GQAM Software Version 1.0.6

Release Notes and Installation Instructions

Please Read

Important

Please read this entire guide. If this guide provides installation or operation instructions, give particular attention to all safety statements included in this guide.

Notices

Trademark Acknowledgments

Publication Disclaimer

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About This Guide

Introduction

This document provides the following information:

- Instructions for upgrading the Model D9479 Gigabit Quadrature Amplitude Modulation (GQAM) Modulator with GQAM software version 1.0.6
- A brief description of benefits the software provides
- Instructions for rolling back to earlier versions of GQAM software in the unlikely event that a site encounters problems after upgrading to GQAM software version 1.0.6

Purpose

This document enables system operators to perform the following tasks:

- Upgrade the Model D9479 GQAM Modulator with GQAM software version 1.0.6.
- Roll back to earlier versions of GQAM software in the unlikely event that a site encounters problems after upgrading the software.

Audience

This document is written for the following audiences:

- System administrators of the Digital Broadband Delivery System (DBDS)
- Operators of the Digital Network Control System (DNCS)
- Cisco's on-site and field service engineers who support sites that use Cisco or other resident applications

Scope

This document provides instructions for upgrading the Model D9479 GQAM Modulator with GQAM software version 1.0.6. It does not provide instructions for installing a GQAM modulator in your headend.

Note: For instructions on installing a GQAM modulator in your headend or for a complete description of the features that GQAM software version 1.0.6 provides the Model D9479 GQAM Modulator, refer to *Gigabit QAM Modulator Model D9479 Installation and Operation Guide.* For the part number for this document, see **Related Publications** later in this Preface.

Related Publications

You may find the following Cisco publications useful:

- *Digital Network Control System Online Help (PC) Version 3.2.0.3 for SR 2.2/3.2*, part number 4003403
- *Gigabit QAM Modulator Model D9479 Installation and Operation Guide,* part number 745431
- *Provisioning the Gigabit Ethernet Port IP Address on the Gigabit QAM Modulator Technical Bulletin*, part number 4002333
- *SR 2.2 and SR 3.2 Service Pack 2 Release Notes and Installation Instructions*, part number 4001158
- *System Release 2.2 Release Notes*, part number 4004065
- *System Release 3.2 Release Notes*, part number 4004066
- *Tearing Down Sessions Before Deleting a QAM or an MQAM Modulator Technical Bulletin*, part number 749641
- *Troubleshooting and Resetting QAMs and MQAMs With auditQAM Instruction Sheet,* part number 4005744

Document Version

This is the second release of this document.

Chapter 1
Introducing GQAM Software Version 1.0.6

Overview

Introduction

This chapter lists the requirements for upgrading the Model D9479 GQAM Modulator with GQAM software version 1.0.6. It also provides a brief overview of the benefits GQAM software version 1.0.6 provides.

In This Chapter

This chapter contains the following topics.

About GQAM Software Version 1.0.6

Introduction

GQAM software version 1.0.6 is designed to be installed on the Model D9479 GQAM Modulator. After the software is installed, GQAM 1.0.6 provides the core functionality of *four* Model D9479 Multiple Quadrature Amplitude Modulation (MQAM) modulators, but it uses only *one* unit of rack space.

Because of its compact size and robust signal-processing capabilities, the GQAM modulator significantly reduces costs per stream and is ideal for mass deployment of interactive broadcast services, such as video-on-demand (VOD) or *anything*-on-demand (xOD).

Note: For a description of the features that a GQAM modulator provides, refer to *Gigabit QAM Modulator Model D9479 Installation and Operation Guide*. For the part number of this guide, see **Related Publications** earlier in this document.

System Release Configuration

GQAM software version 1.0.6 can be installed on a DBDS that is running the following software release versions:

- System Release (SR) 2.2 and later, or SR 3.2 and later, as well as any Service Packs associated with these system releases
- DNCS Application version 3.0.1 and later

Note: Although GQAM software version 1.0.6 can be installed on a DBDS that is running System Release SR 2.1.1 and later, for best results, we recommend that you use GQAM software version 1.0.6 with SR 2.2 and later or SR 3.2 and later, as well as any Service Packs associated with these system releases.

For a complete configuration listing, please contact Cisco Services.

Software

GQAM software version 1.0.6 includes the following codes:

- GQAM Host Application code 1.0.9
- GQAM Host Boot code 1.0.1

Hardware

GQAM software version 1.0.6 supports only the Model D9479 GQAM Modulator.

Features and Benefits

Overview

GQAM 1.0.6 provides the core functionality of *four* Model D9479 MQAM modulators, but it uses only *one* unit of rack space. Because of its compact size and robust signal-processing capabilities, the GQAM modulator is an exceptional product for mass deployment of interactive broadcast services, such as VOD and xOD.

Changes to RF Output Level Immediately Implemented, No Need to Press Enter Key

Unlike QAM and MQAM modulators, GQAM modulators apply any changes you make to the RF output level immediately. You do not need to press the Enter key to have your changes take effect.

For step-by-step instructions on adjusting the RF output level, refer to **Adjust the RF Output Level of a Selected CH Carrier** in *Gigabit QAM Modulator Model D9479 Installation and Operation Guide*. For the part number of this guide, see **Related Publications** earlier in this document.

Want to Learn More About GQAM Features?

For a description of the features that a GQAM modulator provides, refer to *Gigabit QAM Modulator Model D9479 Installation and Operation Guide*. In addition to a list of features, this guide also provides instructions on installing, provisioning, operating, and troubleshooting a GQAM modulator. For the part number of this guide, see **Related Publications** earlier in this document.

Chapter 2
Upgrading the GQAM Modulator With GQAM Software Version 1.0.6

Overview

Introduction

This chapter describes how to upgrade the Model D9479 GQAM Modulator with GQAM software version 1.0.6.

In This Chapter

This chapter contains the following topics.

Upgrade Process Overview

Introduction

This section provides a brief overview of the tasks you must complete to upgrade the Model D9479 GQAM Modulator with GQAM software version 1.0.6.

Before You Begin

Before you upgrade to GQAM 1.0.6, be sure that your system meets the configuration specified in **About GQAM Software Version 1.0.6** in Chapter 1.

If you will not download GQAM 1.0.6 from a File Transfer Protocol (FTP) site, make sure that you have obtained the CD **GQAM V1.0.6**, part number 4003932.

Time To Complete

When upgrading GQAM modulators with GQAM software version 1.0.6, consider the following tasks and the amount of time required for each:

- Completing pre-upgrade tasks takes from 30 to 45 minutes.

  Note: If you are upgrading from an FTP site, allow an additional 10 to 15 minutes to download GQAM software from the FTP site. The speed of the connection and the size of the files determine the download time.

- Downloading GQAM software version 1.0.6 to a GQAM modulator takes about 5 minutes for each GQAM modulator.
- Verifying the functionality of a GQAM modulator depends on the number of sessions that the modulator carries and typically takes about 5 to 10 minutes.

Note: It is not necessary to build sessions on the GQAM modulators that you upgrade. The sessions are rebuilt automatically after GQAM version 1.0.6 is downloaded to a GQAM modulator.

Performance Impact

When GQAM modulators are reset (rebooted) during the upgrade, the services they carry are interrupted. DHCTs will show a frozen picture or black screen until the upgrade is complete and the DNCS has restarted all of the active sessions on the GQAM modulator.

Process Overview

This page provides an overview of the process required to upgrade to GQAM software version 1.0.6.

> ⚠ **CAUTION:**
>
> **If upgrading more than one GQAM modulator, download GQAM software version 1.0.6 to one modulator and verify its functionality before attempting to download GQAM software to another modulator. Verifying the functionality of one GQAM modulator at a time enables you to better isolate any failures that may occur and enables you to minimize service interruptions.**

Pre-Upgrade Tasks

1. Verify the current GQAM software version running on your DNCS and GQAM modulators.
2. Make a copy of the current GQAM software version. In the unlikely event of a failure, you can use this backup copy to restore your system to the previous version of GQAM software.
3. Install GQAM software version 1.0.6 onto the DNCS.
4. If you are upgrading more than one GQAM modulator, establish an order for upgrading the modulators.
5. If the GQAM modulators you are upgrading will carry existing broadcast sessions, determine the sessions that are currently running on the modulators you plan to upgrade so that you can verify these sessions are rebuilt when the new software is downloaded to the modulators.

   Note: If your GQAM modulator will carry VOD sessions, documenting current sessions is not necessary. VOD sessions are set up as needed when a DHCT requests a session.

