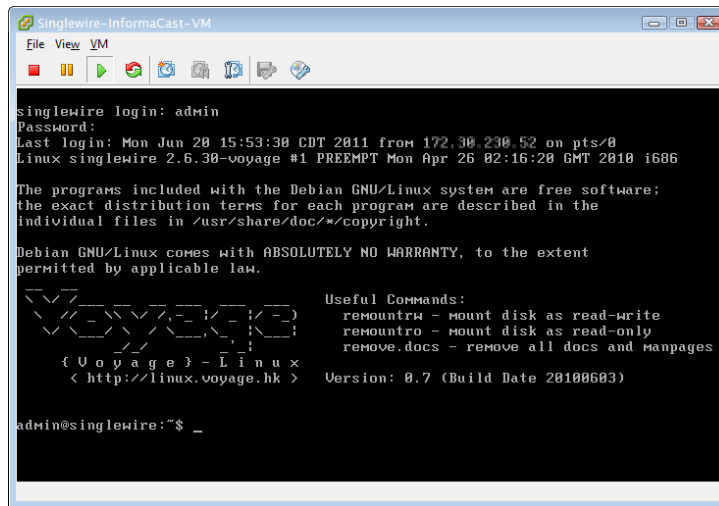


Step 6 Press **Alt + F2** in the Singlewire InformaCast VM console window. The Singlewire InformaCast VM console window refreshes.



Step 7 Enter **admin** at the **singlewire login** prompt and press **Enter**.

Step 8 Enter **changeMe** at the **Password** prompt and press **Enter**. The Singlewire InformaCast VM console window refreshes.



```

Singlewire-InformaCast-VM
File View VM
singlewire login: admin
Password:
Last login: Mon Jun 20 15:53:30 CDT 2011 from 172.30.230.52 on pts/0
Linux singlewire 2.6.30-voyage #1 PREEMPT Mon Apr 26 02:16:20 GMT 2010 i686

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.

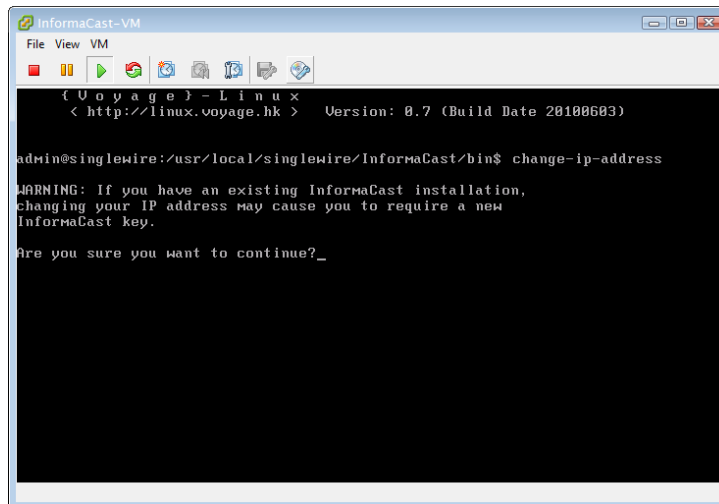
      _ _ _ _ _
     / _ _ _ _ \
    / _ _ _ _ \
   / _ _ _ _ \
  / _ _ _ _ \
 / _ _ _ _ \
/_ _ _ _ _ \
{ U o y a g e } - L i n u x
 < http://linux.voyage.hk >

Useful Commands:
remountw - mount disk as read-write
remountro - mount disk as read-only
remove.docs - remove all docs and manpages
Version: 0.7 (Build Date 20100603)

admin@singlewire:~$ _

```

Step 9 Enter **change-ip-address** and press **Enter**. The Singlewire InformaCast VM console window refreshes.



```

InformaCast-VM
File View VM
{ U o y a g e } - L i n u x
 < http://linux.voyage.hk > Version: 0.7 (Build Date 20100603)

admin@singlewire:/usr/local/singlewire/InformaCast/bin$ change-ip-address

WARNING: If you have an existing InformaCast installation,
changing your IP address may cause you to require a new
InformaCast key.

Are you sure you want to continue?_

