



Dialogic[®] IMG 1010 Integrated Media Gateway

IMG 1010 Quick Start Guide

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Please refer to the following Dialogic web site for information on hardware warranty information, which applies unless different terms have been agreed to in a signed agreement between yourself and Dialogic Corporation or its subsidiaries. The listed hardware warranty periods and terms are subject to change without notice. For purchases not made directly from Dialogic, please contact your direct vendor in connection with warranty period and terms that they offer.

<http://www.dialogic.com/warranties>

WARNING!!!

- **Warning!** Ensure that the system is disconnected from its power source and from all telecommunications links, networks, or modem lines whenever the chassis cover is removed. Do not operate the system with the cover removed.
 - **Avertissement!** Assurez-vous que le système soit débranché de son alimentation ainsi que de toutes les liaisons de télécommunication, des réseaux, et des lignes de modem avant d'enlever le capot. Ne pas utiliser le système quand le capot est enlevé.
 - **Warnung!** Das System darf weder an eine Stromquelle angeschlossen sein noch eine Verbindung mit einer Telekommunikationseinrichtung, einem Netzwerk oder einer Modem-Leitung haben, wenn die Gehäuseabdeckung entfernt wird. Nehmen Sie das System nicht ohne die Abdeckung in Betrieb.
 - **Avvertenza!** Prima di rimuovere il coperchio del telaio, assicurarsi che il sistema sia scollegato dall'alimentazione, da tutti i collegamenti di comunicazione, reti o linee di modem. Non avviare il sistema senza aver prima messo a posto il coperchio.
 - **¡Advertencia!** Asegúrese de que cada vez que se quite la cubierta del chasis, el sistema haya sido desconectado de la red de alimentación y de todos los enlaces de telecomunicaciones, de red y de líneas de módem. No ponga en funcionamiento el sistema mientras la cubierta esté quitada.
-
- The procedures below assume a familiarity with the general terminology associated with electronic equipment and with safety practices and regulatory compliance required for using and modifying electronic equipment.
 - The procedures below should be performed by qualified technical personnel only.
 - Unplug the equipment before performing the procedures described below. Failure to disconnect the power before opening the chassis can result in personal injury or equipment damage.
 - The power supply in this product contains no user-serviceable parts. Refer servicing to qualified technical personnel only.

Table of Contents

	Hardware Limited Warranty	3
1.	Overview	6
	Shipping Information	6
2.	Connecting Power	7
	Connecting AC Power	7
	Connecting DC Power	8
	Grounding (DC Version Only)	9
3.	Network Connections	10
	Connecting CTRL 0 Interface	10
	Connecting DATA 0 Interface	11
	Connecting TDM Signaling and Bearer Ports	12
4.	Configure Pre-loaded GCEMS server	13
	Update /etc/hosts and /etc/sysconfig/network files	13
	Create symbolic link to load system software	14
	Create dhcpd.conf file	15
	Start the services nfs, vsftpd, and dhcpd, services	16
	Install GCEMS software	17
	Starting ClientView to start Configuring Switch	18

Revision History

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07-8728-06	April, 2009	<ul style="list-style-type: none">• N/A
07-8728-07	May, 2011	<ul style="list-style-type: none">• Updated Template• Updated Dialogic Logo• Updated Copyright• Updated Hardware Warrantee• Updated document
64-1204-01	January, 2012	<ul style="list-style-type: none">• Updated Copyright• Updated Part Number to 64#
Last modified: January, 2012		

Refer to www.dialogic.com for product updates and for information about support policies, warranty information, and service offerings.

Terminology

Please be aware that the following terminology and abbreviations are used throughout this document. Please also be sure to consult the legal notice for other important details.

- When used herein, the term *IMG 1010* refers to the *Dialogic® IMG 1010 Integrated Media Gateway* product.
- When used herein, the term *GCEMS* refers to the *Dialogic® Gate Control Element Management System*.

1. Overview

This IMG 1010 Quick Start Guide is an abbreviated guide which describes how power and network cabling are connected prior to configuring. From there, the guide describes installing system software and GCEMS software. Once procedure is completed, the IMG system will be ready to start the configuration process. For more in depth information on installation and setup, refer to the online documentation at <http://www.dialogic.com/manuals>.

