

# Change Network Settings in Informacast with GUI and Console

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## Introduction

This document describes how to change and troubleshoot the network settings in Cisco Basic Paging (InformaCast) with the Graphical User Interface (GUI) and the console.

## Prerequisites

### Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco Basic Paging
- Linux

### Components Used

The information in this document is based on this software version:

- Informacast basic Paging version 11.0.5 – 11.3

The information in this document was created from the devices in a specific lab environment. All the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

## Configure

You can use method 1 or 2 to change the IP address, mask, DNS and gateway for the Singlewire server.

**Warning:** If you plan to switch between Basic and Advanced InformaCast and you change your IP address, you need to redeploy the InformaCast OVA.

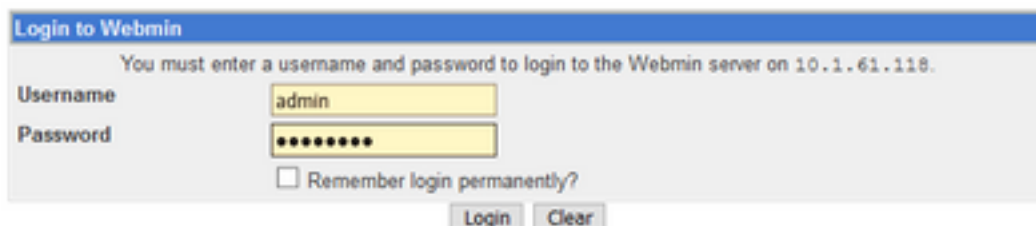
**Warning:** If you have applications currently licensed, changing your IP address may cause you to require new license(s).

**Note:** InformaCast SIP certificates are regenerated whenever InformaCast is installed or its IP address is changed, so if you use Transport Layer Security (TLS) protocol with SIP, you need to install the InformaCast SIP certificate on all Cisco Unified Communications Managers (CUCM) in your InformaCast environment.

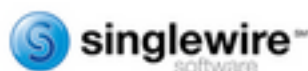
## Method 1. GUI

Step 1. In order to configure the network settings with the GUI open a web browser, enter the IP address of the InformaCast Virtual Appliance (<https://<informacast IP>:10000>) and press the Enter key. The Singlewire start page appears.

Step 2. Click on the **Access Application Management Tools with Control Center** link. A separate tab/window opens to the Control Center menu page as shown in the image.



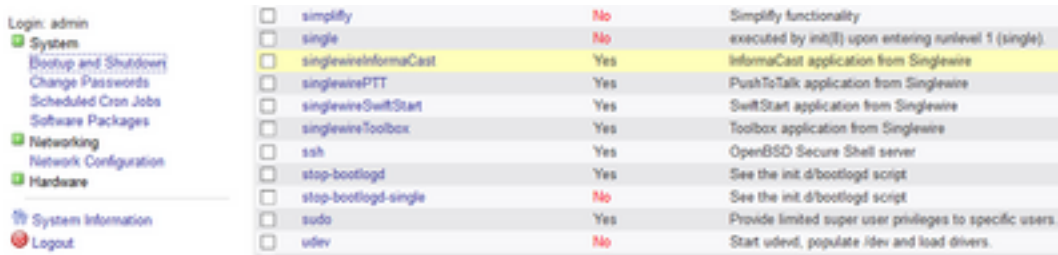
Step 3. Enter your credentials and click on the **Login** button. By default, your username is **admin** and your password is **changeMe**. The Webmin homepage appears as shown in the image.



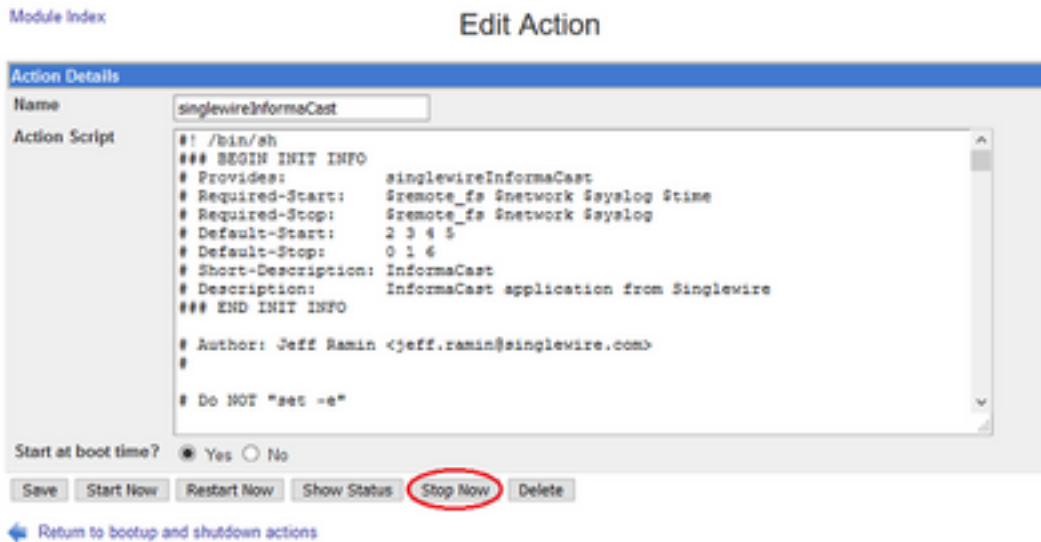
Virtual Appliance version	11.0.5
System hostname	singlewire
Webmin version	1.530
Time on system	Wed Jul 17 14:34:34 2019
Kernel and CPU	Linux 3.2.0-4-686-pae on i686
Processor information	Intel(R) Xeon(R) CPU E5-2699 v4 @ 2.20GHz, 1 cores
System uptime	2 days, 16 hours, 54 minutes
Running processes	58
CPU load averages	0.01 (1 min) 0.03 (5 mins) 0.05 (15 mins)
CPU usage	0% user, 0% kernel, 0% IO, 100% idle
Real memory	3.95 GB total, 1.12 GB used
Virtual memory	4.03 GB total, 0 bytes used
Local disk space	74.78 GB total, 5.18 GB used

Step 4. In order to change the IP address follow these steps, navigate to **System > Bootup and Shutdown**.