```

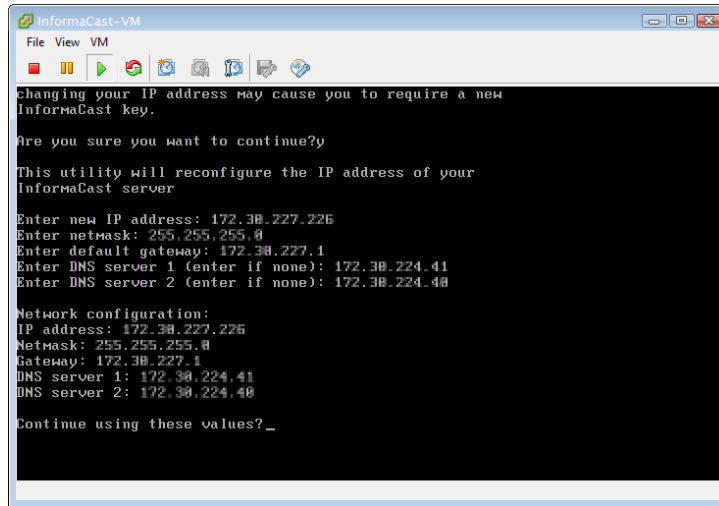
Step 10 Enter **Y** and press **Enter**.

Step 11 Enter a routable IP address on your network that's not currently in use and press **Enter**.

Step 12 Enter a valid netmask for that IP address and press **Enter**.

Step 13 Enter the default gateway for your specified IP address and press **Enter**.

Step 14 Enter the IP address(es) of a DNS server(s) on your network and press **Enter**.



```

InformaCast-VM
File View VM
changing your IP address may cause you to require a new
InformaCast key.
Are you sure you want to continue?y
This utility will reconfigure the IP address of your
InformaCast server
Enter new IP address: 172.30.227.226
Enter netmask: 255.255.255.0
Enter default gateway: 172.30.227.1
Enter DNS server 1 (enter if none): 172.30.224.41
Enter DNS server 2 (enter if none): 172.30.224.40

Network configuration:
IP address: 172.30.227.226
Netmask: 255.255.255.0
Gateway: 172.30.227.1
DNS server 1: 172.30.224.41
DNS server 2: 172.30.224.40
Continue using these values?_
  
```

Step 15 Enter **Y** and press **Enter**.

Step 16 Enter **Exit** and press **Enter**.

Step 17 For InformaCast, log into Communications Manager, go to **System | Enterprise Parameters**, and change the **URL Authentication** field to reflect your new IP address. Also, go to **Device | Device Settings | Phone Services**, and change the IP address for any InformaCast service URLs you have created.



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



Note You need to use the **Update Subscriptions** button whenever you change service information, so that any subscribed phones are properly updated.

Step 18 Reset all of your phones.

Update JTAPI

When you initially install InformaCast EX or whenever you change versions of Communications Manager, you need to update the JTAPI library used by InformaCast EX to the same version used by your Communications Manager server.

- Step 1** Open a web browser and go to <https://<InformaCast EX IP Address>:10000>, where <InformaCast EX IP Address> is InformaCast's statically configured IP address. The Login to Webmin page appears.

- Step 2** Enter your login credentials. By default, your username is **admin** and your password is **changeMe**. The InformaCast EX server's homepage appears.

| | |
|-----------------------|---|
| System hostname | singlewire |
| Operating system | Debian Linux 5.0 |
| Webmin version | 1.530 |
| Time on system | Thu Jun 16 15:48:10 2011 |
| Kernel and CPU | Linux 2.6.30-voyage on i686 |
| Processor information | Quad-Core AMD Opteron(tm) Processor 2382, 1 cores |
| System uptime | 3 days, 7 hours, 57 minutes |
| Running processes | 48 |
| CPU load averages | 0.00 (1 min) 0.00 (5 mins) 0.00 (15 mins) |
| CPU usage | 0% user, 0% kernel, 0% IO, 100% idle |
| Real memory | 2.97 GB total, 32.40 MB used |
| Virtual memory | 3.73 GB total, 0 bytes used |
| Local disk space | 75.07 GB total, 1.78 GB used |

Step 3 Go to **System | Bootup and Shutdown**. The Bootup and Shutdown page appears.