Shipping Information

Review the packing list to check that all the items listed on the packing list have been sent. Should any discrepancies exist, contact your Dialogic Representative immediately.

The original packaging should be retained in the event the system needs to be shipped for any reason. If packaging is no longer needed, both the corrugated cardboard and polyethylene foam can be recycled. See your local recycling facility for information and procedures on this.

2. Connecting Power

Connecting AC Power

If the IMG 1010 purchased is powered by an AC voltage then the AC input power must conform to the specifications in the table below.

Input	Min	Max
Vin (voltage)	90 VAC rms	264 VAC rms
Vin (Frequency)	47 Hz	63 Hz
Iin (90 VAC)		1.25 amps rms
Iin (180 VAC)		.65 amps rms
Heat Dissipation		307 BTUs/hr

Complete the following steps to connect AC power to the chassis.

1. Plug AC cable into the receptacle on the AC power module.
2. Insert other end into a grounded wall outlet, uninterruptible power supply (UPS), or surge protector.
3. Press switch on the AC power module to I (On).

Warning! Do not attempt to modify or use the supplied AC power cord if it is not the exact type required.

AC Power Module

The AC power docking station provides an AC input power module with an integrated fuse, power switch, and standard three position female AC input connector. This connector allows the docking station to interface with all variations of AC outlets by simply using a standard power cable and compatible outlet plug.

For more information regarding AC Power, please refer to the topic **IMG 1010 – Connecting AC Power** in the [online documentation](#).

Connecting DC Power

If the IMG 1010 is powered by DC voltage, the DC input power must conform to the specifications in the table below.

Input	Min	Max
Vin (voltage)	-40 VAC	-60 VDC
Iin	1.85 amps	2.75 amps
Heat Dissipation		307 BTUs/hr

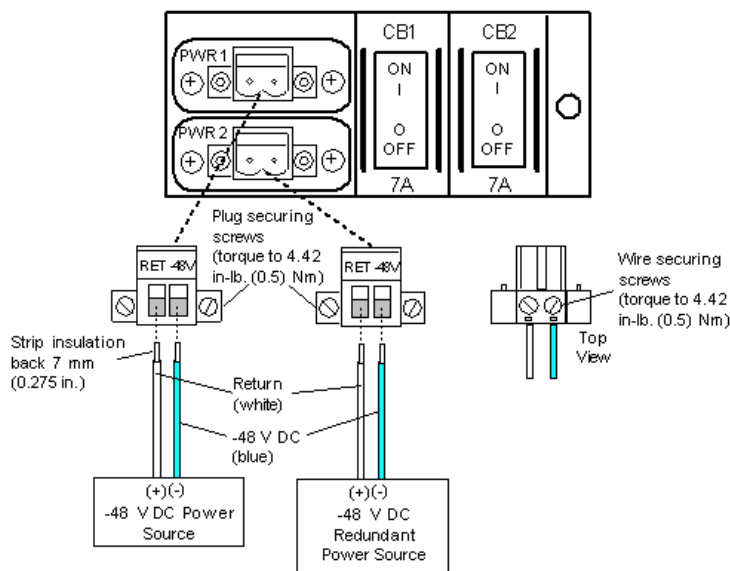
Caution: Do not *daisy-chain* power connections on two or more IMG 1010 chassis and do not wire chassis directly to other equipment or a common bus bar. The DC power module must be wired directly to a -48vdc fused power source.

-48 Volt Connections

When connecting -48 vdc to the IMG 1010, follow the instructions in the table and diagram below.

#12-16 AWG Machine Tool Wire (MTW)	Blue= -48v White= -48v return
DC Power Module Plugs	Dialogic Supplied (In Plastic Bag)

Caution: The DC power module plugs are polarity-sensitive. The unit will not operate if the plugs are not wired correctly, as shown below.



For more information regarding DC Power, please refer to the topic **IMG 1010 – Connecting DC Power** in the [online documentation](#).

