



xOD 1.6 Installation Guide

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

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About This Guide

Introduction

This guide provides procedures for installing the software that supports *anything-On-Demand* (xOD) 1.6.

Important: After you install or upgrade any software in your Digital Broadband Delivery System (DBDS), you must verify that your Emergency Alert System (EAS) is still properly configured in the Digital Network Control System (DNCS). Refer to *Configuring and Troubleshooting the Digital Emergency Alert System* (part number 4004455), for additional information on configuring and troubleshooting your EAS.

Application

The procedures in this guide apply to installing the xOD 1.6 application only on those sites that support System Release (SR) 2.2 or SR 3.2 or later.

xOD Version

This guide is written for xOD 1.6, which includes the following software components:

- xOD Client 3.7.0.x
- ASI Server 1.6.0.x
- xOD Utilities 1.6.0.x

Purpose

The purpose of this guide is to enable you to install all the various software components necessary to support xOD services. After you install these components, you will be able to configure your system to offer xOD services as described in the *xOD 1.6 Configuration Guide* (part number 4004032).

Audience

This document is written for the following audiences:

- DBDS system administrators
- Cisco Services engineers
- Call-center personnel
- System operators who are responsible for maintaining xOD applications

Scope

This guide provides procedures only for installing the software components for xOD 1.6.

This guide does not provide procedures for installing the hardware components that support xOD. Hardware installation is included in various other guides based on the specific piece of hardware.

In addition, this guide does not describe how to configure, operate, maintain, or troubleshoot xOD. That information can be obtained from other guides, as listed in the **Related Publications** section of this Preface, or by calling Cisco Services.

Recommendations

Our engineers recommend that you read this guide in its entirety before you begin installing xOD on your system.

Assumptions

Our engineers assume that anyone who uses the procedures in this guide has experience in using UNIX commands, as well as with crontab file operations.

Related Publications

You may find the following publications useful as resources when you implement the procedures in this document.

- *Configuration Options for xOD 1.6 Marketing Guide* (part number 4003481)
- *Configuring and Troubleshooting the Digital Emergency Alert System* (part number 4004455)
- *DBDS Utilities Version 5.1 Installation Instructions and DNCS Utilities User's Guide* (part number 740020)
- *Digital Network Control System User's Guide For System Releases 2.1, 3.0, and Later* (part number 749605)
- *Maintenance Recommendations for the DBDS* (part number 4002341)
- *Preventing Unexpected SAM Server File Errors* (part number 4004155)
- *xOD 1.5 Installation Guide* (part number 4000140)
- *xOD 1.6 Configuration Guide* (part number 4004032)
- *xOD 1.6 Release Notes* (part number 4010097)
- *xOD (anything-On-Demand) Architecture Guide* (part number 4001931)
- *xOD 1.6 Quick Reference Guide* (part number 4005867)

Document Version

This is the third release of this guide. In addition to minor text and graphic changes, the following table provides the technical changes to this guide.

Description	See Topic
The path to the pre-upgrade script for the ASI server has been corrected.	The <i>Execute preupgrade_ck Script</i> (on page 128) procedure contains the corrected path.
The order of two procedures in Appendix B, Upgrade the xOD Client Software , were rearranged.	The <i>Upgrading the xOD Version in the SAM URL</i> (on page 145) procedure now follows the <i>Upgrading the xOD Client</i> (on page 141) procedure.
Procedures to obtain and install Daylight Saving Time (DST) software have been added to Chapter 4.	See <i>Install the Daylight Saving Time Patch Onto the ASI Server</i> (on page 105).
The Upgrading the xOD Client procedure was refined to allow the installation engineer to select the types of set-top platforms onto which client software will be installed.	See <i>Upgrading the xOD Client</i> (on page 141).

1

Introduction to Installing or Upgrading to xOD 1.6

Introduction

This chapter provides information that you must have before you begin installing xOD 1.6 on your system or upgrading your system to xOD 1.6.

Important: After you install or upgrade any software in your DBDS, you must verify that your Emergency Alert System (EAS) is still properly configured in the DNCS. Refer to *Configuring and Troubleshooting the Digital Emergency Alert System* (part number 4004455) for additional information on configuring and troubleshooting your EAS.

Installation Environment

You can install xOD only in an ISA environment. For more information on the xOD installation environment, refer to the *xOD (anything-On-Demand) Architecture Guide* or call Cisco Services.

Client Configuration Management

Whenever you make a change to your network, please update your network map(s) and notify our engineers by following our Client Configuration Management (CCM) process.