Login: admin

System

- Bootup and Shutdown
- Scheduled Cron Jobs
- Software Packages
- Networking
- Hardware
- System Time

Search:

System Information

Logout

Module Config

Bootup and Shutdown

Create a new bootup and shutdown action.

| Action | At boot? | Description |
|--|----------|--|
| <input type="checkbox"/> alsa-utils | No | This script stores and restores mixer levels on |
| <input type="checkbox"/> asterisk | No | Controls the Asterisk PBX |
| <input type="checkbox"/> atftpd | No | Launch atftpd server, a TFTP server useful |
| <input type="checkbox"/> awds | No | This script is used to start the AWDS daemon which provides |
| <input type="checkbox"/> batmand | No | /etc/init.d/batmand: start batmand |
| <input type="checkbox"/> bootlogd | No | Starts or stops the bootlogd log program |
| <input type="checkbox"/> bootmisc.sh | No | Some cleanup. Note, it need to run after mountnfs-bootclean.sh. |
| <input type="checkbox"/> checkfs.sh | No | Check all filesystems. |
| <input type="checkbox"/> checkroot.sh | No | Check to root file system. |
| <input type="checkbox"/> cron | Yes | cron is a standard UNIX program that runs user-specified |
| <input type="checkbox"/> dahdi | No | dahdi - load and configure DAHDI modules |
| <input type="checkbox"/> dnsmasq | No | DHCP and DNS server |
| <input type="checkbox"/> ebttables | No | Saves and restores the state of the ebttables rulesets. |
| <input type="checkbox"/> flashybrid | No | Flashybrid is a system to help in setting up and managing hybrid |
| <input type="checkbox"/> glibc.sh | No | |
| <input type="checkbox"/> gpsd | No | Start the GPS (Global Positioning System) daemon |
| <input type="checkbox"/> halt | No | |
| <input type="checkbox"/> hostapd | No | Userspace IEEE 802.11 AP and IEEE 802.1X/WPA/WPA2/EAP |
| <input type="checkbox"/> flashybrid | No | Flashybrid is a system to help in setting up and managing hybrid |
| <input type="checkbox"/> glibc.sh | No | |
| <input type="checkbox"/> gpsd | No | Start the GPS (Global Positioning System) daemon |
| <input type="checkbox"/> halt | No | |
| <input type="checkbox"/> single | No | executed by init(8) upon entering runlevel 1 (single). |
| <input type="checkbox"/> singlewireInformaCast | No | InformaCast application from Singlewire |

Create a new bootup and shutdown action.

Start Stop Restart Start On Boot Disable On Boot Start Now and On Boot Disable Now and On Boot

Change to runlevel: Click this button to switch your system from the current runlevel to the selected one. This will cause all the actions in the current level to be stopped, and then all the actions in the new runlevel to be started.

Reboot System Click on this button to immediately reboot the system. All currently logged in users will be disconnected and all services will be re-started.

Shutdown System Click on this button to immediately shutdown the system. All services will be stopped, all users disconnected and the system powered off (if your hardware supports it).

Step 4 Scroll down the list of actions until you come to **singlewireInformaCast**. Click its link. The Edit Action page appears.

Login: admin

System

- Bootup and Shutdown
- Change Passwords
- Scheduled Cron Jobs
- Software Packages
- Networking
- Hardware
- System Information
- Logout

Module Index

Edit Action

Action Details

Name:

Action Script

```
#!/bin/sh
### BEGIN INIT INFO
# Short-Description: InformaCast
# Description: InformaCast application from Singlewire
### END INIT INFO

# Author: Jeff Ramin <jjeff.ramin@singlewire.com>
#

# Do NOT "set -e"

# PATH should only include /usr/* if it runs after the mountnfs.sh script
PATH=/sbin:/usr/sbin:/bin:/usr/bin
DESC="InformaCast"
NAME=singlewireInformaCast
```

Start at boot time? Yes No

Save Start Now Show Status Stop Now Delete

[Return to bootup and shutdown actions](#)