Grounding (DC Version Only)

The DC version of the IMG 1010 should be connected to a true earth ground. To connect chassis to ground you will need the following equipment:

- 10-12 AWG machine tool wire (MTW) (green/yellow).
- Double lug #10 hole at 5/8" spacing solder-less crimp connector used for chassis grounding (Dialogic-supplied).

Procedure

1. Remove the two-hole grounding lug at the rear of the IMG by removing the grounding screws.
2. Crimp the grounding wire to the lug. Re-attach the lug to the unit using the grounding screws.
3. Attach the other end of grounding wire to either a grounding point on the mounting rack or a building ground point.

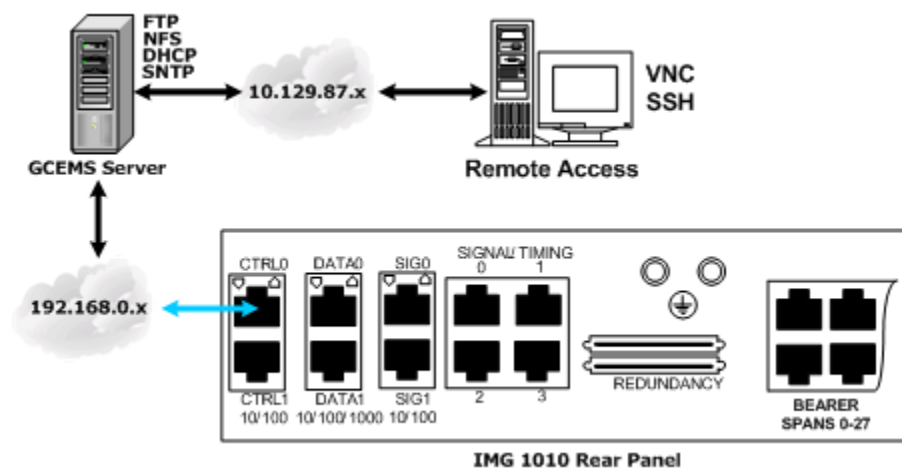
For more information regarding DC Power, please refer to the topic ***IMG 1010 – Connecting DC Power*** in the [online documentation](#).

3. Network Connections

Connecting CTRL 0 Interface

The information below will provide the user with a basic setup sequence for connecting the IMG 1010 to the GCEMS server for the purpose of downloading software, managing services, and configuring the IMG 1010 using the ClientView GUI. Located on the rear of the IMG 1010 are the network interfaces. The first interface labeled **CTRL 0** is a Fast Ethernet interface typically dedicated to the GCEMS server for network management functions. The interface is typically installed onto a private secure network.

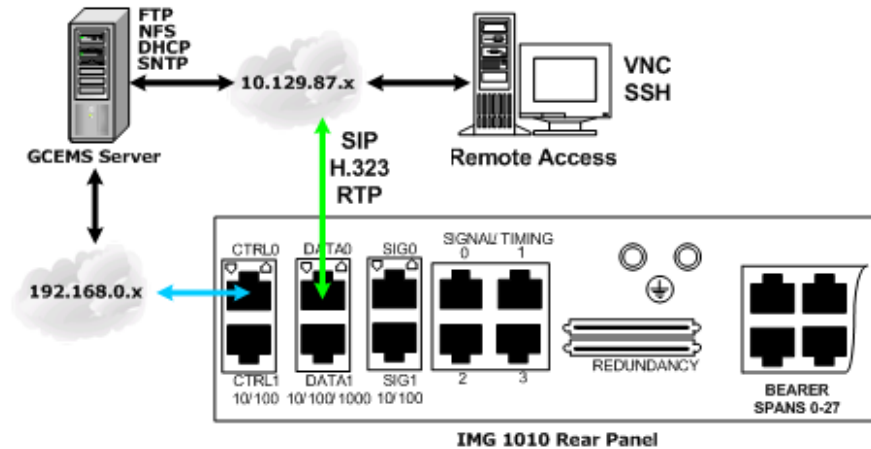
1. Connect up cables as shown in the first figure below. The figure below displays an option that can be used that allows remote access to the GCEMS server and IMG 1010.