By keeping us informed of network changes as you make them, you can be assured that we have a current picture of your system at all times. This allows us to help you troubleshoot your system more effectively and efficiently should the need arise.

For more information about network maps or the CCM process, contact Cisco Services. For systems running SR 2.1 or later, you can also refer to the *Digital Network Control System User's Guide For System Releases 2.1, 3.0, and Later* (part number 749605) or the *Digital Network Control System Online Help*.

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Installation and Upgrade Requirements

Introduction

This section describes the hardware and software requirements that must be in place in your system before you can install xOD 1.6 or upgrade your system to xOD 1.6.

Antecedents

The xOD 1.6 application carries forward the enhancements and features of the xOD 1.5 application. The xOD 1.5 application must be in place before you upgrade to xOD 1.6. You cannot upgrade directly to xOD 1.6 from a version earlier than xOD 1.5.

Check the Currently Installed Software Version

Before you upgrade to xOD 1.6, complete the following steps to ensure that xOD 1.5 is installed on your system.

- 1 Open the ASI GUI on an Internet browser.
Note: The address is typically **http://asi:81**.
- 2 Log in as **asset** user.
- 3 Click **XOD Anything on Demand**.
- 4 On the menu on the left side of the page, click **ASI Info** under the **Logs** section. The window updates to display the ASI server version information.
- 5 Confirm that the **ASI-XOD** field displays version **1.5.0.x**.

Hardware Requirements

Before you install xOD, you must have all of the hardware components responsible for processing xOD content physically installed in your system and configured in the DNCS. The steps for configuring these components in the DNCS are contained in the *Digital Network Control System (DNCS) Online Help*.

In addition to the standard DBDS equipment, you must have one video server per xOD service you plan to offer, and one xOD Application Services Interface (ASI) server. ISA systems must include a Back Office Management System (BMS) server. You must also have a test Digital Home Communications Terminal (DHCT) to verify that your installation was successful when you finish.

If you purchased your ASI server from another vendor, you need these additional items, which you can obtain from Sun Microsystems:

- Lights Out Management (LOM) serial adapter
- Ethernet cable

Software Requirements

Before you install xOD 1.6 or upgrade to it, ensure that your system meets the following software requirements.

Important: For Client Releases, see *Application Platform Release Dependencies* (on page 4).

Installation Requirements

Be sure that you have met the following requirements before installing xOD 1.6:

- SR 2.2 or later is installed on the headend.
- You have a valid software license for Oracle Enterprise Edition Version 9i.
- You have created a service group for each VOD server in your system; refer to the *Digital Network Control System (DNCS) Online Help*.

If you purchased your ASI server from another vendor, you need these additional items, which you can obtain from Sun Microsystems:

- Solaris 8 Software CD 1 of 2 (05/03)
- Solaris 8 Software CD 2 of 2 (03/03)

Upgrade Requirements

In addition to requiring that xOD 1.5 is installed on your system, the upgrade to xOD 1.6 includes the following other software requirements:

- SR 2.2 or later is installed on the headend.
- SARA 1.54 and PowerTV 3.10.9, or SARA 1.80 and PowerTV OS 3.3 is loaded onto the Explorer DHCTs on your system.
- You have a valid software license for Oracle Enterprise Edition Version 9i.
- You have created a service group for each VOD server in your system; refer to the *Digital Network Control System (DNCS) Online Help*.

In addition, be certain that the daylight saving time (DST) patches for the ASI server have been installed. The DST patches are needed to make the ASI software compliant with 2007 DST requirements.

Note: Our engineers recommend that the installation media for xOD 1.5 be on hand prior to upgrading to xOD 1.6. This media may be needed in case a rollback to xOD 1.5 is required.

Application Platform Release Dependencies

The following table shows the application platform release dependencies for this software.

Important: You must have these versions of application platform software *or later* installed on your system prior to beginning the upgrade process. If you do not install the correct application platform software *before* you upgrade your network, subscribers may see video freezing and black screens when using VOD or *anything-On-Demand* (xOD) applications.