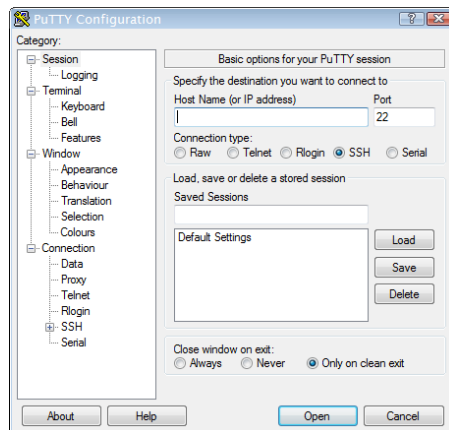
Step 5 Click the **Stop Now** button. It will take a minute or so for InformaCast to stop.



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

Step 6 Use an SSH client (Singlewire recommends PuTTY: <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>) to access InformaCast's command line interface.

Step 7 Open PuTTY. The PuTTY Configuration window appears.

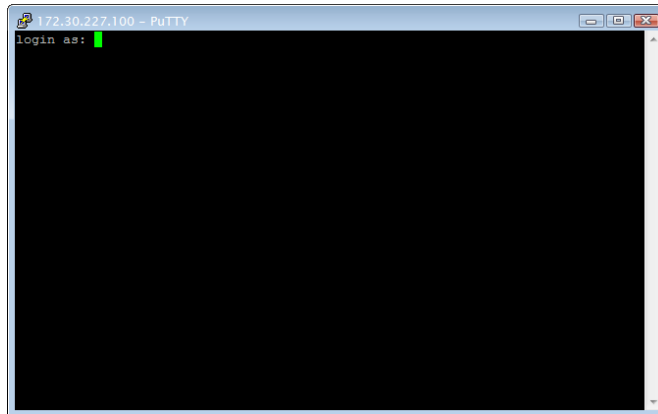


Step 8 Enter InformaCast's IP address in the **Host Name (or IP address)** field.

Step 9 Leave the **Port** field at its default of 22.

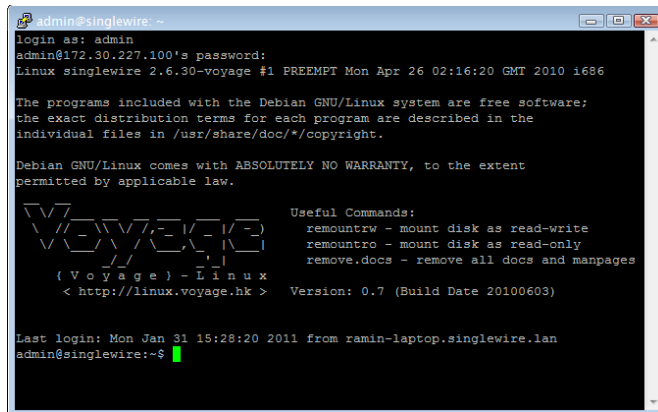
Step 10 Click the **SSH** radio button.

Step 11 Click the **Open** button. The command-line interface for InformaCast appears.



Step 12 Enter **admin** at the prompt and press **Enter**.

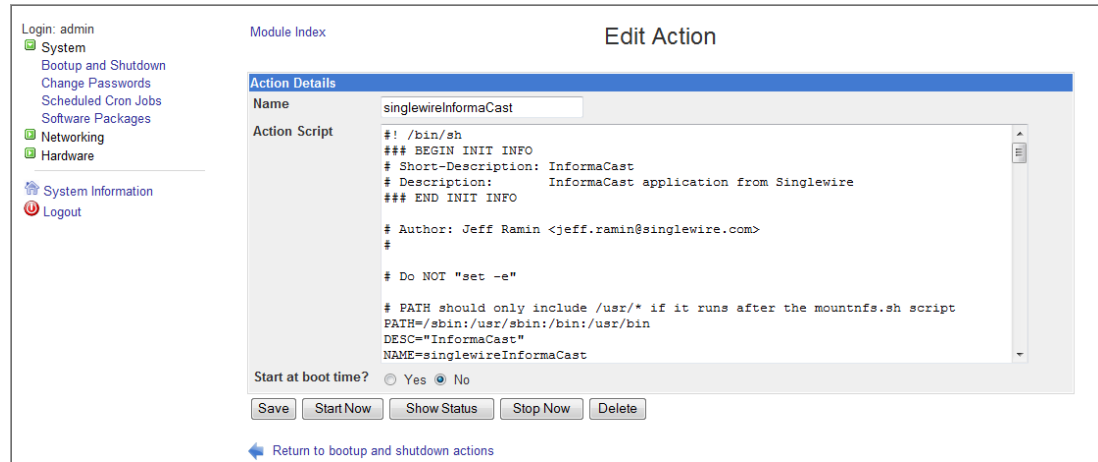
Step 13 Enter **changeMe** at the prompt and press **Enter**. The command-line interface refreshes, showing you that you're logged in.



