



Dialogic® IMG 1010/1004 Integrated Media Gateway

Upgrade System Software

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Revision history

| Revision | Release date | Notes |
|-------------------------|---------------|--|
| N/A | December 2009 | <ul style="list-style-type: none">Created Software Upgrade Procedure |
| N/A | May 2011 | <ul style="list-style-type: none">Updated the logo, copyright information, hardware warranty, and template.Updated procedure to add redundancy and radius information |
| Last modified: May 2011 | | |

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 *IMG 1004* refers to the *Dialogic® IMG 1004 Integrated Media Gateway* product.
- When used herein, the term *GCEMS* refers to the *Dialogic® Gate Control Element Management System*.

1. Upgrade System Software

For latest revision of this procedure, refer to the online documentation located at <http://www.dialogic.com/manuals>

Overview

- Uprev GCEMS software from (10.3.3:x or 10.5.0:x) to software 10.5.1:x and above.
- Uprev switch software from (10.3.3:x or 10.5.0.x) to software 10.5.1.x and above.
- Includes 10.5.3 RADIUS upgrade and TLS licensing.
- Includes procedures for single or redundant GCEMS upgrade.

Time Requirements

- Time required executing the upgrade - Approximately 1 hour
- Call processing downtime – Approximately 10 minutes

Notes

- Upgrading directly from Software Version 10.3.2 to 10.5.0 or beyond is not supported. When upgrading from software 10.3.2 to 10.5.x or beyond, first upgrade from Software version 10.3.2 to 10.3.3. Once this is achieved, you can then upgrade to the 10.5.x software.
- Perform the following steps logged in as an **excelsw** user unless otherwise stated

Preliminary

Prior to upgrading the IMG software perform the following:

1. In ClientView, observe the status of each of the entities listed below. Entities that were not in service before the upgrade should not be expected to be in service after the upgrade.

| | | |
|----------|-----------------|--------------------|
| Spans | SS7 Links | Network Interfaces |
| Channels | ISDN D-Channels | |

2. If a redundant GCEMS server is configured, verify which server is active and which is standby. This information will be needed later.
3. Notify other ClientView users that are logged in of the pending upgrade and have them logoff.
4. Obtain the desired IMG system software from the Dialogic Technical Support BBS (Bulletin Board System) website. Go to <http://www.dialogic.com/support> and click on **Downloads**.
5. Once at the Downloads page, select the IMG in the product selection drop down menu. On the page that appears, click on Support Page link.

6. A logon username and password are required to access the BBS site. If you do not have a username and password and access to the BBS site is required, contact the Dialogic Technical Support Team through one of the sources below or refer to the welcome letter e-mailed after purchase of product. (A support contract is required to access the site)

Email -- americas.support@dialogic.com

Phone -- +1-973-993-1443

7. Once logged into the BBS site, download the IMG 1010/1004 ClientView and GCEMS files.

Backup Existing Configuration

1. Backup the existing system configuration before upgrading. Depending on the version software, the backup procedure varies. See below.
 - If upgrading from system software version 10.5.x, the configuration portion can be automatically backed up using the **Support** Object in ClientView. The Support object can be used to backup the /opt/dialogic/common/config folder. Once the config directory is backed up, manually create a backup of the license directory. From here the Installation of the system software files can be achieved. Move to the **Installation** section below after the backups are complete.
 - If upgrading from software 10.3.x the backing up of files will need to be achieved manually. The next few steps described how to back up files manually. Once all files are backed up manually, proceed to the **Installation** section below.
2. In ClientView, select **File --> Save Configuration File**. This will save the .csa file located in the /opt/dialogic/common/config directory.
3. Create a copy of the current configuration file by renaming the present configuration file to a new configuration file name. Follow steps in the table below to rename the configuration.

- | |
|--|
| <ol style="list-style-type: none">1. In ClientView, select the Configuration Object. The configuration object is the first entry in the configuration pane located on the left side of the ClientView screen.2. Once selected double-click in the text box marked User-Specified in the Filename field.3. When the text box becomes white, edit it to the new title.4. Commit this change, and save the new file by selecting File --> Save from main menu tool-bar. |
|--|

For a more in depth procedure on backing up the GCEMS server manually refer to the following tech note: <http://www.dialogic.com/support/helpweb/img/iw2532.aspx>

Note: Upgrading software from 10.5.0 to 10.5.1+ will create a local backup by automatically renaming the entire /opt/cantata directory to /opt/cantata_<timestamp>, and create a new /opt/dialogic directory. However, it is still recommended to perform a backup of all the files explained above before attempting the upgrade.