Set-Top Platform	Operating System (OS)	SARA	PowerKEY® Conditional Access Version
Explorer RNG200 DVR 1.5.5.1003 or later	OS 8.0.40.1	1.90.12.1	N/A
Explorer 4250HDC Exp 2.0.0 (0701) or later	OS 6.20.28.1	1.61.5a100	4.0.1.1
Explorer 8300HDC DVR 1.5.3 (0801) or later	OS 6.20.28.1	1.90.5a101	3.9.7.13
Explorer 8300 DVR v. 1.4.3a10 or later v. 1.5.2	OS 6.14.74.1 OS 6.14.79.1	1.88.22.1 1.89.16.2	3.9 3.9
Explorer 8000/8010 DVR v. 1.4.3a10 or later v. 1.5.2	OS 6.12.74.1 OS 6.12.79.1	1.88.22.1 1.89.16.2	3.7.5 3.7.5
Explorer 3250HD HD 1.6.0 or later	OS 3.24.5.2	1.59.18.1	3.9
Explorer 2xxx, 31xx, 3200, 3100HD	OS 3.13.6.1	1.60.6.2	1.0.6.20 (Explorer 2000s) 1.0.7 (all others)

Installation and Upgrade Package

Introduction

This section briefly describes the components included in your xOD 1.6 installation and upgrade package. If you are missing any of these items, contact Cisco Services.

Hardware

The xOD 1.6 installation and upgrade package does not include any hardware. If you ordered an ASI server from us, that hardware will come to you under separate cover.

Software

The xOD 1.6 installation and upgrade package includes the following software:

- ASI Server 1.6.0 CDs – Contain software for the ASI server software that allows the server to communicate with other elements in your system

Note: Depending upon your requirements, there are two ASI server CDs available:

- ASI Server 1.6.0 Installation CD for new installations
- ASI Server 1.6.0 Upgrade CD for upgrades from earlier versions
- xOD Utilities 1.6.0 CD – Contains software that includes tools and scripts to assist with maintaining and troubleshooting the xOD application
- xOD Client 1.6.0 CD – Contains software for the xOD client software that you download to DHCTs in your system so that they can display xOD services to your subscribers

Installation Process Overview

Introduction

This section provides a brief overview of the tasks you must complete to install xOD 1.6 on your system. If you are upgrading your xOD version to xOD 1.6, go to *Upgrade Process Overview* (on page 9).

Before You Begin

Before you install xOD on your system, be sure you have met all of the hardware and software requirements specified in *Installation and Upgrade Requirements* (on page 3). Also, make sure you have all of the package components listed in *Installation and Upgrade Package* (on page 6).

Install the Oracle Patch

Before you begin the xOD 1.6 upgrade, install the Oracle patch that is needed to make the ASI server compliant with 2007 daylight saving time (DST) requirements. Oracle has developed their own software installation instructions. Reference the Oracle instructions and install the DST software now.

Time To Complete

Installing this version of xOD takes approximately 4 to 6 hours to complete.

Performance Impact

Installing this version of xOD does not impact network performance.

Process Overview

You must complete the following tasks to install xOD on your system.

- 1 Make sure all of the DBDS hardware components responsible for processing xOD content are physically installed in your system and configured in the DNCS. This includes one VOD server per xOD service you plan to offer, as well as the ASI server. In addition, ISA systems must include a BMS server.
Note: Refer to the applicable hardware installation guides and the *Digital Network Control System (DNCS) Online Help*.
- 2 Make sure you have defined one service group per VOD server installed.
Note: Refer to the *Digital Network Control System (DNCS) Online Help*.
- 3 Configure your DNCS to support xOD services.

Chapter 1 Introduction to Installing or Upgrading to xOD 1.6

- 4 If you did not purchase the ASI server from us, install Solaris 8 on the server. See Chapter 3, *Install Solaris on the ASI Server* (on page 73), for more information.
- 5 If you did not purchase the ASI server from us, install the ASI server software, including the utilities.
- 6 Install the xOD client software on the ASI server.
- 7 Verify that your installation was successful by configuring an xOD service and using a test DHCT as described in the *xOD 1.6 Configuration Guide* (part number 4004032).
- 8 Verify that your Emergency Alert System (EAS) is still properly configured in the DNCS. Refer to *Configuring and Troubleshooting the Digital Emergency Alert System* (part number 4004455), for additional information on configuring and troubleshooting your EAS.
- 9 Configure your system prior to installing xOD 1.6.

Upgrade Process Overview

Introduction

This section provides a brief overview of the tasks you must complete to upgrade your system from xOD 1.5 to xOD 1.6. If you are installing xOD 1.6 at a new site, go to Installation Process Overview.

Before You Begin

Before you upgrade xOD on your system, be sure you have met all of the hardware and software requirements specified in *Installation and Upgrade Requirements* (on page 3). Also, make sure you have all of the package components listed in *Installation and Upgrade Package* (on page 6).

Time To Complete

Upgrading your system to xOD 1.6 takes approximately 3 hours to complete.

Performance Impact

During the upgrade process, subscribers cannot order any xOD, PPV, or VOD services.