Step 14 Enter **updateJTAPI** at the prompt and press **Enter**.

Step 15 Enter **exit** at the prompt and press **Enter**.

Step 16 Go back to your Stop Action page and click the **Return to action** link. The Edit Action page appears.



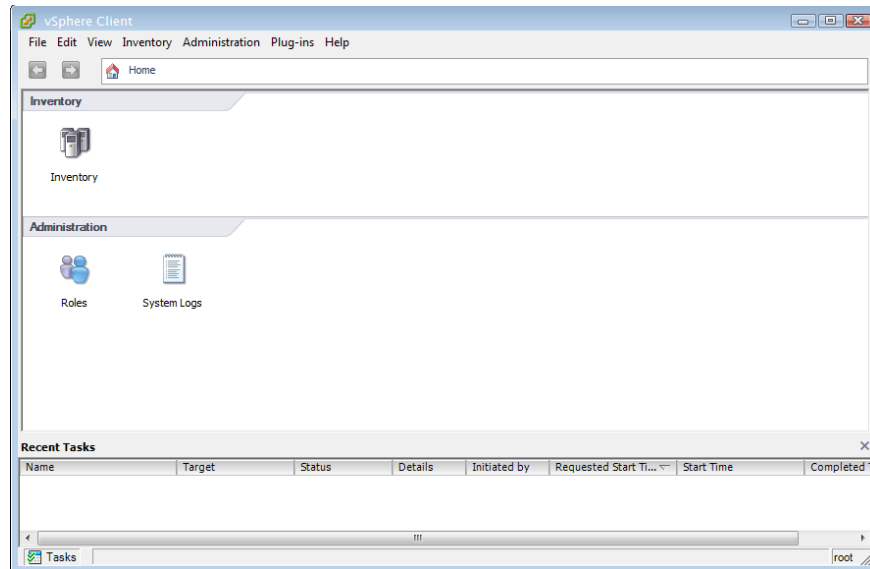
Step 17 Click the **Start Now** button. It will take a minute or so for InformaCast to start.



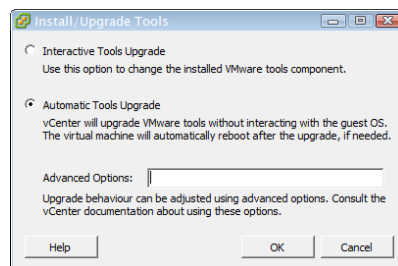
Upgrade your VMware Tools

If vSphere has an error flag that says that your version of VMware doesn't match your version of VMware tools, or if your CPU usage seems elevated, you should upgrade your VMware tools to match the level of your VMware version.

Step 1 Open and log into the vSphere client. The vSphere Client window appears.



Step 2 Select your virtual machine, and go to **Inventory | Virtual Machine | Guest | Install/Upgrade VMware Tools**. The Install/Upgrade Tools window appears.



Step 3 Select the **Automatic Tools** radio button and click the **OK** button. Your VMware tools are upgraded.



CHAPTER 3

Acknowledgments

InformaCast EX from Singlewire Software runs on a Linux kernel and the Voyage Linux distribution.

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<http://www.singlewire.com/pgl>.

For all software license information, see the “InformaCast Installation and User Guide.”