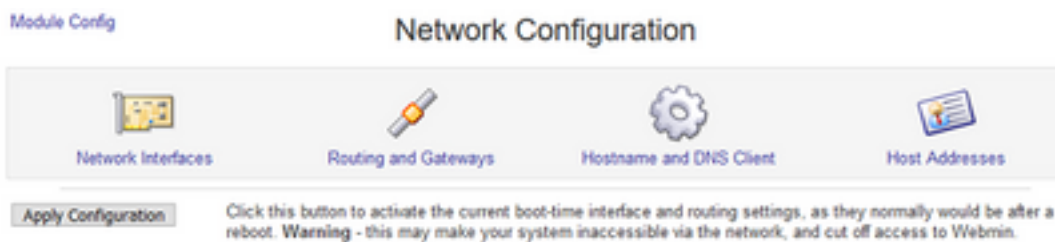
Step 5. From the list of services select **singlewireInformaCast** as shown in the image.



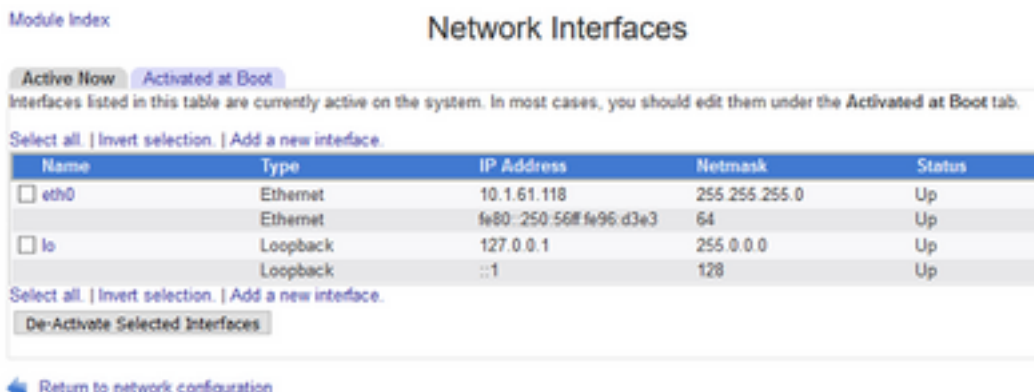
Step 6. In order to stop the Informacast service click on **Stop Now** and wait until the service stops with all its children processes as shown in the image.



Step 7. Return to the main menu and navigate to **Networking > Network Configuration**. The network configuration options are as shown in the image.



Step 8. Select **Network Interfaces** and click on **eth0**.



Step 9. Edit the **eth0 interface** with the new IP address and click on **Save**. At this point, it is expected to lose the connectivity to the server. In order to log in back to the server, use the new IP

address.

Module Index Edit Active Interface

---

**Active Interface Parameters**

Name	eth0	IP Address	10.1.61.118
Netmask	255.255.255.0	Broadcast	10.1.61.255
MTU	1500	Status	<input checked="" type="radio"/> Up <input type="radio"/> Down
Hardware address	00:50:56:96:d3:e3	Virtual interfaces	0 (Add virtual interface)

[Return to network interfaces](#)

Step 10. In order to edit the bootup interface, navigate to **Networking > Network Configuration**, click on the **Activated at Boot** tab and edit the IP address, the netmask and the broadcast IP as shown in the image.

Module Index Edit Bootup Interface

---

**Boot Time Interface Parameters**

Name	eth0	Activate at boot?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Address source	<input type="radio"/> From DHCP <input type="radio"/> From BOOTP <input checked="" type="radio"/> Static configuration		
	IP Address	10.1.61.118	
	Netmask	255.255.255.0	
	Broadcast	<input type="radio"/> Automatic <input checked="" type="radio"/> 10.1.61.255	
Virtual interfaces	0 (Add virtual interface)	Hardware address	<input checked="" type="radio"/> Default <input type="radio"/>

[Return to network interfaces](#)

Step 11. In order to start the singlewireInformaCast again, navigate to **System > Bootup and Shutdown**.

Step 12. From the list of services, select **singlewireInformacast** and click on **Start Now**. It can take several minutes for the service to start.