Process Overview

You must complete the following tasks to upgrade your system to xOD 1.6.

- 1 Complete the pre-upgrade tasks required to upgrade the ASI server software.
- 2 Upgrade the ASI server software.
- 3 Upgrade the xOD client software through the ASI server.
- 4 Verify that your upgrade was successful by configuring an xOD service and using a test DHCT as described in the *xOD 1.6 Configuration Guide* (part number 4004032).
- 5 If your system uses an Emergency Alert System (EAS), verify that your EAS is still properly configured in the DNCS. Refer to *Configuring and Troubleshooting the Digital Emergency Alert System* (part number 4004455), for additional information on configuring and troubleshooting your EAS.
- 6 Go to **Appendix A** to begin upgrading the ASI server software.

2

Configure the DNCS for xOD

Introduction

The first step in installing xOD on your system is to configure the DNCS to support xOD as described in this chapter. Complete the procedures in this chapter in the order in which they are presented. Our engineers recommend that you complete them without interruption.

Note: If you are upgrading an existing xOD system, use the procedures listed in **Appendix A** and **Appendix B**.

Time to Complete

Configuring the DNCS to support xOD takes approximately 1 to 2 hours to complete.

Performance Impact

Configuring the DNCS to support xOD has no impact on network performance.



CAUTION:

The procedures in this chapter are used to install xOD on a new system. If you are upgrading an existing xOD system, use the procedures listed in Appendix A and Appendix B. Failure to do so may erase your xOD configuration.

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Process Overview

Introduction

This section provides a brief overview of the tasks you must complete to configure the DNCS to support xOD.

**CAUTION:**

The procedures in this chapter are used to install xOD on a new system. If you are upgrading an existing xOD system, use the procedures listed in Appendix A and Appendix B. Failure to do so may erase your xOD configuration.

Tasks to Complete

To configure the DNCS to support xOD, you must complete the following tasks in order. Refer to the remaining sections in this chapter for detailed instructions for each task.

- 1 Add a value-added service provider (VASP) entry for the session gateway (ISA systems).
- 2 Add entries to the DNCS hosts table for the session gateway (ISA) and for the ASI Server.
- 3 Set up the broadcast file system (BFS) as follows:
 - Add the xOD source.
 - Define the source you just created as a BFS source.
 - Create an inband carousel for the BFS source.
 - Create an inband carousel for files less than 70 KB in size.
 - Create an inband carousel for files more than 70 KB in size.
 - Create an out-of-band carousel for the saixod.cfg file.
 - Authorize a BFS server for the inband and out-of-band carousels you just created.
- 4 Create an xOD package.
- 5 Register the xOD package with the Service Application Manager (SAM).

Note: This is frequently referred to as *creating a SAM service*.
- 6 Add the xOD service to a channel map.

Chapter 2 Configure the DNCS for xOD

- 7 Add the xOD service to the Interactive Program Guide (IPG) as follows:
 - Add an entry to the Application Server hosts table for the ASI Server.
 - Set up the xOD IPG collector.
 - Create an IPG service name and identifier (ID) for the xOD service.
 - If applicable, create an IPG service name and ID for each channel that you want to display an individual xOD program title. This feature is called *Titles in the Guide* (TIG).
- 8 Verify that there is an active xOD session and that it contains the same number of continuous-feed (CF) sessions as shown on the front panel of the BFS Quadrature Amplitude Modulation (QAM) modulator.
- 9 Verify that your installation was successful by authorizing a test DHCT to receive the xOD service.

Add an xOD VASP Entry

Overview

This section provides steps for adding a VASP entry to the DNCS so that the DNCS can communicate with the device that is sending xOD data. A VASP entry is a generic term for an entity that provides services or functionality to elements on the DBDS. A DBDS may include multiple VASP entries, each providing a unique set of services, such as xOD.

If you have an ISA system, you must add a VASP entry for the session gateway. The session gateway resides on the Business Management System (BMS) and allows the ISA equipment in the headend to communicate with the DNCS.

Before You Begin

Before you begin, you must have the IP address for the session gateway (ISA). You can obtain the IP address from the equipment vendor.