Upgrade Tasks

1. **CAUTION:**

   All active sessions on the GQAM modulator will be interrupted when the modulator is reset. DHCTs downstream of the modulator will lose their ability to display services until sessions are reestablished.

   Upgrade GQAM modulators with GQAM software version 1.0.6 by resetting the modulator from the DNCS or by cycling power to the modulator. Resetting the modulator causes it to reboot, update the software, and re-establish existing sessions.

   Note: If resetting the modulator does not cause it to reboot and load GQAM software version 1.0.6, turn power to the modulator off and on again. For assistance cycling power to the modulator, refer to *Gigabit QAM Modulator Model D9479 Installation and Operation Guide*. For the part number of this guide, see **Related Publications** earlier in document.

2. Verify that the GQAM modulator is functioning properly following the upgrade.

3. To upgrade another GQAM modulator, repeat steps 1 and 2.

Verify the Current GQAM Software Version on the DNCS

Introduction

Before attempting to upgrade to GQAM software version 1.0.6, verify the current GQAM software version installed on your DNCS. This section describes how to verify the GQAM software version installed on your DNCS.

Verifying the Current GQAM Software Version on the DNCS

Complete these steps to verify the current GQAM software version installed on your DNCS.

1. Open an xterm window on the DNCS.
2. Log on as the **dncs** user.
3. Type **pkginfo -l SAIgqam** and then press **Enter**.

   Note: The **l** used in "-l" is the lowercase of the letter L.

   Result: Information about the software package appears in the xterm window. The **version** line indicates the current version of GQAM software installed on the DNCS.

4. Does the information indicate that GQAM software version 1.0.6 has been installed?
   - If **yes**, you do not need to install GQAM software version 1.0.6 onto the DNCS, and may not need to upgrade GQAM modulators with GQAM 1.0.6. Go to **Verify the Current Software on GQAM Modulators**, next in this chapter.
   - If **no**, before installing GQAM 1.0.6 on the DNCS, backup the GQAM software currently installed on your DNCS. Go to **Back Up the Current GQAM Software Version**, later in this chapter.

Verify the Current Software on GQAM Modulators

Introduction

Before attempting to upgrade GQAM modulators with GQAM 1.0.6 (Host Application code 1.0.9 and Host Boot code 1.0.1), verify the current GQAM software version currently installed on your GQAM modulators.

Verifying the Current Software on GQAM Modulators

Complete these steps to verify the current version of GQAM software installed on the GQAM modulators in your system.

1. On the front panel of the GQAM modulator, press the **OPTIONS** button 10 times.

   Result: The **Host Software Revision** screen appears in the display and lists the current GQAM application code and boot code, as shown in the following example.

   ```
   HOST SW: App:          Boot
   1.0.9                  1.0.1
   ```

2. Does the HOST SW: App: field display 1.0.9 and the Boot field display 1.0.1?
   - If **yes**, GQAM software version 1.0.6 is already installed on this modulator. You do not need to upgrade this modulator with GQAM software version 1.0.6.
   - If **no**, GQAM software version 1.0.6 is not installed on this modulator.
3. Press **Enter** to return to the default front panel message.
4. Does your system contain other GQAM modulators?
   - If **yes**, repeat steps 1 to 3 to verify the version of software that is installed on each modulator.
   - If **no**, go to step 5.
5. Did you determine that one or more GQAM modulators do not have GQAM software version 1.0.6 installed?
   - If **yes**, you are ready to download software to the appropriate GQAM modulators. For assistance downloading to modulators that carry xOD or VOD sessions, see **Download GQAM Software Version 1.0.6 to GQAM Modulators That Carry xOD or VOD Sessions**, later in this chapter.
   - If **no**, you do not need to upgrade GQAM modulators with GQAM 1.0.6 and can ignore the remainder of these instructions.

Back Up the Current GQAM Software Version

Introduction

Before downloading GQAM software version 1.0.6 to a GQAM modulator, copy the configuration file of the version of GQAM software currently installed. In the unlikely event of a failure, you can use the copy to restore the current version of GQAM software to your system. This section provides instructions for copying the configuration file of your current GQAM software version.

> ⚠ **CAUTION:**
>
> **Do not proceed with downloading GQAM software version 1.0.6 until you have created a backup of the current configuration file of the GQAM software installed on your system. Otherwise, you will be unable to restore the previous version of GQAM software to your system in the unlikely event of a failure.**
>
> **Restore the previous version of GQAM software to your system only when recommended by Cisco Services.**

Backing Up the Current GQAM Software Version

Follow these steps to back up the current version of GQAM software on your system.

1. Open an xterm window on the DNCS.

   Result: The system displays a dncs user prompt .

2. Type **su –** and press **Enter.**

   Result: The system prompts you to enter the password for the root user.

3. Type the password for the root user and press **Enter**.

   Result: The system logs you in as the root user and displays a root user prompt.

4. Type **cd /tftpboot** and then press **Enter**.

   Result: The root prompt appears.

5. Type **pwd** and then press **Enter**.

   Result: The /tftpboot directory name appears. This name indicates you are in the correct directory.

6. Type **cp –p gqam.config gqam.bakxxx** and then press **Enter.**

   Result: A copy of the configuration file gqam.config, which contains GQAM configuration settings, is saved to a configuration file named gqam.bakxxx.

   Note: In this example, *xxx* represents your current GQAM software version. For example, if your current GQAM software version is 1.0.1, name the file **gqam.bak101.**

Back Up the Current GQAM Software Version, Continued

7. Type **ls -l** and then press **Enter**.

   Note: The **l** used in "ls" and "-l" is the lowercase of the letter L, not the number 1.

   Result: A list of files appears. The file gqam.bakxxx appears in the list.

8. Type **exit** and then press **Enter** to exit from the root user.

9. Type **exit** and press **Enter** to close the xterm window.

10. Now that you have made a copy of the current version of GQAM software installed on your DNCS, you are ready to install GQAM software version 1.0.6 on your DNCS. Go to **Install GQAM Software Version 1.0.6 Onto the DNCS**, next in this chapter.

Install GQAM Software Version 1.0.6 Onto the DNCS

Introduction

This section describes how to install GQAM software version 1.0.6 onto the DNCS using either of the following methods:

- From the CD **GQAM V1.0.6**, part number 4003932
- From Cisco's FTP server

Installing the GQAM Software From a CD

Follow these steps to install GQAM software version 1.0.6 from a CD.

1. Open an xterm window on the DNCS.

   Result: The system displays a dncs user prompt .

2. Type **su –** and press **Enter.**

   Result: The system prompts you to enter the password for the root user.

3. Type the password for the root user and press **Enter**.

   Result: The system logs you in as the root user and displays a root user prompt.

4. Insert the CD **GQAM V1.0.6** into the CD-ROM drive of the DNCS.

5. Wait approximately 30 seconds for the system to mount the **CD** before continuing to step 6.

   Note: Shortly after inserting the CD, a File Manager window will display. When it does, it may block the xterm window. If this occurs, click the xterm window to bring the xterm window to the forefront.

6. From the xterm window, type **df –n** and then press **Enter** to confirm that the system mounted the CD successfully.

   Result: A list of the mounted and unmounted file systems appears.

   Note: The presence of **/cdrom/dvsg** in the list confirms that the system correctly mounted the CD.

7. Type **cd /cdrom/dvsg** and press **Enter.**

   Result: The /cdrom/dvsg directory becomes the working directory.

8. Type **./install_pkg** and then press **Enter.**

   Important: Be sure to type a period in front of /install_pkg.

   Results:

   - The system lists the packages that will be installed.
   - A confirmation message appears asking you to confirm that you want to proceed with the installation.

9. Type **y** and press **Enter** to start the installation.

   Result: When the installation is complete, the system displays a message stating that the installation was successful and a prompt for the root user appears.

   Note: The installation should take about a minute.

10. Was the installation successful?

    - If **yes**, type **exit** and press **Enter** to log out as root user. Then go to step 11.
    - If **no**, contact Cisco Services.

11. Type **exit** and press **Enter** to close the xterm window.

    Result: The xterm window closes so that the File Manager window is now visible.

12. From the File Manager window, click **File** and select **Eject**.

    Result: The CD ejects and the File Manager window closes.

13. Remove the CD from the CD drive and store it in a secure location. Go to **Establish a Download Sequence**, later in this chapter.

Installing the GQAM Software From Cisco's FTP Server

In this section, you will create a directory on the DNCS into which you will load the GQAM software version 1.0.6 file. Then, you will use the FTP file transfer utility to obtain the file from Cisco's FTP server and load it into the newly created directory. Next, you will decompress and extract the compressed file. Finally, you will install GQAM software version 1.0.6 from the file you created at the beginning of this procedure.