Module Index Edit Action

---

**Action Details**

Name	singlewireInformaCast
Action Script	<pre>#!/bin/sh ### BEGIN INIT INFO # Provides: singlewireInformaCast # Required-Start: \$remote_fs \$network \$syslog \$time # Required-Stop: \$remote_fs \$network \$syslog # Default-Start: 2 3 4 5 # Default-Stop: 0 1 6 # Short-Description: InformaCast # Description: InformaCast application from Singlewire ### END INIT INFO  # Author: Jeff Ramin &lt;jeff.ramin@singlewire.com&gt; # # Do NOT "set -e"</pre>
Start at boot time?	<input checked="" type="radio"/> Yes <input type="radio"/> No

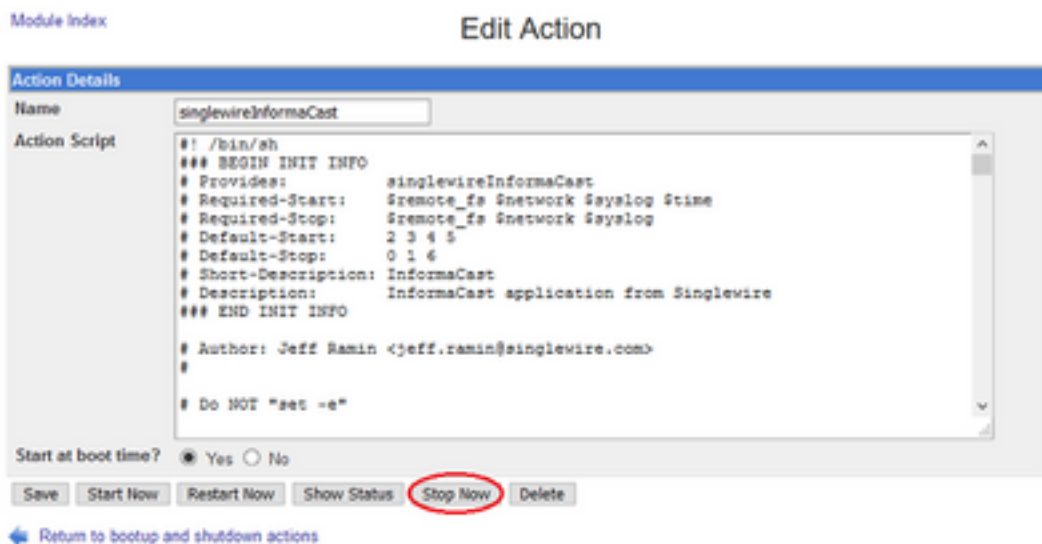
[Return to bootup and shutdown actions](#)

Step 13. In order to change the DNS and hostname, navigate to **System > Bootup and Shutdown**.

Step 14. From the list of services select **singlewireInformaCast** as shown in the image.

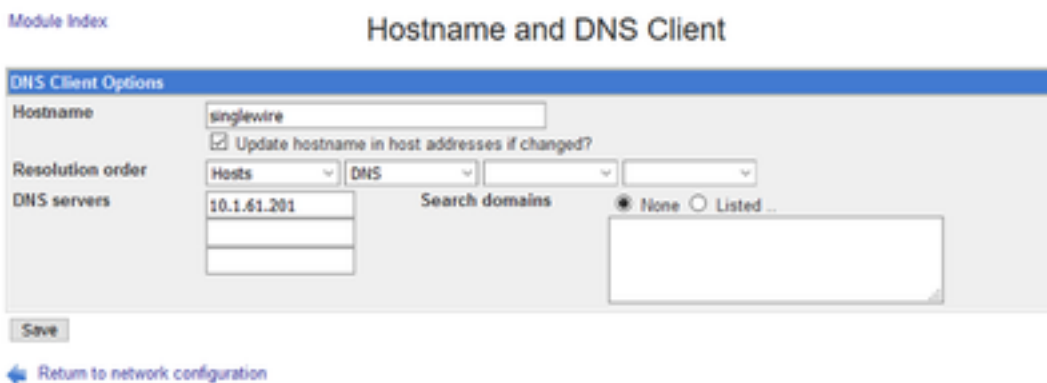
<input type="checkbox"/>	simplify	No	Simplify functionality
<input type="checkbox"/>	single	No	executed by init(1) upon entering runlevel 1 (single)
<input checked="" type="checkbox"/>	singlewireInformaCast	Yes	InformaCast application from Singlewire
<input type="checkbox"/>	singlewirePTT	Yes	PushToTalk application from Singlewire
<input type="checkbox"/>	singlewireSwiftStart	Yes	SwiftStart application from Singlewire
<input type="checkbox"/>	singlewireToolbox	Yes	Toolbox application from Singlewire
<input type="checkbox"/>	ssh	Yes	OpenBSD Secure Shell server
<input type="checkbox"/>	stop-bootlogd	Yes	See the init.d/bootlogd script
<input type="checkbox"/>	stop-bootlogd-single	No	See the init.d/bootlogd script
<input type="checkbox"/>	sudo	Yes	Provide limited super user privileges to specific users.
<input type="checkbox"/>	udev	No	Start udevl, populate idev and load drivers.

Step 15. Click on **Stop Now** and wait until the service stops with all its children processes as shown in the image.



Step 16. In order to return to the main menu, navigate to **Networking > Network Configuration**.

Step 17. Select **Hostname and DNS Client**.



Step 18. Edit your DNS entries and click on **Save**.

Step 19. Return to the list of services under **System > Bootup and Shutdown**.

Step 20. Select **singlewireInformaCast** and click on **Start Now**. It can take several minutes for the service to start.

The screenshot shows the 'Edit Action' window for the service 'singlewireInformaCast'. The 'Name' field is filled with 'singlewireInformaCast'. The 'Action Script' field contains the following content:

```
#!/bin/bash
### BEGIN INIT INFO
# Provides:          singlewireInformaCast
# Required-Start:    $remote_fs $network $syslog $time
# Required-Stop:     $remote_fs $network $syslog
# Default-Start:     2 3 4 5
# Default-Stop:      0 1 6
# Short-Description: InformaCast
# Description:       InformaCast application from Singlewire
### END INIT INFO

# Author: Jeff Ramin <jeff.ramin@singlewire.com>
#
# Do NOT "set -e"
```

Below the script, the 'Start at boot time?' option is selected with the 'Yes' radio button. At the bottom, there are buttons for 'Save', 'Start Now', 'Restart Now', 'Show Status', 'Stop Now', and 'Delete'. The 'Start Now' button is circled in red.