Connecting DATA 0 Interface

The information below will provide the user with a basic setup sequence for connecting the IMG 1010 to a VoIP network utilizing SIP or H.323 signaling. The DATA interfaces are Gigabit-Ethernet ports and are typically used to pass RTP traffic. Depending on how the ports are configured, they can be configured to be on the same secure IP network as the CTRL 0 interface (Management Network), or can be connected to a separate public network to be used for VoIP Signaling and RTP traffic.

1. Connect the cables as shown in the figure below. The figure below displays the DATA 0 interface being connected to a public network.

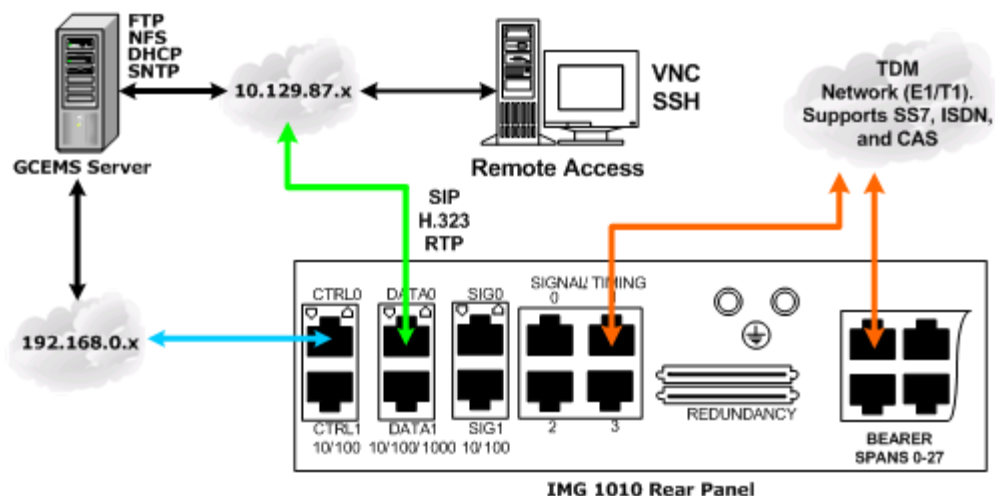


2. The DATA 0 interface located on the rear of the IMG 1010 and is a Gigabit-Ethernet port dedicated to VoIP Bearer traffic (RTP) or SIP/H.323 signaling. Refer to the the topics under the **IMG 1010-Installation and Setup Guide > IMG 1010-Hardware Installation** book for more information on connecting to this interface.

Note: The IP addresses for these ports are assigned through the ClientView GUI. For more information on configuring these interfaces, refer to the IP Address and IP Network (Interface) topics in the **ClientView Pane Reference** section of the online documentation.

Connecting TDM Signaling and Bearer Ports

The Bearer spans (Interface Offsets) 0-27 are connected to a TDM network. Each bearer interface which represents one DS1 can have signaling and/or bearer DS0's configured on them. The Signaling/Timing interfaces can be connected to the TDM network as well. These interfaces are typically used for SS7 or ISDN signaling but can be used for any TDM functionality as well. Refer to the T1/E1 topic under the **Configuration > T1/E1** book in the [online documentation](#) for more information.



Note: SS7 Signaling links and ISDN D-channels can be brought in over either the Signal/Timing Ports or the Bearer Ports.

4. Configure Pre-loaded GCEMS server

When purchasing an IMG 1010, the customer has the option of purchasing a server which is labeled the GCEMS server. This server has been pre-loaded with a version of Red Hat Enterprise Linux OS along with all the applications and services needed to start configuring the IMG 1010. If the GCEMS server was purchased through Dialogic Inc, follow the procedure below. The procedure below describes configuring the GCEMS server to operate in your specific network. The first ethernet port on the GCEMS server is preconfigured with an address of 192.168.0.100. This IP address can be used to connect to the GCEMS server to make further changes to the host configuration

Note: Most commands will need to be executed as a root or super-user. Verify before entering commands that you are a root user.