Creating the Directory

Follow these steps to create a directory on the DNCS into which you will load the file containing GQAM software version 1.0.6.

1. Open an xterm window on the DNCS.

   Result: The system displays a dncs user prompt.

2. Type **su –** and press **Enter**.

   Result: The system prompts you to enter the password for the root user.

3. Type the password for the root user and press **Enter.**

   Result: The system logs you in as the root user and displays a root user prompt.

4. Type **cd /export/home/dncs** and then press **Enter**.

   Result: The /export/home/dncs directory becomes the working directory.

5. Type **mkdir gqam106** and then press **Enter**.

   Result: The system creates a subdirectory called gqam106 in the /export/home/dncs directory.

6. Type **cd gqam106** and then press **Enter**.

   Result: The /export/home/dncs/gqam106 directory becomes the working directory.

7. Go to **Obtaining the GQAM Software File**, next in this procedure.

Obtaining the GQAM Software File

Follow these general guidelines in order to obtain the file containing GQAM software version 1.0.6 from Cisco's FTP server.

1. Log on to Cisco's FTP server.

   Notes:

   - The address of the server is **ftp.sciatl.com** or **172.18.45.203**.
   - The username is **anonymous**.
   - The password is the email address of the person logging in.

2. Choose one of the following options to navigate to the directory in which the file is located:
   - If you are outside of Cisco's firewall, type **cd /pub/scicare/RELEASED/GQAM** to navigate to the correct directory**.**
   - If you are inside of Cisco's firewall, type **cd /external_pub/scicare/RELEASED/GQAM** to navigate to the correct directory**.**
3. Type **bin** and then press **Enter**.

   Result: The system sets the ftp transfer mode to binary.
4. Type **hash** and then press **Enter**.

   Result: The system configures itself to display hash marks that show file-transfer progress.
5. Type **get gqam106.tar.Z** and press **Enter**.

   Result: The system begins copying files into the /export/home/dncs/gqam106 directory on your DNCS.
6. Type **bye** and press **Enter**.

   Result: The system logs you out of Cisco's FTP server.
7. Go to **Decompressing and Extracting the File**, next in this procedure.

Decompressing and Extracting the File

In this procedure, you will use the gzip and tar file-processing utilities to decompress and extract the file you just loaded onto your system.

1. Type **gzip -d gqam106.tar.Z** and then press **Enter**.

   Result: The system decompresses the GQAM software file.
2. Type **tar xvf gqam106.tar** and then press **Enter**.

   Result: The system extracts the individual files.
3. Go to **Installing GQAM 1.0.6 on the DNCS**, next in this procedure.

Installing GQAM 1.0.6 on the DNCS

Follow these instructions to install GQAM software version 1.0.6 from the directory you created at the beginning of this procedure.

1. Type **pwd** and press **Enter** to verify that the directory containing GQAM software version 1.0.6 is the working directory.

   Result: The system displays the current working directory.

2. Did the system display **/export/home/dncs/gqam106** as the current working directory?
   - If **yes**, go to step 3.
   - If **no**, type **cd /export/home/dncs/gqam106** and press **Enter**.

3. Type **./install_pkg** and then press **Enter.**

   Important: Be sure to type a period in front of /install_pkg.

   Results:
   - The system lists the packages that will be installed.
   - A confirmation message appears asking you to confirm that you want to proceed with the installation.

4. Type **y** and press **Enter** to start the installation.

   Result: When the installation is complete, the system displays a message stating that the installation was successful and a prompt for the root user appears.

   Note: The installation should take about a minute.

5. Was the installation successful?
   - If **yes**, type **exit** and press **Enter** to log out as root user. Then go to step 6.
   - If **no**, contact Cisco Services.

6. Type **exit** and press **Enter** to close the xterm window. You are ready to determine a sequence for downloading GQAM software version 1.0.6 to the GQAM modulators in your system. Go to **Establish a Download Sequence**, next in this chapter.

   Result: The xterm window closes so that the File Manager window is now visible.

Establish a Download Sequence

Introduction

This section provides guidance for establishing a sequence to follow when downloading GQAM software version 1.0.6 onto more than one GQAM modulator.

Note: For more information about the DNCS and operating the DNCS software, refer to the *DNCS Online Help* for your system.

Establishing a Sequence for Downloading GQAM Software Version 1.0.6 Onto Each GQAM Modulator

CAUTION:

If downloading GQAM software version 1.0.6 to more than one GQAM modulator, download the software to one modulator and verify its functionality before attempting to download software to another modulator. Verifying the functionality of one modulator at a time enables you to better isolate any failures that may occur.

The order in which you download GQAM software onto GQAM modulators allows you to verify that the download is successful before proceeding. Follow these guidelines to establish an order in which to download GQAM software version 1.0.6 to GQAM modulators. The method that you follow depends on the type of sessions that the GQAM modulator carries (xOD/VOD sessions or broadcast sessions).

xOD/VOD Sessions

When upgrading GQAM modulators that carry xOD or VOD sessions, we suggest that you upgrade all modulators in one hub and verify the functionality of those modulators before upgrading modulators in another hub.

Use the following guidelines to determine the order in which to upgrade modulators within a hub:

- If any GQAM modulators act as spares, start by downloading GQAM software version 1.0.6 on these modulators.
- If your system does not have a spare GQAM modulator, download GQAM software version 1.0.6 on the modulator carrying the fewest number of sessions.
- Continue downloading the software to modulators by working your way up to the modulator carrying the most sessions.

Broadcast Sessions

When upgrading GQAM modulators that carry broadcast sessions, upgrade the modulators in one hub, one modulator at a time, and verify its functionality before proceeding to the next modulator in the hub.

Use the following guidelines to determine the order in which to upgrade modulators:

- If any GQAM modulators act as spares, start by downloading GQAM software version 1.0.6 on these modulators.
- If your system does not have a spare GQAM modulator, download GQAM software version 1.0.6 on the modulator carrying sessions that are least viewed.
- Continue downloading the software to modulators in this hub by working your way up to the modulator carrying sessions that are most frequently viewed.

What's Next?

After you have established an order for downloading GQAM software version 1.0.6 onto the GQAM modulators in your system, the next step depends on the type of sessions your GQAM modulators carry (xOD/VOD sessions or broadcast sessions).

xOD/VOD Sessions

If all of your GQAM modulators carry xOD or VOD sessions, you are ready to begin downloading GQAM software version 1.0.6 to GQAM modulators. Go to **Download GQAM Software Version 1.0.6 to GQAM Modulators That Carry xOD or VOD Sessions**, later in this chapter.

Note: Because xOD and VOD sessions are not pre-configured, but are set up as needed when a subscriber requests them, generating a list of existing sessions is not necessary.

Broadcast Sessions

If you have GQAM modulators that carry broadcast sessions, first generate a list of the existing sessions that each modulator currently carries. Generating this list helps you to verify that these sessions are successfully rebuilt after GQAM 1.0.6 is downloaded to the modulator. Go to **Determine Existing Broadcast Sessions**, next in this chapter.

Determine Existing Broadcast Sessions

Introduction

By using Cisco's Report Writer, you can generate a report that lists the existing broadcast sessions in your system along with the channels and sources in your system. This section describes how to generate, save, and print the Channels, Sources & Sessions Report, which lists this information.

Note: If your GQAM modulator will carry VOD sessions, you do not need to generate the Channels, Sources & Sessions Report. VOD sessions are set up as needed when a subscriber requests a session.