[Return to bootup and shutdown actions](#)

Step 21. Give the service several minutes to come back online.

Step 22. In order to change the Gateway, navigate to **Network configuration > Routing and gateways** and edit the settings as shown in the image. Click on **Save**.

The screenshot shows the 'Routing and Gateways' configuration page. It has two tabs: 'Boot time configuration' and 'Active configuration'. The 'Active configuration' tab is selected. Below the tabs, there is a note: 'This section allows you to configure the routes that are activated when the system boots up, or when network settings are fully re-applied.'

The 'Routing configuration activated at boot time' section contains the following fields:

- Default router:  None (or from DHCP)  Gateway
- Static routes table with columns: Interface, Network, Netmask, Gateway.
- Local routes table with columns: Interface, Network, Netmask.

At the bottom left, there is a 'Save' button. Below the form, there is a link: [Return to network configuration](#)

## Method 2. Console

In order to change the IP address, mask, DNS and gateway of the InformaCast server with the console follow this procedure:

Step 1. Open and log into the vSphere client.

Step 2. Select your virtual machine from your inventory (by default, this is Singlewire InformaCast VM).

Step 3. Click on **Open Console**. The Singlewire InformaCast VM console window appears as shown in the image.

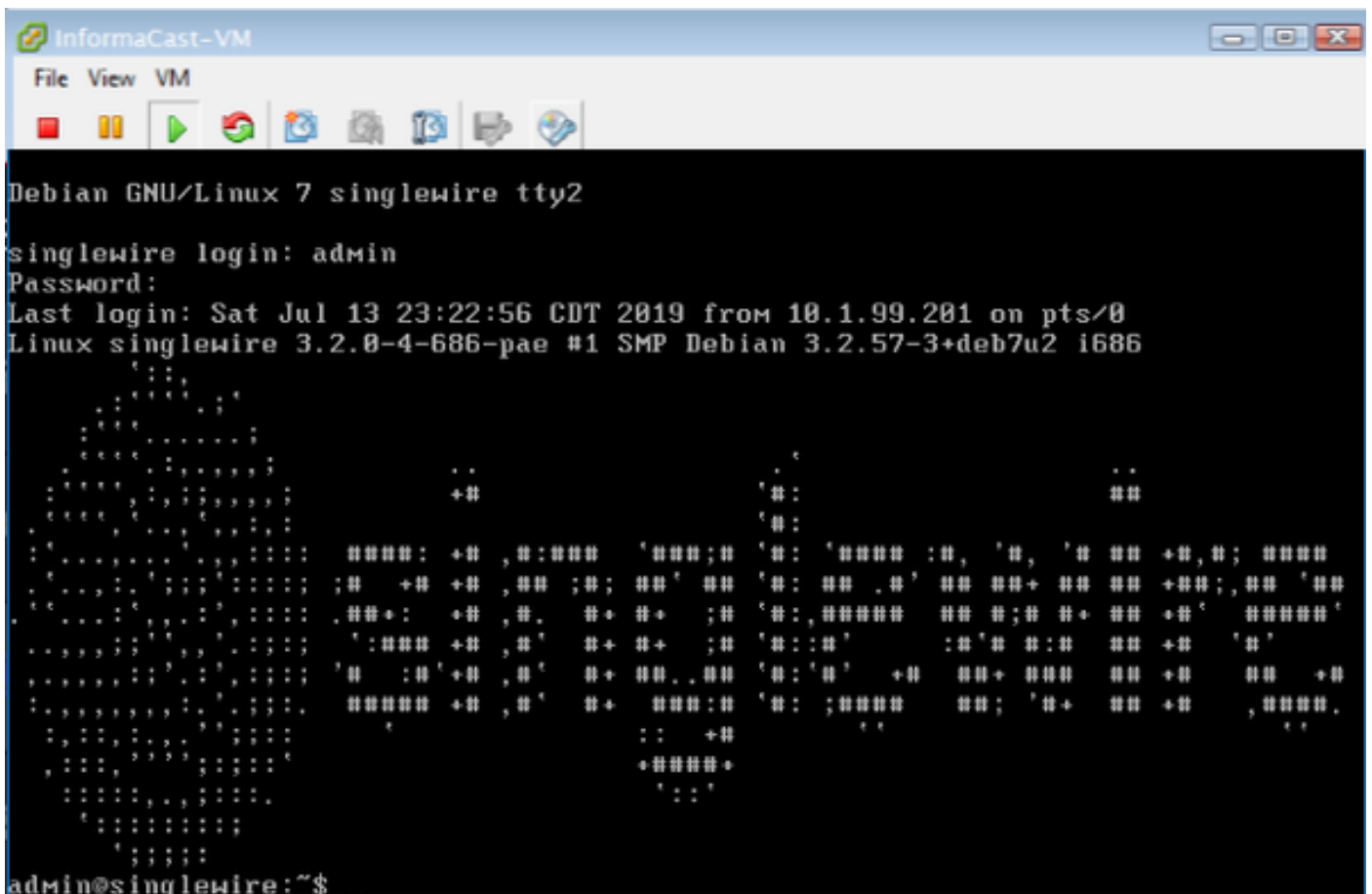
```
=====
Sun Jul 14 21:37:52 CDT 2019
Network Configuration:
Current IP address is 10.1.61.118
Link status: up
Press Alt+F2 for local login
Press Alt+F1 to display this screen

Go to the Singlewire Start page (http://10.1.61.118) to
access your application(s).
=====
```

Step 4. Press **Alt + F2** in the Singlewire InformaCast VM console window. The Singlewire InformaCast VM console window refreshes.