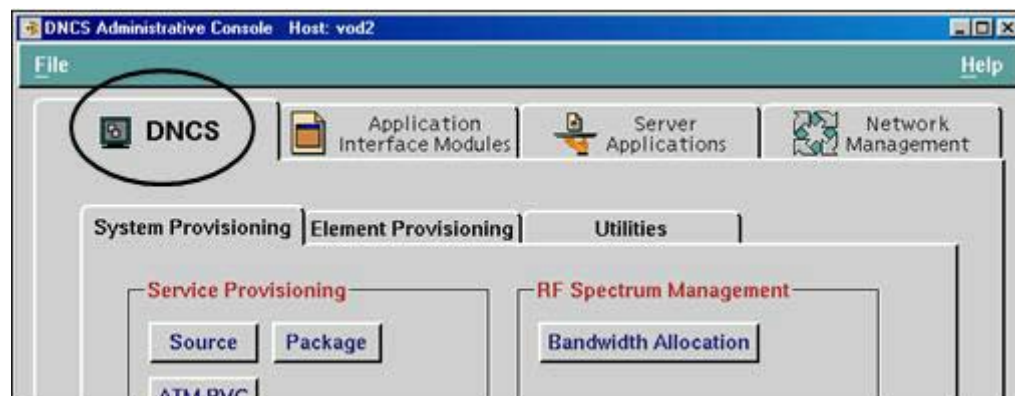
In addition, you must choose a unique number to identify this VASP entry. You can use up to 10 numeric characters. Our engineers recommend that you establish a numbering scheme that allows you to easily identify the type of service associated with each VASP entry.

Example: You might give a VASP entry associated with an xOD service an ID of 8001. Then, you would assign IDs of 8002, 8003, and so forth to each additional VASP entry you add that is associated with an xOD service.

Adding a VASP Entry

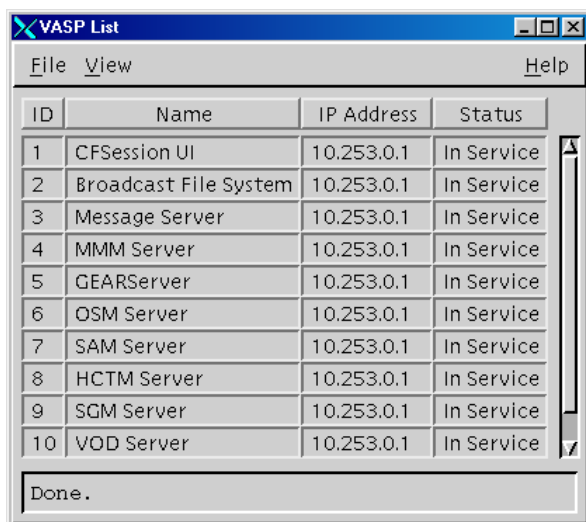
Complete these steps to add an xOD VASP entry.

- 1 On the DNCS Administrative Console, click the **DNCS** tab if it is not already in the forefront.

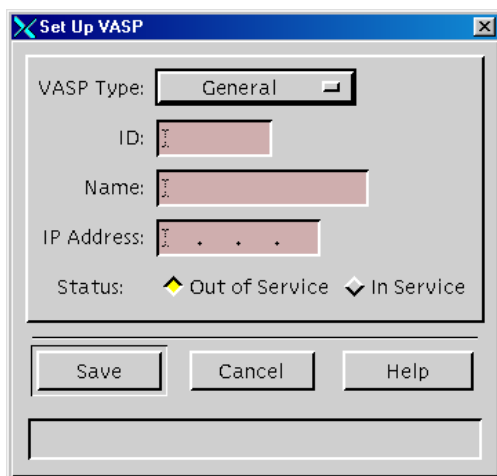


Chapter 2 Configure the DNS for xOD

- 2 Click the **Element Provisioning** tab if it is not already in the forefront.
- 3 Click **VASP**. The VASP List window opens.

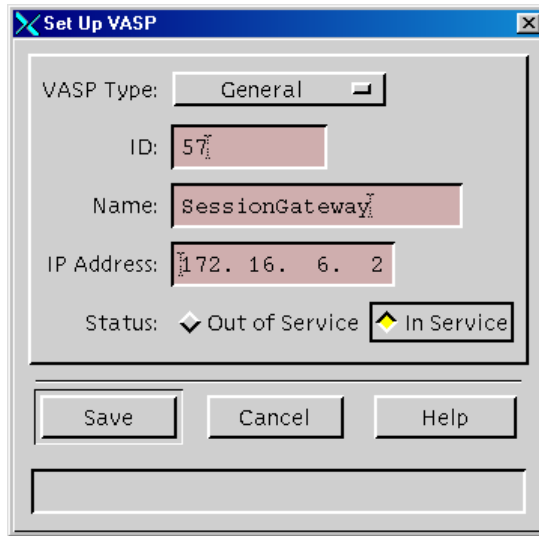


- 4 Click **File** and select **New**. The Set Up VASP window opens.