Description

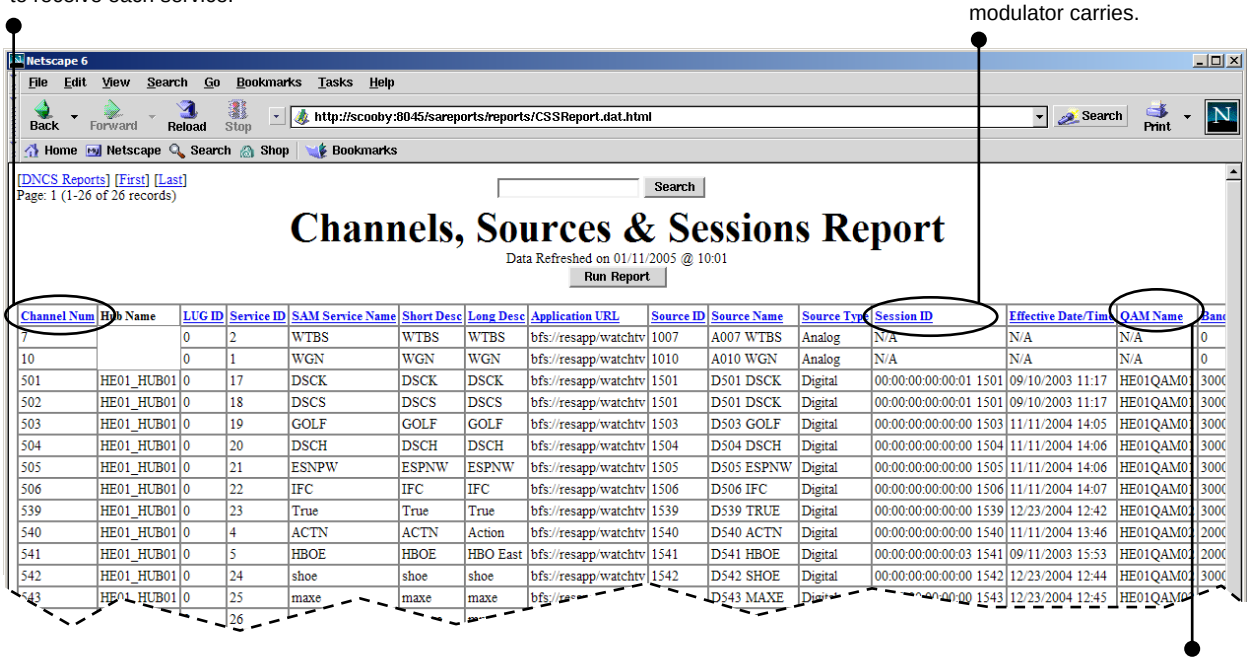
The Channels, Sources & Sessions Report lists each *display channel* (channel number) in the system. It also displays information about the *carriage* of each channel (how the channel is transmitted on the DBDS), starting from each source in your system and ending with each GQAM modulator in your system.

Channels, Sources & Sessions Report Information

The following shows an example of the Channels, Sources & Sessions Report and highlights information helpful in verifying a successful upgrade.

The **Channel Num** column lists the display channels in your system. Display channels are those to which you can tune the DHCT to receive each service.

The **Session ID** column lists the sessions that a GQAM modulator carries.



Channel Num	Hub Name	LUG ID	Service ID	SAM Service Name	Short Desc	Long Desc	Application URL	Source ID	Source Name	Source Type	Session ID	Effective Date/Time	QAM Name	Band
7		0	2	WTBS	WTBS	WTBS	bfs://resapp/watchtv	1007	A007 WTBS	Analog	N/A	N/A	N/A	0
10		0	1	WGN	WGN	WGN	bfs://resapp/watchtv	1010	A010 WGN	Analog	N/A	N/A	N/A	0
501	HE01_HUB01	0	17	DSCK	DSCK	DSCK	bfs://resapp/watchtv	1501	D501 DSCK	Digital	00:00:00:00:00:01 1501	09/10/2003 11:17	HE01QAM01	3000
502	HE01_HUB01	0	18	DSCS	DSCS	DSCS	bfs://resapp/watchtv	1501	D501 DSCK	Digital	00:00:00:00:00:01 1501	09/10/2003 11:17	HE01QAM01	3000
503	HE01_HUB01	0	19	GOLF	GOLF	GOLF	bfs://resapp/watchtv	1503	D503 GOLF	Digital	00:00:00:00:00:00 1503	11/11/2004 14:05	HE01QAM01	3000
504	HE01_HUB01	0	20	DSCH	DSCH	DSCH	bfs://resapp/watchtv	1504	D504 DSCH	Digital	00:00:00:00:00:00 1504	11/11/2004 14:06	HE01QAM01	3000
505	HE01_HUB01	0	21	ESNPW	ESPNW	ESPNW	bfs://resapp/watchtv	1505	D505 ESPNW	Digital	00:00:00:00:00:00 1505	11/11/2004 14:06	HE01QAM01	3000
506	HE01_HUB01	0	22	IFC	IFC	IFC	bfs://resapp/watchtv	1506	D506 IFC	Digital	00:00:00:00:00:00 1506	11/11/2004 14:07	HE01QAM01	3000
539	HE01_HUB01	0	23	True	True	True	bfs://resapp/watchtv	1539	D539 TRUE	Digital	00:00:00:00:00:00 1539	12/23/2004 12:42	HE01QAM02	3000
540	HE01_HUB01	0	4	ACTN	ACTN	Action	bfs://resapp/watchtv	1540	D540 ACTN	Digital	00:00:00:00:00:00 1540	11/11/2004 13:46	HE01QAM02	2000
541	HE01_HUB01	0	5	HBOE	HBOE	HBO East	bfs://resapp/watchtv	1541	D541 HBOE	Digital	00:00:00:00:00:03 1541	09/11/2003 15:53	HE01QAM02	2000
542	HE01_HUB01	0	24	shoe	shoe	shoe	bfs://resapp/watchtv	1542	D542 SHOE	Digital	00:00:00:00:00:00 1542	12/23/2004 12:44	HE01QAM02	3000
543	HE01_HUB01	0	25	maxe	maxe	maxe	bfs://		D543 MAXE	Digital	00:00:00:00:00:00 1543	12/23/2004 12:45	HE01QAM0	
			26											

The **QAM Name** column lists the name of each QAM modulator, uniquely identifying each QAM modulator in the system.

Generating the Channels, Sources & Sessions Report

Follow these steps to generate a Channels, Sources & Sessions Report.

> ⚠ **CAUTION:**
>
> **Before running Report Writer, you must exit all instances of Netscape associated with your UNIX user ID. When you try to run Report Writer with more than one instance of Netscape associated with your UNIX user ID, a message appears on the screen stating that Netscape has "detected a lock file." Do not continue. If you attempt to continue, Report Writer may exhibit unpredictable behavior.**

1. On the DNCS Administrative Console, click the **Utilities** tab.

   Result: The Utilities tab displays.

2. Click **Reports.**

   Result: A Web browser opens and displays the DNCS Web Server welcome message.

3. Click **DNCS Report Manager**.

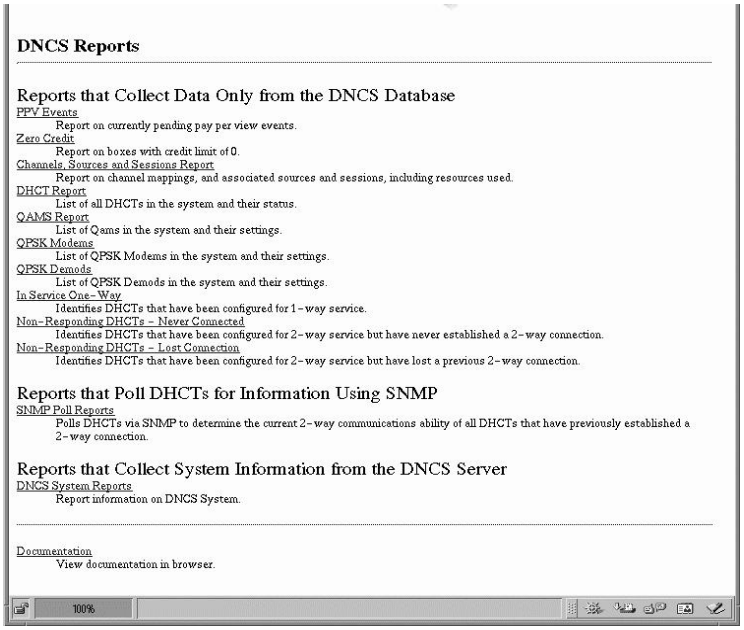
   Result: A prompt for the user name and password appear for the DNCS server where Cisco's Report Writer software is located.

4. Type your user name and password and then click **OK**.

Notes:

- The <hostname> represents the host name of the DNCS server where Cisco's Report Writer software is located.
- You can enter the host name or the IP address of the server.
- The default user name is **sareports** and the default password is **report.**

Result: The Web browser displays the following page.



DNCS Reports

Reports that Collect Data Only from the DNCS Database

PPV Events
Report on currently pending pay per view events.

Zero Credit
Report on boxes with credit limit of 0.

Channels, Sources and Sessions Report
Report on channel mappings, and associated sources and sessions, including resources used.

DHCT Report
List of all DHCTs in the system and their status.

QAMS Report
List of Qams in the system and their settings.