Step 5. Enter **admin** at the singlewire login prompt and press Enter key.

Step 6. Enter your OS password at the Password prompt and press the Enter key. The Singlewire InformaCast VM console window refreshes as shown in the image.



```
InformaCast-VM
File View VM
Debian GNU/Linux 7 singlewire tty2
singlewire login: admin
Password:
Last login: Sat Jul 13 23:22:56 CDT 2019 from 10.1.99.201 on pts/0
Linux singlewire 3.2.0-4-686-pae #1 SMP Debian 3.2.57-3+deb7u2 i686

admin@singlewire:~$
```

Step 7. In order to confirm the current configuration use the command **cat /etc/network/interfaces** as shown in the image.

```
admin@singlewire:~$ cat /etc/network/interfaces
auto lo eth0
iface lo inet loopback

iface eth0 inet static
    address 10.1.61.119
    gateway 10.1.61.1
    netmask 255.255.255.0

admin@singlewire:~$
```

Step 8. In order to change the current IP of the Informacast server, enter the **change-ip-address** command and press the Enter key as shown in the image.

```
admin@singlewire:~$ change-ip-address
Starting change IP address script
WARNING: If you have applications currently licensed,
changing your IP address may cause you to require new license(s).

Are you sure you want to continue (y/n)? y
```

Step 9. Then, enter **Y** and press the Enter key.

Step 10. Enter a routable IP address on your network that is not currently in use and press the Enter key.

Step 11. Enter a valid netmask for that IP address and press the Enter key.

Step 12. Enter the default gateway for your specified IP address and press the Enter key.

Step 13. Enter the IP address(es) of a DNS server(s) on your network and press the Enter key to get an output as shown in the image.

```
admin@singlewire:~$ change-ip-address
Starting change IP address script
WARNING: If you have applications currently licensed,
changing your IP address may cause you to require new license(s).

Are you sure you want to continue (y/n)? y

This utility will change the network parameters of your server, as well as recon
figure applications to use the new IP address

Enter new IP address: 10.1.61.118
Enter netmask: 255.255.255.0
Enter default gateway: 10.1.61.10
Enter DNS server 1 (enter if none):
Enter DNS server 2 (enter if none):

Network configuration:
IP address: 10.1.61.118
NetMask: 255.255.255.0
Gateway: 10.1.61.10
DNS server 1:
DNS server 2:

Continue using these values (y/n)? _
```

Step 14. Enter **Y** and press the Enter key. The script to change the network parameters and regenerate the Secure Sockets Layer (SSL) certificates starts automatically as shown in the



image.

```
running /usr/local/singlewire/InformaCast/bin/change-ip-address modify
Generating SSL certificates

running /usr/local/singlewire/PushToTalk/bin/change-ip-address modify
Generating SSL certificates
```

Step 15. The message **Change IP address process completed successfully** indicates that the change was applied. Send a ping to the new IP address to confirm reachability.

Step 16. In order to confirm that the change was taken correctly run the command **cat /etc/network/interfaces** as shown in the image.

```
running /usr/local/singlewire/InformaCast/bin/change-ip-address finish
/home/admin
/home/admin
starting InformaCast
InformaCast has been started.

running /usr/local/singlewire/PushToTalk/bin/change-ip-address finish
starting PushToTalk
Change IP address process completed successfully
admin@singlewire:~$ cat /etc/network/interfaces
auto lo eth0
iface lo inet loopback

iface eth0 inet static
address 10.1.61.118
gateway 10.1.61.10
netmask 255.255.255.0

admin@singlewire:~$
```

If you configure the new IP address with a previously used IP, the change fails with the error "**No changes were made to your system. Try running this command again or contact Singlewire support for assistance**" as shown in the image.

```
Checking /usr/local/singlewire/InformaCast/web/WEB-INF/wsdl/RecipientGroupService-1.wsdl
ERROR: 10.1.61.118 substitution failed, will roll back
Checking /usr/local/singlewire/InformaCast/web/WEB-INF/wsdl/ReplayService-1.0.wsdl
ERROR: 10.1.61.118 substitution failed, will roll back
Checking /usr/local/singlewire/InformaCast/web/WEB-INF/db/bcast.script
ERROR: 10.1.61.118 substitution failed, will roll back
Checking /usr/local/singlewire/InformaCast/web/WEB-INF/db/tmpBasic/bcast.script
ERROR: 10.1.61.118 substitution failed, will roll back
Checking /usr/local/singlewire/InformaCast/web/WEB-INF/db/tmpAdvanced/bcast.script
ERROR: 10.1.61.118 substitution failed, will roll back
/usr/local/singlewire/InformaCast/bin/change-ip-address prepare 10.1.61.118 failed; contact Singlewire support

running /usr/local/singlewire/PushToTalk/bin/change-ip-address prepare
Modifying /usr/local/singlewire/PushToTalk/web/WEB-INF/data/database.script
Checking /usr/local/singlewire/PushToTalk/web/WEB-INF/data/database.script
ERROR: 10.1.61.118 substitution failed, will roll back
/usr/local/singlewire/PushToTalk/bin/change-ip-address prepare 10.1.61.118 failed; contact Singlewire support
The change IP address process failed. No changes were made to your system.
Try running this command again or contact Singlewire support for assistance.
admin@singlewire:~$
```

In this case, change the server IP to a new one (never used) and repeat the process an additional time with the desired IP and gateway.