Transfer / Copy System Software Files

Transfer via FTP the new software to the GCEMS server. Software files must be transferred in binary mode and the Username and Password for FTP are:

| |
|--------------------|
| |
| Username = excelsw |
| Password = excelsw |

Note: For installations with Redundant Hosts/GCEMS servers, copy the files below to both primary and secondary servers.

1. Transfer the following files to the /home/excelsw/ftpBuilds directory.

- IMG 10.5.x.xxx.bin
- IMGUserInterface_10.5.x.xxx
- img1010_ver105xxxx_id0101.bin
- img1004_ver105xxxx_id0106.bin

Note: Copy the IMG binaries to either the /home/excelsw/ftpBuilds directory or the location indicated in the dhcpd.conf file. The dhcpd.conf file is located in the /etc directory. If you open this file there is a line in it which states <filename "ftpBuilds/IMG1010_id0101.bin">. This is the directory path to the IMG software.

2. If using an SD Card to load system software, appropriate files must be transferred to the card. Files can be transferred to the SD card in one of two ways:
 - If IMG is using 10.5.0 or newer software, access to the SD card can be enabled in ClientView and the software can be transferred to and from the SD card using the ftp utility. Refer to the **1010-SD Card Remote Provisioning** or **IMG 1004-SD Card Remote Provisioning** topics in the [online documentation](#) for more information on remote access to the SD card.
 - The second way is to use an SD Card Reader and copy the files through use of the reader. Refer to the **IMG 1010 – Downloading System Software from SD Card** or **IMG 1004 - Downloading IMG System Software from SD card** topics from online documentation for more information on loading software using an SD card.

Installing GCEMS System Software Files

All GCEMS applications must be stopped before upgrading. If running a redundant GCEMS application, determine which server has the active GCEMS application and which server has the standby. Open the **IMG EMS** object in the ClientView application (Configuration -> IMG EMS). The **Connection State** field displays the status of the two GCEMS applications. Complete step 1 below on the standby GCEMS application once the active/standby status is determined. Repeat step 1 on the active server once the standby has been stopped.

Note: Up-revving the GCEMS Software and does not contain any specific service-affecting steps. Calls will continue to process on the IMG while the GCEMS software is being up-revved.

1. Shutdown the current GCEMS Applications.

- Close the ClientView GUI.
- Close the AdminView Application Terminal if an AdminView terminal is open.
- Double click on the StopGCEMS ICON to shutdown all GCEMS processes.

Note: If there isn't a StopGCEMS desktop ICON, the GCEMS application can be stopped by running StopGCEMS from the installs folder located in the `opt/dialogic/installs/IMG_10.5.x.xx/GateControlEMS/bin` directory. (`./StopGCEMS`)

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

```
[localuser@localhost]$ su
Password: excel12
```

3. Change the mode to executable for the following files. This is accomplished by performing the following commands:

```
# chmod +x IMG_10.5.x.xxx.bin          xxx = build number
# chmod +x IMGUserInterface_10.5.x.xxx.bin  xxx = build number
```

4. Install GCEMS software.

```
[root@localhost]# ./IMG_10.5.x.xxx.bin (xxx=build) (Follow prompts)
```

Follow the prompts. Refer to the **Starting GCEMS** topic in the online documentation which describes the installation process. The `IMG_10.5.x.xxx.bin` will be installed in the `/opt/dialogic/installs/IMG_10.5.x.xxx` directory. Once completed, you will be prompted to log out and then log back in. Do not log out yet, you will be prompted to log out later in installation process.

Note: For redundant GCEMS installs you must answer **yes** when prompted "**if this is a redundant system**".

5. Install the IMG User Interface file. IMGUserInterface_10.5.x.xxx.bin will be installed in the /opt/dialogic/installs/IMGUserInterface_10.5.x.xxx directory.

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

6. If using RADIUS then existing servers that are migrating to 10.5.3 and beyond must revise the dictionary file. Starting with version 10.5.3 the Radius dictionary file dictionary.dialogic has replaced dictionary.cantata.

- Copy the dictionary.dialogic file from the /opt/dialogic/common/radius directory to /usr/share/freeradius directory or to the radius server. If radius is running on more than one server repeat this for each radius server.
- Edit the dictionary file that resides in the /usr/share/freeradius directory and add the following line: \$INCLUDE dictionary.dialogic
- Re-start the Radius service

Refer to the **Configuring Free RADIUS using GCEMS as Radius Server** topic in the online documentation for additional details.