- 5 For **VASP Type**, click to select **General** if it is not already selected.
- 6 Click in the **ID** field and type a unique number to identify this VASP entry. You can use up to 10 numeric characters.
Important: This number must be different from any existing VASP entries. You can quickly check to see if an ID is in use by viewing the ID column in the VASP List window.
- 7 Click in the **Name** field and type the following based on your system configuration:
Note: If you have an ISA system, type **SessionGateway**.
- 8 Click in the **IP Address** field and type the IP address for the video server or session gateway as applicable. Be careful to place the periods (.) properly between numbers.

- 9 At the **Status** field, click the **In Service** option. The Set Up VASP window should look similar to the following example.



The screenshot shows a 'Set Up VASP' window with the following fields and values:

- VASP Type: General
- ID: 57
- Name: SessionGateway
- IP Address: 172.16.6.2
- Status: ☒ Out of Service, ☐ In Service

Buttons at the bottom: Save, Cancel, Help.

- 10 Click **Save**. The system saves the VASP entry information in the DNCS database and closes the Set Up VASP window. The VASP List window updates to include the new VASP entry.
- 11 Click **File** and select **Close** to close the VASP List window and return to the DNCS Administrative Console.
- 12 Your next step is to add entries to the DNCS hosts table for the video server or session gateway and for the ASI server. Go to *Add Entries to the DNCS Hosts Table* (on page 18).

Add Entries to the DNCS Hosts Table

Overview

After you add a VASP entry for the video server or session gateway, you must add the IP addresses and host names for the video server or session gateway and for the ASI Server to the DNCS hosts table. This process allows you to type the host name, which is usually easier to remember, rather than the IP address every time you need to work with a component through the DNCS.

Before You Begin

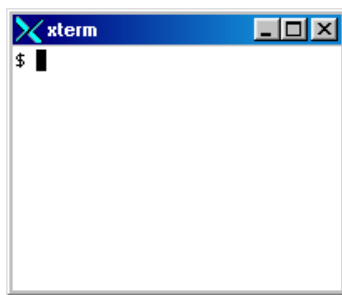
Before you begin, you must have the following items:

- IP address for the video server or session gateway as entered for its VASP entry
- IP address for the ASI server (from your system administrator)
- Super user (**su**) privileges and password (from your system administrator)

Adding Entries to the DNCS Hosts Table

Complete these steps to add entries for the video server or session gateway and for the ASI server to the DNCS hosts table.

- 1 Use the mouse to place the cursor on any open area on the DNCS desktop, and then click the middle mouse button. A dropdown menu appears with a list of options.
- 2 Click the left mouse button and select **xterm**. An xterm window opens.



- 3 Log in as **su**. A prompt appears.
- 4 Type **vi /etc/hosts** and press **Enter**. The `/etc/hosts` file opens in vi editor.
- 5 Insert a blank line and add an entry for the session gateway using the following format:

For an ISA system: **xxx.xx.xx.xxx sessiongateway**

Note: In the format shown above, `xxx.xx.xx.xxx` represents the IP address.

- 6 Insert another blank line and add an entry for the ASI server using the following format:
xxx.xx.xx.xxx asi
Note: In the format shown above, xxx.xx.xx.xxx represents the IP address.
- 7 Type **:wq!** and press **Enter**. The system exits vi editor and a prompt appears.
- 8 Type **exit** and press **Enter**. The system exits **su** mode on the DNCS and a prompt appears. Leave the xterm window open. You will need it to complete some of the other procedures in this guide.
- 9 Your next step is to set up the BFS to process xOD data. Go to *Set Up the BFS* (on page 20).

Set Up the BFS

Introduction

After you add the video server or session gateway and the ASI Server to the DNCS hosts table, you must set up the BFS to process xOD data as described in this section. The BFS is the primary means of communication between the DNCS and DHCTs.

The BFS uses data carousels to send the files that tell the DHCT how to properly run a specific application, such as xOD. These carousels make the information available to all DHCTs in the system. However, only those DHCTs specifically authorized and looking for the information will receive it.

Note: Carousels are sometimes referred to as *sources* or *data pumps*.

Process Overview

To set up the BFS to process xOD data, you must complete the following procedures, which are detailed later in this section.

- 1 Stop the OSM process on the DNCS.
- 2 Tear down the OSM session.
- 3 Add the new inband carousels to the BIG PAT table.
- 4 Add the xOD sources.
- 5 Define the xOD sources as BFS sources.
- 6 Create an inband carousel for the BFS source.
- 7 Create an inband carousel for files less than 70 KB in size.
- 8 Create an inband carousel for files more than 70 KB in size.
- 9 Create an out-of-band carousel for the saixod.cfg file.
- 10 Authorize a BFS server for the carousels you just created.
- 11 Restart the OSM process on the DNCS.