**Warning:** If you change the InformaCast IP address via SSH instead of Console the next message displays "If you are running this command over ssh, changing your IP address will result in your connection being dropped Singlewire recommends running this command from the console".

## Verify

There is currently no verification procedure available for this configuration.

## Troubleshoot

In order to confirm if the server uses static or dynamic IP run the command `cat /etc/network/interfaces` as shown in the image.

```
admin@singlewire:~$ cat /etc/network/interfaces
auto lo eth0
iface lo inet loopback

iface eth0 inet static
    address 10.1.61.118
    gateway 10.1.61.1
    netmask 255.255.255.0

admin@singlewire:~$ █
```

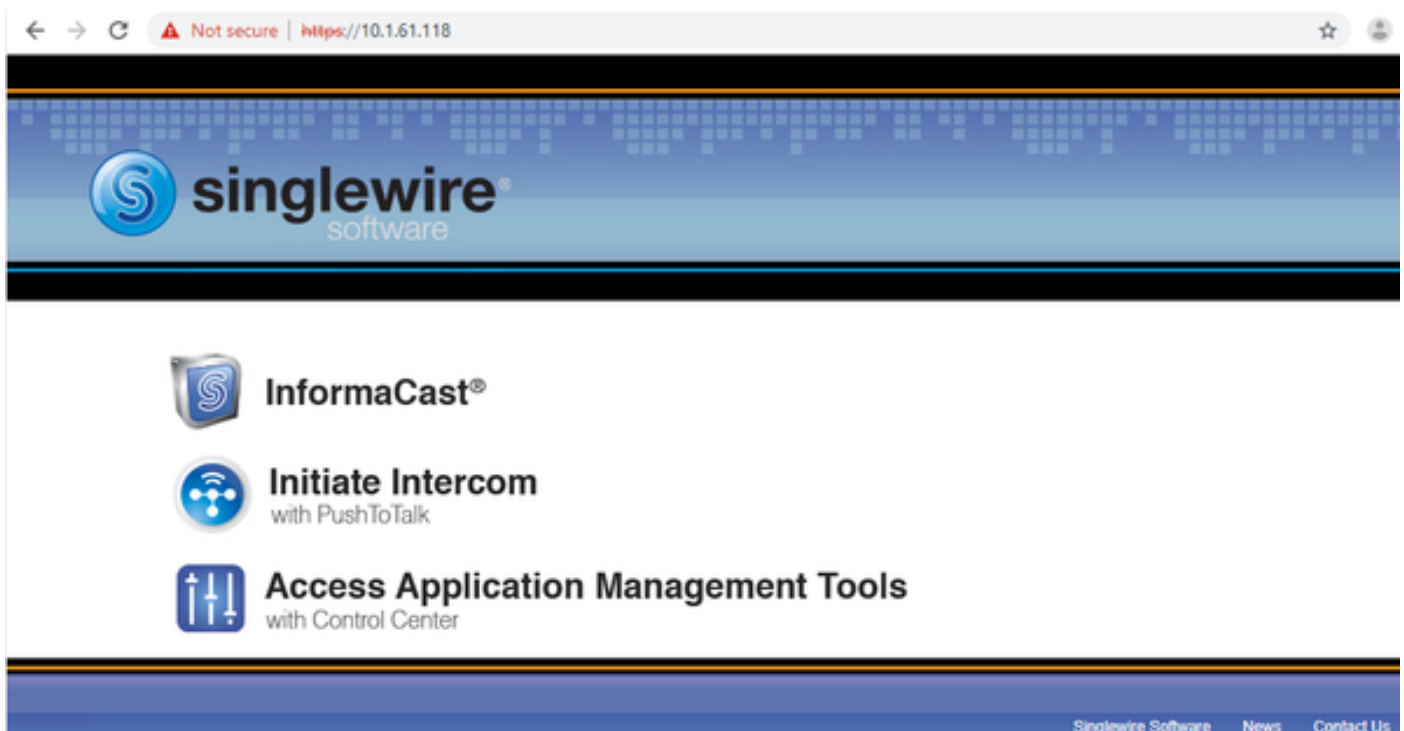
Other useful command that you can use is `/sbin/ifconfig eth0` as shown in the image.

```
admin@singlewire:~$ /sbin/ifconfig eth0
eth0      Link encap:Ethernet  HWaddr 00:50:56:96:d3:e3
          inet addr:10.1.61.118  Bcast:10.1.61.255  Mask:255.255.255.0
          inet6 addr: fe80::250:56ff:fe96:d3e3/64  Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:24224  errors:0  dropped:0  overruns:0  frame:0
          TX packets:12825  errors:0  dropped:0  overruns:0  carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:1816926 (1.7 MiB)  TX bytes:14745702 (14.0 MiB)
          Interrupt:19  Base address:0x2000

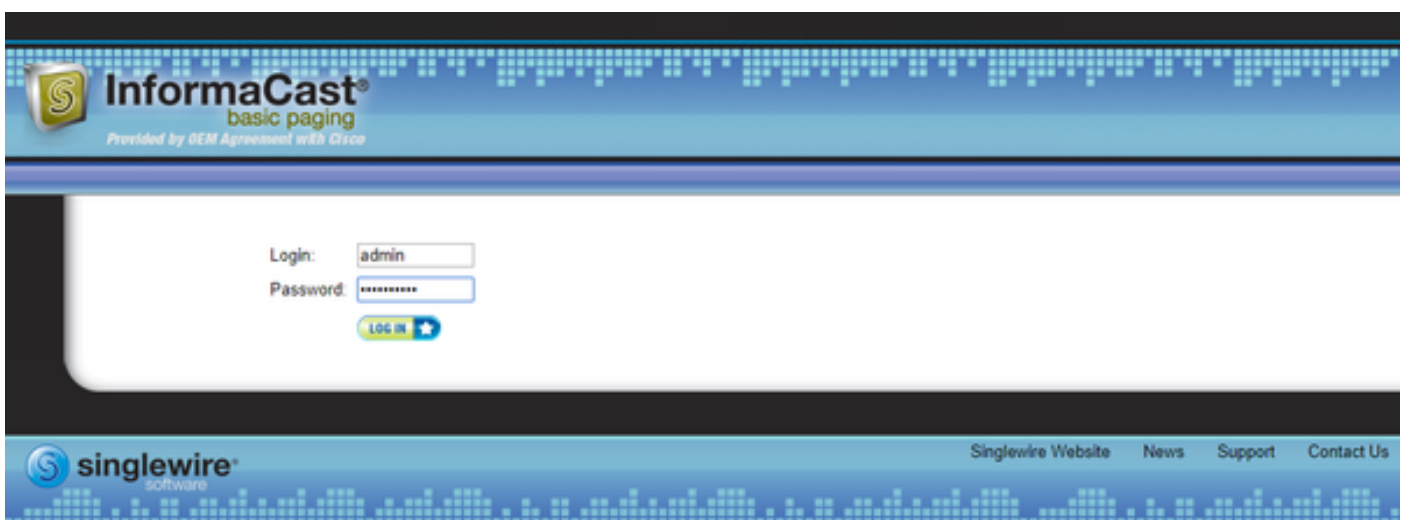
admin@singlewire:~$ █
```