7. After installing the IMGUserInterface (ClientView) at the end of the previous step you will be prompted to log out. Log out as root user by entering the **exit** command.
8. For redundant GCEMS servers repeat steps 2 – 5 to upgrade the secondary server.

Note: A new license file will be required if upgrading from version 10.3.x:x to 10.5.x. Starting with 10.5.3 licensing is required for secure communications and SIP Signaling over TLS. When Transport Layer Security is used ensure that the license file includes SECURE COMMUNICATIONS.

Installing System Software (Create a symbolic link)

1. To load system software, the FTP server residing on the GCEMS host computer needs either a pathname to the specific file that is to be installed -or- a common link (img1010_id0101.bin) in the ftp server that points to the specific file. With redundant GCEMS servers if you are running dhcp/ftp on both servers the IMG binary will need to be copied to both servers and the link updated on both servers. The two methods below describe how to create a symbolic link.

Note: Creating a common/symbolic link will reduce upgrade time by eliminating the need to edit the /etc/dhcpd.conf file and restart the host FTP services. Create the symbolic link using one of the two methods explained below:

Method 1: (Create link manually)

1. In the GCEMS server, navigate to the /home/excelsw/ftpBuilds directory. In this folder will be a file labeled img1010_ver1053xxx_id0101.bin. (1053=10.5.3 software and xxx=build number of the software). Perform the following commands within this folder.

```
$ ln -sf img1010_ver1053123_id0101.bin img1010_id0101.bin
$ ln -sf img1004_ver1053123_id0106.bin img1004_id0106.bin
```

The command above will create a link connecting software 10.5.3 build 123 to the filename img1010_id0101.bin or img1004_id0106.bin.

2. To confirm the link has been created, enter the command

```
$ ls -lrt
```

3. The Response below will be displayed in the ftpBuilds list:

```
lrwxrwxrwx 1 root root 27 Jun 21 09:27 img1010_id0101.bin ->
img1010_ver1051123_id0101.bin
```

This verifies that the link created points to the correct .bin file.

Method 2: Use lnimg (link img) script

1. A time saving script has been written that will also create the symbolic link described above. Follow the procedure below to create the symbolic link using this tool.
2. If the lnimg script is not in the /home/excelsw/ftpBuilds folder create a link to it.

```
$ cd /home/excelsw/ftpBuilds
$ ln -sf /opt/dialogic/common/osconfig/lnimg lnimg
$ chmod +x lnimg
```

3. From the ftpBuilds directory, run the lnimg script. Script needs to be run as a root/superuser.

```
#./lnimg
```

4. Follow the instructions and enter the build number only. For example upgrading to 1053123 (1053 = 10.5.3 build 123).

A response Link Created --> img1010_ver1053123_id0101.bin
img1010_id0101.bin will be output.

5. Executing the **ls -lrt** command as described above will verify the link was created.

Re-Start IMG System Software

1. If changes were made to the dhcpd.conf file it will be necessary to restart the dhcpd service. The service can be restarted by root user only.

```
# /sbin/service dhcpd restart
```

2. If installing the IMG software from an SD card, insert the card into the SD slot on the IMG. See **Downloading IMG System Software from an SD Card** in the online documentation.
3. If a new license has been received, copy it to the stand alone GCEMS server or to both the primary and secondary GCEMS servers in the /opt/dialogic/common/license directory.
4. Restart GCEMS

- For a single GCEMS, refer to the **Start GateControlEMS** topic in the online documentation.
- For a redundant GCEMS system only, start the primary GCEMS now.
- For multi-node SS7 systems see the graceful upgrade procedure to upgrade 1 IMG at a time.

5. Restart ClientView. Refer to the **Starting ClientView** topic in the [online documentation](#).
6. Load the desired configuration file. Click the load button to open and commit the configuration file (.csa).

Note: At this point all IMG's will be reset.

7. Verify that all nodes return to online state.
8. Verify all spans that were in service prior to upgrade return to in-service state.
9. Verify calls are being processed to all trunk groups.
10. For redundant GCEMS servers now start the GCEMS service on the secondary server.

Post-Installation

File Clean-Up

Backup and remove all unused log, license and configuration files from the /opt/dialogic folders.