QPSK Modems
List of QPSK Modems in the system and their settings.

QPSK Demods
List of QPSK Demods in the system and their settings.

In Service One-Way
Identifies DHCTs that have been configured for 1-way service.

Non-Responding DHCTs - Never Connected
Identifies DHCTs that have been configured for 2-way service but have never established a 2-way connection.

Non-Responding DHCTs - Lost Connection
Identifies DHCTs that have been configured for 2-way service but have lost a previous 2-way connection.

Reports that Poll DHCTs for Information Using SNMP

SNMP Poll Reports
Polls DHCTs via SNMP to determine the current 2-way communications ability of all DHCTs that have previously established a 2-way connection.

Reports that Collect System Information from the DNCS Server

DNCS System Reports
Report information on DNCS System.

Documentation
View documentation in browser.

100%

5. Under **Reports that Collect Data Only from the DNCS Database**, click the **Channels, Sources and Sessions Report** link.

   Result: The following page opens.

[DNCS Reports] [First] [Next][Last]
Page: 1 (1-500 of 2396 records)

Search

Choose a page: Select

Channels, Sources & Sessions Report

Data Refreshed on 06/10/2004 @ 16:32

Run Report

Channel Num	Hub Name	LUG ID	Service ID	SAM Service Name	Short Desc	Long Desc	Application URL
8		0	710	WGTV	WGTV	WGTV	bfs://resapp/watchtv
12		0	754	WPBA_ANALOG	WPBA	WPBA	bfs://resapp/watchtv
9	Hub_1_HE1	0	713	WUPA	WUPA	WUPA	bfs://resapp/watchtv
10	Hub_1_HE1	0	712	WGN	WGN	WGN CHICAGO	bfs://resapp/watchtv
11	Hub_1_HE1	0	769	WPXA_ANALOG	WPXA	WPXA	bfs://resapp/watchtv
9	Hub_2_HE2	0	713	WUPA	WUPA	WUPA	bfs://resapp/watchtv
10	Hub_2_HE2	0	712	WGN	WGN	WGN CHICAGO	bfs://resapp/watchtv
11	Hub_2_HE2	0	769	WPXA_ANALOG	WPXA	WPXA	bfs://resapp/watchtv
501	Hub_11_HE1	0	897	SHEXE	SHEXE	SHOW Extreme	bfs://resapp/watchtv
502	Hub_11_HE1	0	898	STZE	STZE	Starz East	bfs://resapp/watchtv
503	Hub_11_HE1	0	901	ENCE	ENCE	ENCE	bfs://resapp/watchtv
513	Hub_11_HE1	0	564	HBOPW	HBOPW	HBO PLUS WEST	bfs://resapp/watchtv
515	Hub_11_HE1	0	601	SHO2W	SHO2W	Showtime 2 West	bfs://resapp/watchtv
516	Hub_11_HE1	0	602	TMCW	TMCW	The Movie Channel West	bfs://resapp/watchtv
517	Hub_11_HE1	0	603	STZ2W	STZ2W	Starz 2 West	bfs://resapp/watchtv
527	Hub_11_HE1	0	558	ZDTV	ZDTV	ZDTV	bfs://resapp/watchtv
537	Hub_11_HE1	0	900	ACTE	ACTE	ACTION East	bfs://resapp/watchtv
538	Hub_11_HE1	0	565	HBOE	HBOE	HBO EAST	bfs://resapp/watchtv

6. To generate the report click **Run Report**.

   Results:

   - The **Running** message displays to let you know that the system is generating the report.
   - When the report has been generated, the **Click on button below to display report data** message displays.

7. Click **Display Data.**

   Result: The Channels, Sources & Sessions Report page opens.

8. Scroll to the right until the **QAM Name** column appears. Then click the **QAM Name**.

   Result: The system begins re-generating the report so that the session list is sorted according to each QAM, MQAM, or GQAM modulator in your system.

Source ID	Source Name	Source Type	Session ID	Effective Date/Time	QAM Name	Bandwidth	MPEG Program Number	Content Origination
1008	A008 WGTV	Analog	N/A	N/A	N/A	0	N/A	N/A
1012	A012 WPBA	Analog	N/A	N/A	N/A	0	N/A	N/A
1009	A009 WUPA	Analog	N/A	N/A	N/A	0	N/A	N/A
1010	A010 WGN	Analog	N/A	N/A	N/A	0	N/A	N/A
1011	A011 WPXA	Analog	N/A	N/A	N/A	0	N/A	N/A
1009	A009 WUPA	Analog	N/A	N/A	N/A	0	N/A	N/A
1010	A010 WGN	Analog	N/A	N/A	N/A	0	N/A	N/A
1011	A011 WPXA	Analog	N/A	N/A	N/A	0	N/A	N/A
1501	D501 DSCK	Digital	00:00:00:00:00:02 1501	01/18/2001 13:05	QAM2x1	2000000	50	MPEG
1502	D502 DSCS	Digital	00:00:00:00:00:02 1502	01/19/2001 12:22	QAM2x1	2000000	48	MPEG
1503	D503 GOLF	Digital	00:00:00:00:00:02 1503	01/19/2001 16:29	QAM2x1	2000000	47	MPEG
1513	D513 HBOPW	Digital	00:00:00:00:00:02 1513	01/20/2001 10:19	QAM2x1	2000000	14	MPEG
1515	D515 SHO2W	Digital	00:00:00:00:00:02 1515	02/06/2001 15:09	QAM2x1	2000000	16	MPEG
1516	D516 TMCW	Digital	00:00:00:00:00:02 1516	02/06/2001 16:13	QAM2x1	2000000	17	MPEG
1517	D517 STZ2W	Digital	00:00:00:00:00:02 1517	02/06/2001 16:20	QAM2x1	2000000	18	MPEG
1527	D527 ZDTV	Digital	00:00:00:00:00:02 1527	01/19/2001 12:55	QAM2x1	2000000	29	MPEG
1537	D537 ACTN	Digital	00:00:00:00:00:02 1537	02/06/2001 10:09	QAM2x1	2000000	40	MPEG
1538	D538 HBOE	Digital	00:00:00:00:00:02 1538	01/20/2001 10:31	QAM2x1	2000000	41	MPEG

9. When the **Data Refreshed** message displays, click **Display Data.**

   Result: The Channels, Sources & Sessions Report page displays again with the session list sorted according to each QAM, MQAM, or GQAM modulator in your system

10. Save the report for later use. Go to **Saving the Channels, Sources & Sessions Report,** next in this section.

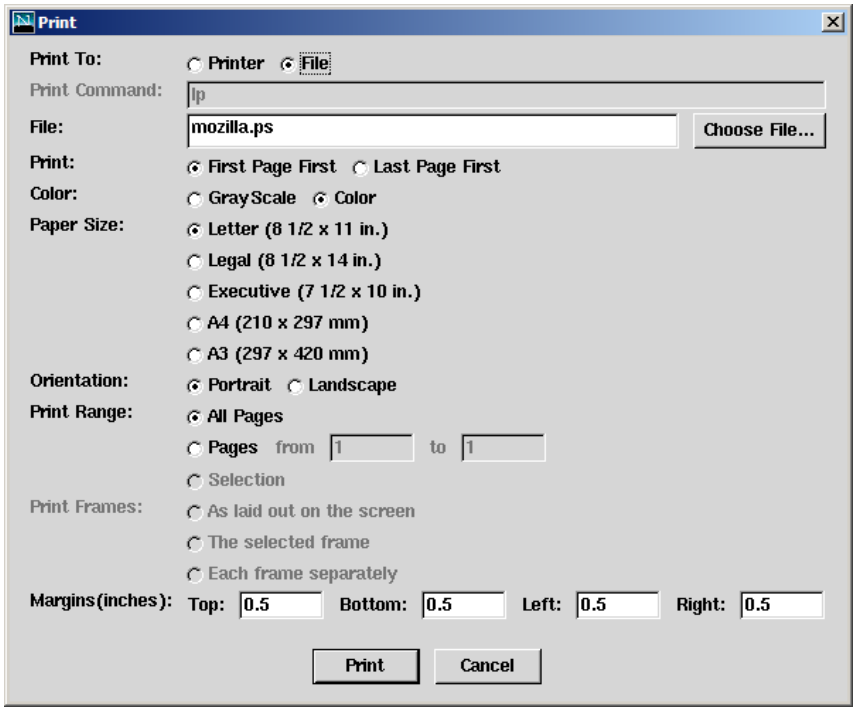
Saving the Channels, Sources & Sessions Report

Follow these steps to save the Channels, Sources & Sessions Report.