In order to troubleshoot multicast, network settings and other issues, collect logs from Informacast server as follows.

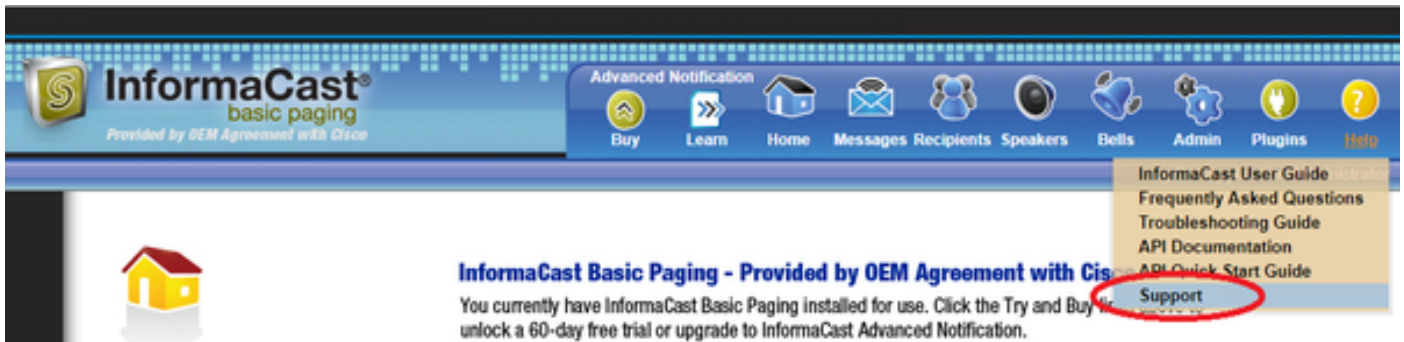
Step 1. Open the informacast IP in a web browser, [https://<informacast\\_IP>](https://<informacast_IP>) and select Informacast.



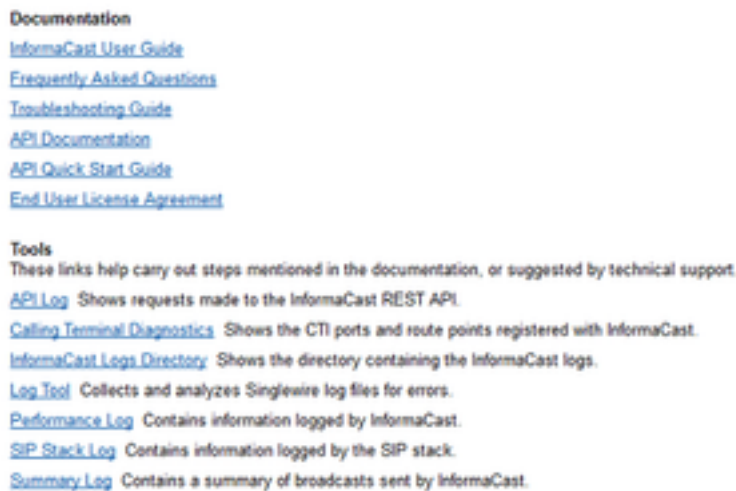
Step 2. Use your credentials to log in as shown in the image.



Step 3. Navigate to **Help > Support**.



Step 4. The **Documentation** and **Tools** menu shows up. It can vary for each Informacast version as shown in the image.



In order to troubleshoot multicast issues click on **Informacast Logs Directory** and collect the **Performance Logs** and **Summary Logs**.