Update /etc/hosts and /etc/sysconfig/network files

1. In the /etc/hosts file, there are two entries. The first is mapped to 127.0.0.1. Do not edit this. The second is a factory default set up during configuration and testing at the factory. Using a text editor such as a vi or gedit, modify the default factory settings to equal the hostname and ip address being given to the GCEMS server. See example of default file below

```
192.168.0.100  FactoryDefault  localhost.localdomain
127.0.0.1      localhost.localdomain  localhost
```

2. Edit the HOSTNAME=<hostname> line in the /etc/sysconfig/network file so the value given to <hostname> is the same hostname being modified in /etc/hosts file in previous step.

```
[excelsw@Factory Default ~]$ more /etc/sysconfig/network
NETWORKING=yes
HOSTNAME=FactoryDefault
```

NOTE: If the GCEMS server was not purchased from Dialogic, then a server must be configured with Red Hat Enterprise Linux. The GCEMS and ClientView applications use Red Hat Enterprise Linux as the operating system to run on. In the online documentation, the topics under the book **IMG 1010 - Installation and Setup Guide > IMG 1010 – Linux Red Hat Installation** display recommended GCEMS server specifications, recommended Linux Configuration and OS settings, and one example describing the installation of Red Hat Enterprise Linux onto a server. Follow these topics to install Linux on a server. Once Linux is installed, continue on with the procedure below.

IMPORTANT: Please read and understand the IMG 1010 technical documentation prior to performing any setup or installation procedures. The documentation can be accessed through the following site: <http://www.dialogic.com/manuals>

Create symbolic link to load system software

To install the System Software into the IMG, the FTP Server being utilized (Usually GCEMS Server) should have one of two things to allow software to be loaded.

- A pathname to the specific software that is to be installed -or-
- Have a link generated in the ftp server that points a generic name (img1010_id0101.bin) to a specific software file.

The procedure below describes the latter. Creating a link will allow the user to change software builds in the IMG easily. The link generated will create an association between the filename line in the dhcpd.conf file located in /etc and the latest version software being installed. The link will be created in the /home/excelsw/ftpBuilds folder. A script has been written that will create the symbolic link described above. This script was written to make it easier to change the symbolic link each time a new build is to be installed. Follow the procedure below to create the symbolic link through the lnimg script.

1. Copy the script file labeled *lnimg* located in the /opt/dialogic/common/osconfig directory and paste it into the /home/excelsw/ftpBuilds directory.
2. From the ftpBuilds run the lnimg (link img) script

```
[root@localhost]# ./lnimg
```

3. Follow the instructions and enter the appropriate *IMG 1010 Build Number* from the *Available IMG 1010 Build* files. Use the format described in the lnimg script. (1051=10.5.1, 1052=10.5.2, 1053=10.5.3).
4. The following response will be generated:

```
Link Created... img1010_ver1053123_id0101.bin -> img1010_id0101.bin
```

5. Executing the ls -la command as shown above, verifies that the link was created.

Create dhcpd.conf file

Create the dhcpd.conf file. The IP information, codec information, and protocol information for the IMG and GCEMS server should be determined before starting the xldhcpd script. Also, the MAC address of the CTRL 0 interface can be obtained from sticker located on bottom of IMG 1010 chassis.

1. As Super User, create a dhcpd.conf file. Run the dhcpd file creation script located in the following /opt/dialogic/common/osconfig directory.

```
[root@localhost]# ./xldhcp
```

2. Enter values when prompted as appropriate for your configuration. You will be prompted for the following information: [factory defaults shown in **bold**]

```
Router/Default Gateway IP Address: [192.168.0.1]
Router/Default Gateway Subnet Mask: [255.255.255.0]
Subnet IP Address: (Router/Default Gateway IP Address - 1) [192.168.0.0]
FTP Server IP Address: (This PC IP Address) [192.168.0.100]
How many IMG systems are being configured? [1]
T1 or E1 IMG ( t/ e)? [t]
CODEC Profile Selection
1 = LBR
2 = LBR + iLBC
3 = LBR + iLBC + wireless
[NOTE: You must have a license for wireless codecs. You must also set host flags accordingly (see Vocoder Information)]
Enter CODEC profile? [2]
IMG(CTRL0)[1] IP Address: [192.168.0.102]
IMG(CTRL0)[1] MAC Address: (MAC shown on IMG Label) [00:20:1C:xx:xx:xx]
IMG(CTRL1)[1] MAC Address: (MAC shown on IMG Label +1) [00:20:1C:xx:xx:xx+1]
```