Note: You must save the Channels, Sources & Sessions Report to your hard drive.

1. From your Web browser window click **File**, and then click **Print.**

   Result: The Print page opens.

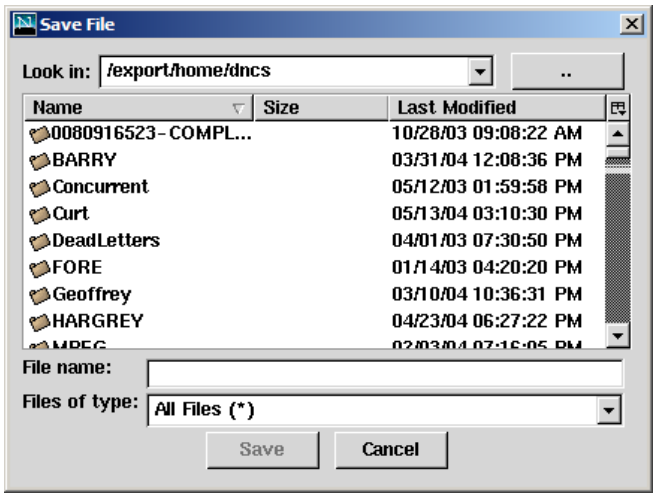


2. From the Print To section of the Print window, select the **File** option.

   Result: The **File** option is highlighted.

3. Click **Choose File**.

   Result: The Save File window opens.

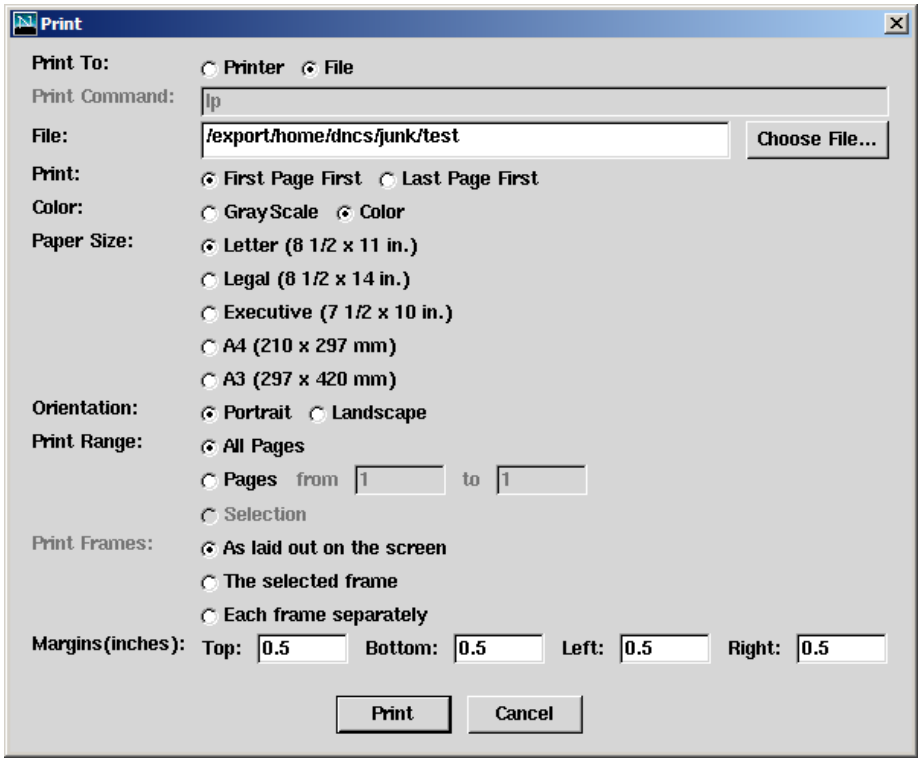


4. Choose one of the following methods to navigate to the directory in which you want to save the file:
   - Double-click the .. (double-dot) symbol in the Directories panel to navigate to a higher-level directory.
   - Double-click the directory name to navigate to a subdirectory.

   Note: You must save the Channels, Sources & Sessions Report to your hard drive.

5. Click in the **File Name** field and type a name for the file. Then click **Save**.

   Result: The Save File window closes to show the Print window, which updates the File field to include the file you named in step 4.



6. Print a copy of this report for later use in verifying a successful upgrade. Go to **Printing the Channels, Sources & Sessions Report,** next in this section.

Printing the Channels, Sources & Sessions Report

Important: To print the report from the DNCS, you must have a printer configured for the DNCS.

Follow these steps to print the Channels, Sources & Sessions Report.

1. In the Print To section of the window, click the **Printer** option.

   Result: The **Printer** option is highlighted.

2. Click in the **Print Command** field and type the correct printer name. Then click **Print.**

   Result:

   - The Print window closes to show the Channels, Sources & Sessions Report page.
   - The report is sent to your printer.

3. Click **File** and choose **Close** or **Quit**.

   Result: The Channels, Sources & Sessions Report page closes.

4. Now that you have a list of the sessions that are running on the GQAM modulators that you are upgrading, you are ready to begin the upgrade process. Go to **Download GQAM Software Version 1.0.6 to GQAM Modulators That Carry Broadcast Sessions**, next in this chapter.

Download GQAM Software Version 1.0.6 to GQAM Modulators That Carry Broadcast Sessions

Introduction

To download GQAM software 1.0.6 (Host Application code 1.0.9 and Host Boot code 1.0.1) to a GQAM modulator that carries broadcast sessions, reboot the GQAM modulator by resetting it from the DNCS or cycling power to the modulator. After the modulator reboots, GQAM software version 1.0.6 is downloaded from the DNCS to the modulator.

Rebooting the GQAM Modulator From the DNCS

> ⚠ **CAUTION:**
>
> **All active sessions on the GQAM modulator will be interrupted when the modulator is reset. DHCTs downstream of the modulator will lose their ability to display services until sessions are reestablished.**

Follow these steps to reboot the modulator by resetting it from the DNCS.

1. If you have not already done so, provision the modulator on the DNCS.

   Note: For instructions on provisioning the GQAM modulator, refer to *Gigabit QAM Modulator Model D9479 Installation and Operation Guide*.

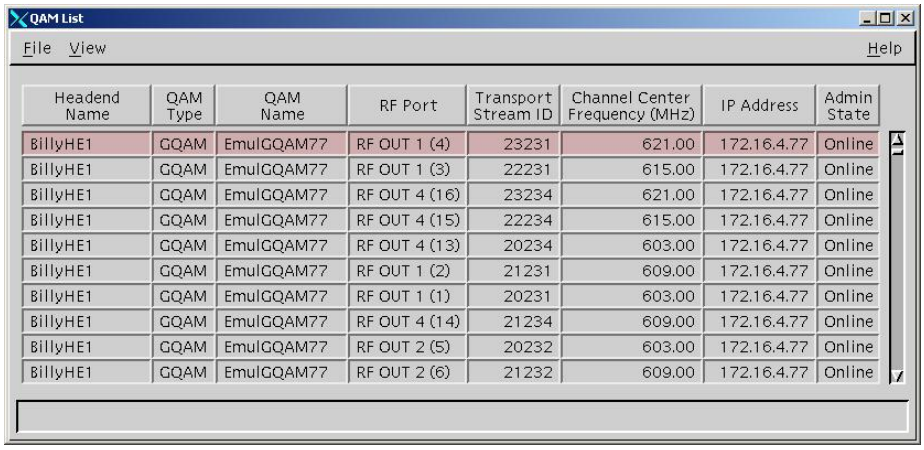
2. From the DNCS Administrative Console, click the **DNCS** tab, then the **Element Provisioning** tab, and next click **QAM**.

   Result: The QAM List window opens.

3. Based on the order you determined earlier, select the GQAM modulator you want to reset by highlighting it in the QAM List window.

   Important: Although each GQAM modulator that has been provisioned is listed 16 times, select only one of the 16 modulators listed.

   Example: The following diagram shows an example of a GQAM modulator selected in the QAM List window.