Step 5. In order to troubleshoot network settings, you are required to get the **messages logs**. Connect via SSH to the server with admin credentials and run the next command.

```
tar -zcf messages.tgz /var/log/*  
/usr/local/singlewire/SwiftStart/server/jetty/webapps/SwiftStart/WEB-INF/data/*  
/etc/network/interfaces
```

Step 6. The command line shows many permission denied messages, however the traces are collected and saved in compressed **.tgz** files as shown in the image.

```
admin@singlewire:~$ tar -zcf messages.tgz /var/log/* /usr/local/singlewire/SwiftStart/server/jetty/webapps/SwiftStart/WEB-INF/data/* /etc/network/interfaces  
tar: Removing leading `/' from member names  
tar: /var/log/apt/term.log: Cannot open: Permission denied  
tar: /var/log/boot: Cannot open: Permission denied  
tar: /var/log/fsck/checkroot: Cannot open: Permission denied  
tar: /var/log/iptraf: Cannot open: Permission denied  
tar: /var/log/lighttpd: Cannot open: Permission denied  
tar: /var/log/watchdog: Cannot open: Permission denied  
tar: Exiting with failure status due to previous errors  
admin@singlewire:~$
```

Step 7. In order to confirm that the **messages.tgz** was generated use the command **ls -la** as shown in the image.

```

admin@singlewire:~$ ls -la
total 46528
drwxr-xr-x 8 admin admin    4096 Jul 14 13:06 .
drwxr-xr-x 5 root  root    4096 Apr 27  2011 ..
-rw----- 1 root  root    2739 Jan 14  2011 .bash_history
-rw-r--r-- 1 admin admin    220 Jan 11  2011 .bash_logout
-rw-r--r-- 1 admin admin   3116 Jan 11  2011 .bashrc
drwx----- 4 admin admin    4096 Jul 23  2018 .cache
drwx----- 3 admin admin    4096 Feb 20  2012 .config
drwxr-xr-x 2 admin admin    4096 Jul 23  2018 .fontconfig
-rw-r--r-- 1 root  root   1380 Mar 13  08:49 Informacast1.cap
-rw-r--r-- 1 root  root   1744 Jul 31  2018 InformaCast_LogTool_Capture_201807311120.pcap
-rw-r--r-- 1 root  root   4138 Sep 23  2018 InformaCast_LogTool_Capture_201809231353.pcap
-rw-r--r-- 1 root  root   9587 Mar 13  08:59 InformaCast_LogTool_Capture_201903130800.pcap
-rw-r--r-- 1 admin admin 1453069 Jul 31  2018 InformaCast_LogTool_Logs_201807311120.tgz
-rw-r--r-- 1 admin admin 2350097 Sep 23  2018 InformaCast_LogTool_Logs_201809231550.tgz
-rw-r--r-- 1 admin admin 2354348 Sep 23  2018 InformaCast_LogTool_Logs_201809231605.tgz
-rw-r--r-- 1 admin admin 33240845 Mar 13  09:06 InformaCast_LogTool_Logs_201903130801.tgz
-rw-r--r-- 1 admin admin 1544692 Jul 31  2018 InformaCast_LogTool_OScmds_201807311120.log
-rw-r--r-- 1 admin admin 1560839 Sep 23  2018 InformaCast_LogTool_OScmds_201809231549.log
-rw-r--r-- 1 admin admin 1564683 Sep 23  2018 InformaCast_LogTool_OScmds_201809231604.log
-rw-r--r-- 1 admin admin 2079795 Mar 13  09:01 InformaCast_LogTool_OScmds_201903130800.log
drwxr-xr-x 3 admin admin    4096 Jul 23  2018 .local
-rw-r--r-- 1 admin admin 1303117 Jul 14 13:06 messages.tgz
drwx----- 3 admin admin    4096 May 15  2013 .pki
-rw-r--r-- 1 admin admin    865 Feb  9  2012 .profile
-rw-r--r-- 1 root  root    2020 Jul 26  2018 pruebal
-rw----- 1 root  root    1024 Jan 11  2011 .rnd

```

Step 8. In order to export the **messages.tgz** file to an external SFTP server use the command **sftp <user>@<sftp\_ip\_address>**. Enter your SFTP credentials and once connected type **put messages.tgz** to export the file as shown in the image.

```

admin@singlewire:~$ sftp victogut@10.1.99.201
Authenticated with partial success.
victogut@10.1.99.201's password:
Hello, I'm freeFTPd 1.0Connected to 10.1.99.201.
sftp>
sftp> put messages.tgz
Uploading messages.tgz to /messages.tgz
messages.tgz                               100% 1273KB   1.2MB/s   00:01
sftp>

```

Step 9. If you have a TAC case open use the link <https://cway.cisco.com/csc/> in order to attach the **messages.tgz** to your service request.



## Case File Uploader

Attaching files to a Cisco Support Case is easy

### 1 Enter your Cisco TAC Case Number

Case Number <CaseNumberHere>

### 2 Add files

### 3 Add file descriptions

### 4 File Visibility

Upload

Step 10. The **daemon.log** file can help you to figure it out the root cause of the issue.

## Related Information

InformaCast Virtual Appliance Basic Paging:

[https://www.cisco.com/c/dam/en/us/td/docs/voice\\_ip\\_comm/cucm/cisco\\_paging\\_server/11\\_0\\_5/CiscoPagingServerInstallandUserGuide\\_1105.pdf](https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cucm/cisco_paging_server/11_0_5/CiscoPagingServerInstallandUserGuide_1105.pdf)