Note: Assign an IP address to the IMG CTRL 0 interface that is on the same subnet as the GCEMS server. Once this IP address is set, the GCEMS will be able to connect to and configure the IMG

3. The following is the response after all prompts are complete:

```
dhcpd.conf created with 1 IMG's configured...
```

4. The file will be created in the /opt/dialogic/common/osconfig directory.
5. Move the file to the /etc directory

```
mv dhcpd.conf /etc)
```

Start the services nfs, vsftpd, and dhcpd, services

1. As a Super User, start all the services and configure them to restart when GCEMS server is rebooted. Enter the following commands to start the nfs server.

```
#/sbin/service nfs start      (Start the nfs service)
#/sbin/service nfs status     (Verify whether nfs is running or not)
#/sbin/chkconfig nfs on       (Configure nfs service to restart after a reboot of GCEMS)
#/sbin/chkconfig nfs --list   (Verify that runlevels 3,4 and 5 are all on.)

Example:  nfs                0:off    1:off    2:on     3:on     4:on     5:on     6:off
```

2. Enter the following commands to start vsftpd service.

```
#/sbin/service vsftpd start   (Start the vsftpd service)
#/sbin/service vsftpd status  (Verify whether vsftpd is running or not)
#/sbin/chkconfig vsftpd on    (Configure vsftpd service to restart after a reboot of GCEMS)
#/sbin/chkconfig vsftpd --list (Verify that runlevels 3,4 and 5 are all on.)
```

3. Enter the following commands to start dhcpd service.

```
#/sbin/service dhcpd start    (Start the dhcpd service)
#/sbin/service dhcpd status    (Verify whether dhcpd is running or not)
#/sbin/chkconfig dhcpd on      (Configure dhcpd service to restart after a reboot of GCEMS)
#/sbin/chkconfig dhcpd --list  (Verify that runlevels 3,4 and 5 are all on.)
```

4. Enter the following commands to start ntpd service.

```
#/sbin/service ntpd start     (Start the ntpd service)
#/sbin/service ntpd status     (Verify whether ntpd is running or not)
#/sbin/chkconfig ntpd on       (Configure ntpd service to restart after a reboot of GCEMS)
#/sbin/chkconfig ntpd --list   (Verify that runlevels 3,4 and 5 are all on.)
```

5. Once these services are running and the IMG software build is available the software can be downloaded. Refer to the **IMG 1010 - Software Installation and Setup > IMG 1010-Downloading System Software** topic in the [online documentation](#) and download the system software from the GCEMS server to the IMG 1010.

Install GCEMS software.

To take advantage of all new features, it is recommended that the latest version of GCEMS software be installed on the GCEMS Server. The most current software can be obtained from the Dialogic Technical Support website.

1. Go to the Dialogic Support Technical Website at <http://www.dialogic.com/support>
2. Select '**Downloads**'. You will require a logon username and password to access the downloads site. (A support contract is needed to access this site.) Within this site will be two software binary files with the following format. Download the latest version of these files.
 - IMG_10.5.3.xxx.bin
 - IMGUserInterface_10.5.3.xxx.bin

Note: If you do not have a support contract with Dialogic, then the software supplied to you on the Software CD can be used.

1. Open a terminal on the GCEMS server and become a root/superuser by entering the command:

```
[localuser@localhost]$ su
Password: excel2
```

2. Change the mode to executable for the following files being installed. This is accomplished by executing the following commands:

```
[root@localhost]#chmod +x IMG_10.5.3.xxx.bin
[root@localhost]#chmod +x IMGUserInterface_10.5.3.xxx.bin
```

3. Install GCEMS software.

```
[root@localhost]# ./IMG_10.5.3.xxx.bin (xxx=build) (Follow prompts)
```

The GCEMS will be installed in the directory/opt/dialogic/installs/IMG_10.5.3.xxx. At the end of the installation you will be prompted to log out and then log back in. Do not log out and back in at this time.