Creating the Inband BFS Carousel for Small Files

After you create the inband carousel for the xOD BFS source, you must create the inband carousel for small data files. This carousel provides smaller data files (up to 70 KB in size) for the network.

Complete these steps to create the inband carousel for small files.

- 1 With the Sources tab still in the forefront of the BFS Administration window, click **File** and select **New**. The Set Up BFS Source window opens.
- 2 Click in the **Source Name** field and type **SAIXOD_IB_SM**. This should be the same name that you entered when you added the DNCS source.

- 3 Click in the **Source ID** field and type the source ID that you used when you added the DNCS source.

Notes:

- Our numbering convention uses even numbers for inband BFS carousels.
- You must use a number that is greater than 200 for the source ID. Source ID numbers 1 through 200 are reserved for system-built sources.
- Our engineers recommend that you add 2 to the number you used for the inband carousel source ID, if possible. For example, if the source ID for the inband carousel is 4444, use 4446 here.

- 4 For the **Source Type**, click the **BFS** option.
- 5 For the **Transport Type**, click the **In-band** option.
- 6 Click in the **Data Rate** field, and type **1.00**.
- 7 Click in the **Block Size** field, and type **1024**.
- 8 In the **Available Hosts** field, click to select **dncsatm** and click **Add**.

Important: Do not change any other fields.

Result: The selection moves to the Selected Hosts field. When you finish, the Set Up BFS Source window will look similar to the following example.

- 9 Click **Save**. The system saves the carousel information in the DNCS database and closes the Set Up BFS Source window. The Sources tab on the BFS Administration window updates to include the new carousel information.

Stopping the OSM Process

The first step in setting up the BFS for xOD 1.6.0 is to stop the OSM process of the DNCS. Follow these instructions to stop the OSM process.

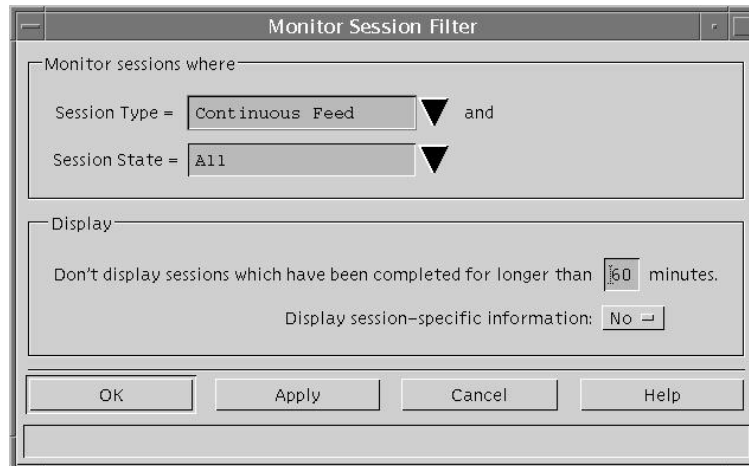
Note: Stopping and restarting a process is sometimes referred to as “bouncing” the process.

- 1 From an xterm window on the DNCS, type **dncsControl** and then press **Enter**. The DnCS Control window opens.
- 2 Type **2** (for Startup / Shutdown Single Element Group) and then press **Enter**. The DnCS Control window updates to list all of the DNCS processes and servers.
- 3 Type the number associated with the **DNCS HCT Manager & OSM** element group and then press **Enter**. A message appears that prompts the user to enter the target status for the entire element group or to type **e** to display each individual element.
- 4 Type **e** and then press **Enter**. The DnCS Control window updates to list the individual elements that comprise the DNCS HCT Manager & OSM element group.
- 5 Type the number associated with **/dvs/dnCS/bin/osm** and then press **Enter**. A message appears that prompts the user to enter the target status for the selected element.
- 6 Type **1** (for stopped) and then press **Enter**. A confirmation message appears.
- 7 Type **y** (for yes) and then press **Enter**. The DnCS Control window updates to reflect the current status of each element in the group.
- 8 Wait until the current state (Curr Stt) of the **/dvs/dnCS/bin/osm** element is stopped. The DnCS Control window updates automatically in about 30 seconds or you can press Enter to force an update.
- 9 Your next step is to tear down the OSM session. Go to *Tearing Down the OSM Session* (on page 22).