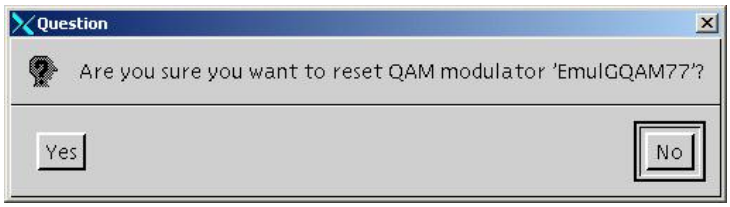


Headend Name	QAM Type	QAM Name	RF Port	Transport Stream ID	Channel Center Frequency (MHz)	IP Address	Admin State
BillyHE1	GQAM	EmulGQAM77	RF OUT 1 (4)	23231	621.00	172.16.4.77	Online
BillyHE1	GQAM	EmulGQAM77	RF OUT 1 (3)	22231	615.00	172.16.4.77	Online
BillyHE1	GQAM	EmulGQAM77	RF OUT 4 (16)	23234	621.00	172.16.4.77	Online
BillyHE1	GQAM	EmulGQAM77	RF OUT 4 (15)	22234	615.00	172.16.4.77	Online
BillyHE1	GQAM	EmulGQAM77	RF OUT 4 (13)	20234	603.00	172.16.4.77	Online
BillyHE1	GQAM	EmulGQAM77	RF OUT 1 (2)	21231	609.00	172.16.4.77	Online
BillyHE1	GQAM	EmulGQAM77	RF OUT 1 (1)	20231	603.00	172.16.4.77	Online
BillyHE1	GQAM	EmulGQAM77	RF OUT 4 (14)	21234	609.00	172.16.4.77	Online
BillyHE1	GQAM	EmulGQAM77	RF OUT 2 (5)	20232	603.00	172.16.4.77	Online
BillyHE1	GQAM	EmulGQAM77	RF OUT 2 (6)	21232	609.00	172.16.4.77	Online

4. Click **File** and then select **Reset**.

   Result: The Question window appears with the name of the selected GQAM modulator inside the quotation marks ('… ').

   Example: The following diagram shows an example of the Question window.



5. Click **Yes**.

   Result: The QAM List window displays the following message:
   The reset request has been received by QAM modulator <Name of GQAM>.

   Note: The <Name of GQAM> represents the name of the modulator you just reset.

6. On the front panel of the modulator, wait for the Downloading message to appear and for alarms to end.

   Result: When the download is complete, the default status message appears, as shown in the following example.

```
CH 1  300.00Mz        50.0 dBmV
ITUB 256QAM           Alarm 0
```

   Notes:

   - It may take up to 5 minutes for the message to appear and the alarms to end.
   - For a complete description of the messages that display during a code download, refer to *Gigabit QAM Modulator Model D9479 Installation and Operation Guide*.

7. On the front panel of the GQAM modulator, press the **OPTIONS** button 10 times.

   Result: The **Host Software Revision** screen appears in the display and lists the current GQAM application code and boot code, as shown in the following example.

```
HOST SW: App:         Boot
1.0.9                 1.0.1
```

8. Does the HOST SW: App field display 1.0.9 and the Boot: field display 1.0.1?

   - If **yes**, press **Enter** to return to the default front panel message. Then go to step 9.
   - If **no**, try turning power to the modulator off and on again to force the modulator to reboot. Then wait for the default status message to appear as described earlier in step 6. For assistance cycling power to the modulator, refer to *Gigabit QAM Modulator Model D9479 Installation and Operation Guide*.

   Note: If turning power to the modulator off and on again does not cause the modulator to reboot and load GQAM software version 1.0.6, call Cisco Services.

9. Now that you have downloaded GQAM software version 1.0.6 to this modulator verify its functionality. For assistance, see **Verifying the Functionality of a GQAM Modulator That Carries Broadcast Sessions**, next in this section.

Verifying the Functionality of a GQAM Modulator That Carries Broadcast Sessions

Follow these steps to confirm that a DHCT downstream of the GQAM modulator can tune to authorized channels.

> ⚠ **CAUTION:**
>
> **Verify the functionality of one GQAM modulator at a time. In the unlikely event of a failure, you can better isolate that failure without interrupting service for the remaining GQAM modulators and their associated DHCTs.**

1. Access a DHCT that is connected downstream of one GQAM modulator.
2. Refer to the Channels, Sources & Sessions Report that you generated earlier.
3. Tune the DHCT to each channel carried on the GQAM that you upgraded.
4. Are all channels accessible from the DHCT?
   - If **yes**, go to step 5.
   - If **no**, do not attempt to upgrade the software of any additional GQAM modulators, call Cisco Services.
5. Do you need to download GQAM software version 1.0.6 to another GQAM modulator?
   - If **yes**, use the sequence you determined earlier to select the next modulator to upgrade, and download GQAM software version 1.0.6 to this modulator. For assistance, see **Download GQAM Software Version 1.0.6 to GQAM Modulators That Carry Broadcast Sessions**, earlier in this section.
   - If **no**, you have upgraded all the xOD and VOD GQAM modulators in your system with GQAM software version 1.0.6.

Download GQAM Software Version 1.0.6 to GQAM Modulators That Carry xOD or VOD Sessions

Introduction

To download GQAM software 1.0.6 (Host Application code 1.0.9 and Host Boot code 1.0.1) to a GQAM modulator that carries xOD or VOD sessions, reboot the GQAM modulator by resetting it from the DNCS or cycling power to the modulator. After the modulator reboots, GQAM software version 1.0.6 is downloaded from the DNCS to the modulator.

Rebooting GQAM Modulators From the DNCS

CAUTION:

All active sessions on the GQAM modulator will be interrupted when the modulator is reset. DHCTs downstream of the modulator will lose their ability to display services until sessions are reestablished.

Follow these steps to reboot the modulator by resetting it from the DNCS.

Note: Repeat this procedure for each hub that has been upgraded with GQAM software version 1.0.6 and is carrying xOD or VOD sessions.

1. If you have not already done so, provision the modulator on the DNCS.

   Note: For instructions on provisioning the GQAM modulator, refer to *Gigabit QAM Modulator Installation and Operation Guide*.

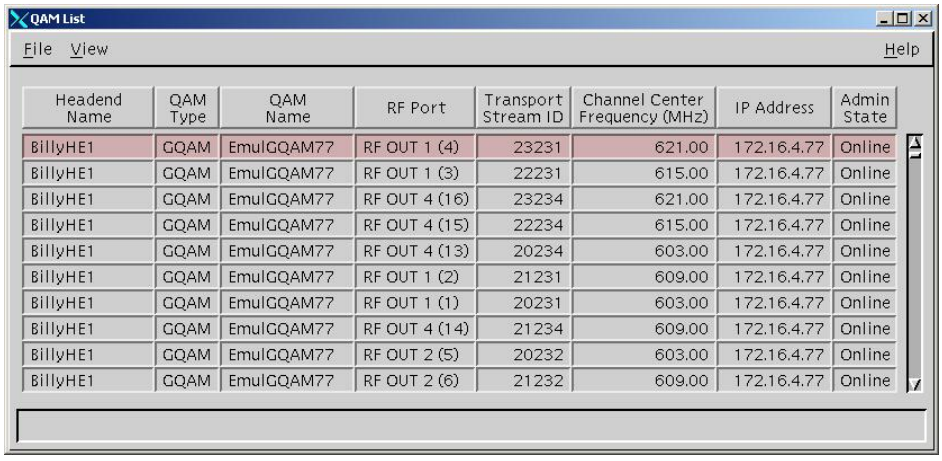
2. From the DNCS Administrative Console, click the **DNCS** tab, then the **Element Provisioning** tab, and next click **QAM**.

   Result: The QAM List window opens.

3. Based on the order you determined earlier, select the GQAM modulator you want to reset by highlighting it in the QAM List window.

   Important: Although each GQAM modulator that has been provisioned is listed 16 times, select only one of the 16 modulators listed.

   Example: The following diagram shows an example of a GQAM modulator selected in the QAM List window.