4. Install the IMG User Interface

```
[root@localhost]# ./IMGUserInterface_10.5.3.xxx.bin (xxx=build) (Follow prompts)
```

IMGUserInterface is installed into /opt/dialogic/installs/IMGUserInterface_10.5.3.xxx directory.

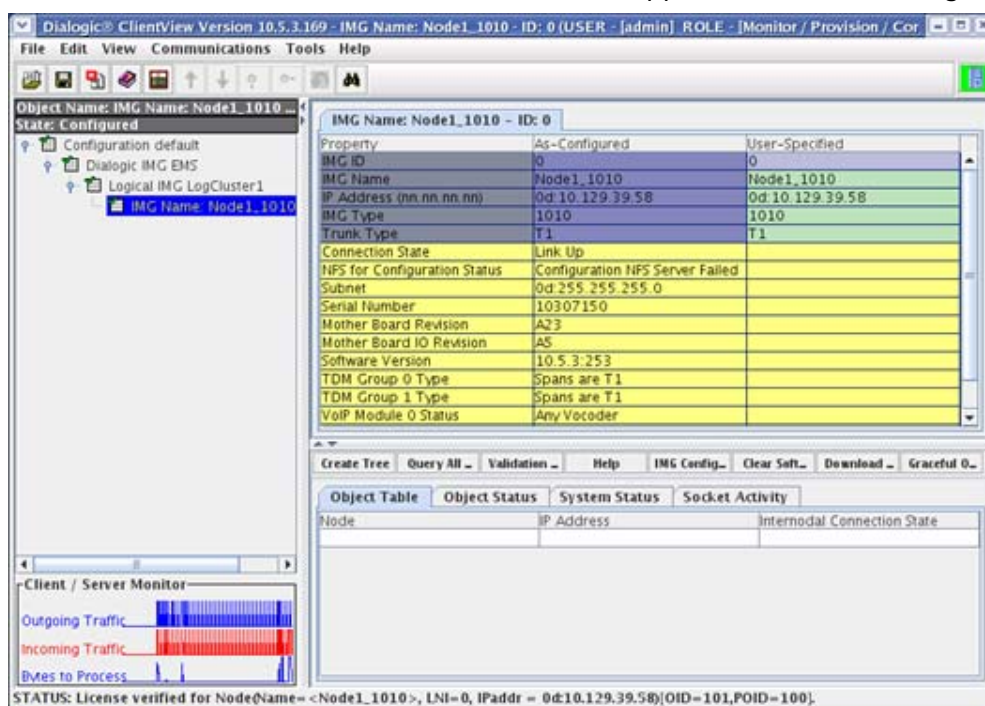
5. At the end of the installation you will be prompted to log out. Log out as root user by entering the **exit** command.

For more information on installing GCEMS and ClientView, refer to the **IMG 1010 - Software Installation and Setup > Installing GCEMS software** topic in the online documentation through the links above.

Starting ClientView to start Configuring Switch

Once the IMG 1010 has the system software installed, the cabling is connected, and the GCEMS server has been configured, the ClientView application needs to be started. Once started, the clientView application can be used to configure the system. Follow procedure below to start ClientView.

1. Double Click on the **IMG ClientView** icon on the desktop -or- enter the `./ClientView` command from the `/opt/dialogic/IMG/IMGUserInterface/ClientView` directory.
2. An About Dialogic ClientView box will appear. Click on the **Close** button at the bottom.
3. A Client Socket box appears and asks for username and password. Enter username and password and select OK. The default User and password are:
 Username admin
 Password admin
4. EventView and ClientView screens will appear. GCEMS and ClientView are now running.
5. Right Click on the Dialogic IMG EMS object in the ClientView tree and select **New Logical IMG**. Enter a name for this Logical Node Group.
6. Right click on The Logical IMG and select **New Physical IMG**.
7. In the object that appears, enter a name in the name field and enter the IP address given to the <CTRL 0> interface in the IP address (nn.nn.nn.nn) field. The GCEMS will now connect. Once connected, ClientView will appear like the following screen capture.



The IMG 1010 is now ready to be configured using ClientView. Refer to the Configuration section of the online documentation.