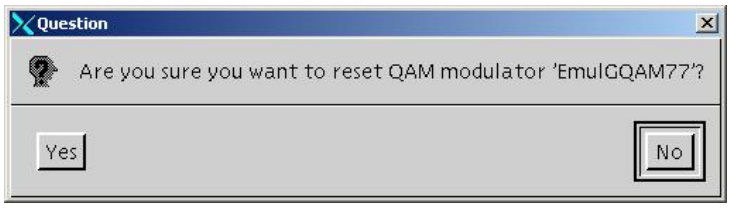


Headend Name	QAM Type	QAM Name	RF Port	Transport Stream ID	Channel Center Frequency (MHz)	IP Address	Admin State
BillyHE1	GQAM	EmulGQAM77	RF OUT 1 (4)	23231	621.00	172.16.4.77	Online
BillyHE1	GQAM	EmulGQAM77	RF OUT 1 (3)	22231	615.00	172.16.4.77	Online
BillyHE1	GQAM	EmulGQAM77	RF OUT 4 (16)	23234	621.00	172.16.4.77	Online
BillyHE1	GQAM	EmulGQAM77	RF OUT 4 (15)	22234	615.00	172.16.4.77	Online
BillyHE1	GQAM	EmulGQAM77	RF OUT 4 (13)	20234	603.00	172.16.4.77	Online
BillyHE1	GQAM	EmulGQAM77	RF OUT 1 (2)	21231	609.00	172.16.4.77	Online
BillyHE1	GQAM	EmulGQAM77	RF OUT 1 (1)	20231	603.00	172.16.4.77	Online
BillyHE1	GQAM	EmulGQAM77	RF OUT 4 (14)	21234	609.00	172.16.4.77	Online
BillyHE1	GQAM	EmulGQAM77	RF OUT 2 (5)	20232	603.00	172.16.4.77	Online
BillyHE1	GQAM	EmulGQAM77	RF OUT 2 (6)	21232	609.00	172.16.4.77	Online

4. Click **File** and then select **Reset**.

   Result: The Question window appears with the name of the selected GQAM modulator inside the quotation marks ('… ').

   Example: The following diagram shows an example of the Question window.



5. Click **Yes**.

   Result: The QAM List window displays the following message:
   The reset request has been received by QAM modulator <Name of GQAM>.

   Note: The <Name of GQAM> represents the name of the modulator you just reset.

6. On the front panel of the modulator, wait for the Downloading message to appear and for alarms to end.

   Result: When the download is complete, the default status message appears, as shown in the following example.

```
CH 1  300.00Mz        50.0 dBmV
ITUB 256QAM           Alarm 0
```

   Notes:

   - It may take up to 5 minutes for the message to appear and the alarms to end.
   - For a complete description of the messages that display during a code download, refer to *Gigabit QAM Modulator Model D9479 Installation and Operation Guide*.

7. On the front panel of the GQAM modulator, press the **OPTIONS** button 10 times.

   Result: The **Host Software Revision** screen appears in the display and lists the current GQAM application code and boot code, as shown in the following example.

```
HOST SW: App:         Boot
1.0.9                 1.0.1
```

8. Does the HOST SW: App field display 1.0.9 and the Boot: field display 1.0.1?

   - If **yes**, press **Enter** to return to the default front panel message. Then go to step 9.
   - If **no**, try turning power to the modulator off and on again to force the modulator to reboot. Then wait for the default status message to appear as described earlier in step 6. For assistance cycling power to the modulator, refer to *Gigabit QAM Modulator Model D9479 Installation and Operation Guide*.

   Note: If turning power to the modulator off and on again does not cause the modulator to reboot and load GQAM software version 1.0.6, call Cisco Services.

9. Does this hub contain another xOD or VOD GQAM modulator that you need to upgrade?
   - If **yes**, repeat steps 3 to 8 to download GQAM software version 1.0.6 to another modulator.
   - If **no**, you have downloaded GQAM software version 1.0.6 to all GQAM modulators in this hub, and are ready to verify the functionality of these modulators. For assistance, see **Verifying the Functionality of GQAM Modulators That Carry xOD or VOD Sessions**, next in this section.

Verifying the Functionality of GQAM Modulators That Carry xOD or VOD Sessions

Follow these steps to confirm that an active session is being carried by any one of the modulators that you have upgraded with GQAM software version 1.0.6.

Important: Due to load balancing and traffic, it is difficult to determine with absolute certainty that all GQAM modulators are functioning properly. For this reason, after completing the following verification, also monitor these modulators for a few days following this upgrade.

1. On the front panel of the GQAM modulator, press the **OPTIONS** button twice to display the Session Count screen.

   Result: The Session Count screen appears and shows the number of active sessions in the second line of the screen for the first channel on the modulator.

```
CH 1  Session Count
            1
```

   Note: For more information on using the screens of the front panel, refer to *Gigabit QAM Modulator Model D9479 Installation and Operation Guide*.

2. Does the Session Count screen indicate that the modulator has at least one active session?
   - If **yes**, you have upgraded the GQAM modulators in this hub with GQAM software version 1.0.6. Press **ENTER** to return to the default screen. Go to step 6.
   - If **no**, press **RF SEL** to scroll through each of the 16 channels and determine if any is carrying an active session.

     Note: Each time you press RF SEL from the Session Count screen, another GQAM channel appears with the number of active sessions carried on the channel.
3. Did you find an active session on any of the 16 channels?
   - If **yes**, you have upgraded the GQAM modulators in this hub with GQAM software version 1.0.6. Press **ENTER** to return to the default screen. Go to step 6
   - If **no**, go to step 4.
4. Is there another GQAM modulator in this hub that has been upgraded with GQAM software version 1.0.6 and is carrying xOD or VOD sessions?
   - If **yes**, from another modulator, repeat steps 1 to 3 to determine if there is an active session on this modulator.
   - If **no**, purchase an xOD or VOD event from the local DHCT. Then go to step 5.
5. Does the DHCT display the session, and does a Session Count screen on any of the upgraded modulators indicate that an active session was built for the event you purchased in step 4?
   - If **yes**, you have successfully upgraded the GQAM modulators in this hub with GQAM software version 1.0.6. Press **ENTER** to return to the default screen. Go to step 6.
   - If **no**, call Cisco Services.
6. Do you need to download GQAM software version 1.0.6 to xOD or VOD GQAM modulators in another hub?
   - If **yes**, download software to the GQAM modulators in another hub. For assistance, see **Download GQAM Software Version 1.0.6 to GQAM Modulators That Carry xOD or VOD Sessions**, earlier in this section.
   - If **no**, you have upgraded all the GQAM modulators in your system.

Chapter 3
Customer Information

If You Have Questions

If you have technical questions, call Cisco Services for assistance. Follow the menu options to speak with a service engineer.

Access your company's extranet site to view or order additional technical publications. For accessing instructions, contact the representative who handles your account. Check your extranet site often as the information is updated frequently.

Appendix A
Roll Back to the Previous Version of GQAM Software

Overview

Introduction

This appendix contains instructions for restoring the previous version of GQAM software should you encounter problems after upgrading to GQAM software version 1.0.6. Follow the instructions in this section only after Cisco Services directs you to restore the previous version of software.

Important: If after downloading GQAM software version 1.0.6 you encounter problems, contact Cisco Services for assistance. In the event that Cisco directs you to download the previous version of software to GQAM modulators, follow the procedures in this appendix while working with Cisco.

In This Appendix

This appendix contains the following topics.

Restore the Previous Version of GQAM Software

Introduction

Contact Cisco Services if you notice that the system is reacting adversely after installing or upgrading to GQAM software version 1.0.6. If Cisco Services recommends restoring the previous GQAM software version, use the instructions in this section to assist you as you work with a Cisco Services engineer to restore the previous GQAM software version.

> ⚠ **CAUTION:**
>
> **Contact Cisco Services before attempting to restore the previous GQAM software version.**

Restoring the Previous GQAM Software Version

Follow these steps to restore the previous version of GQAM software in the unlikely event that you encounter problems after upgrading to GQAM software 1.0.6.

Note: To restore the previous GQAM executable files, restore the configuration backup file that you saved in **Back Up the Current GQAM Software Version** in Chapter 2.

1. Open an xterm window on the DNCS and log on as the **root** user.

   Result: The root prompt appears.

2. Type **cd /tftpboot** and then press **Enter**.

   Result: The root prompt appears.

3. Type **pwd** and then press **Enter**.

   Result: The text /tftpboot appears at the prompt. This text indicates you are in the correct directory.

4. Type **cp –p gqam.config gqam.104** and then press **Enter**.

   Result: The configuration file named gqam.config, which contains GQAM version 1.0.6 configuration settings, is saved to a file named gqam.104.

5. Type **cp –p gqam.bakxxx gqam.config** and then press **Enter.**

   Note: The *xxx* represents the original GQAM software version number.

   Result: The configuration file named gqam.bakxxx, which contains the previous list of GQAM configuration files, is copied to a configuration file named gqam.config.

6. Type **ls -l** and then press **Enter**.

   Note: The **l** used in "ls" and "-l" is the lowercase of the letter L, not the number 1.

   Result: A list of files displays. The files gqam.bakxxx, gqam.config, and gqam.104 appear in the list.

7. Confirm that the date and size of **gqam.config** matches those of **gqam.bakxxx**.

8. Type **exit** and then press **Enter.**

9. You are now ready to download the previous version of GQAM software to GQAM modulators by rebooting the modulators.

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