Tearing Down the OSM Session

After you stop the OSM process, follow these instructions to tear down the OSM session.

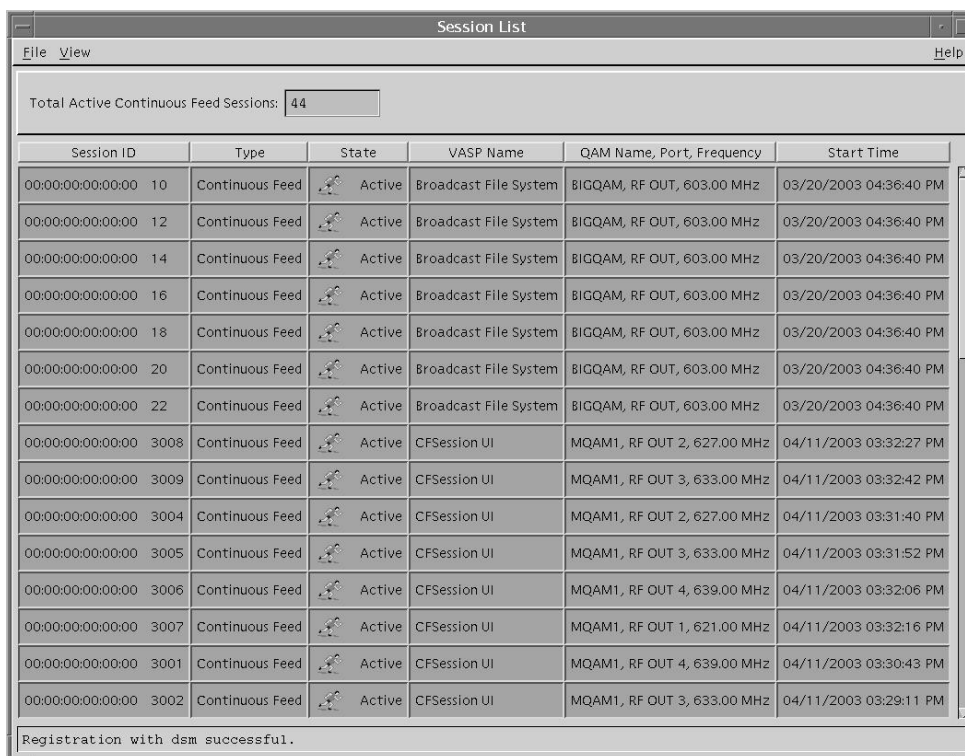
- 1 From the **DNCS** tab on the DNCS Administrative Console, select **Utilities** and then click **Session List**. The Monitor Session Filter window opens.



Chapter 2 Configure the DNCS for xOD

- 2 Follow these instructions to configure the Monitor Session Filter window.
 - a Click the arrow to the right of the **Session Type** field and then select **Continuous Feed**.
 - b Click the arrow to the right of the **Session State** field and then select **Active**.
 - c Click **OK**.

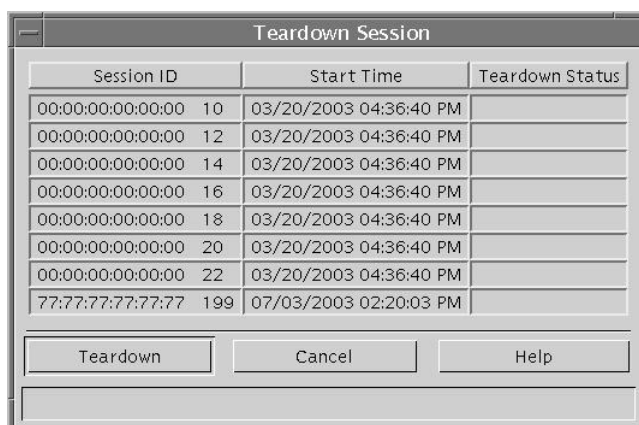
Result: The Session List window opens.



The Session List window displays a table of active sessions. The table has columns for Session ID, Type, State, VASP Name, QAM Name, Port, Frequency, and Start Time. The status bar at the bottom indicates 'Registration with dsm successful.'

Session ID	Type	State	VASP Name	QAM Name, Port, Frequency	Start Time
00:00:00:00:00:00 10	Continuous Feed	Active	Broadcast File System	BIGQAM, RF OUT, 603.00 MHz	03/20/2003 04:36:40 PM
00:00:00:00:00:00 12	Continuous Feed	Active	Broadcast File System	BIGQAM, RF OUT, 603.00 MHz	03/20/2003 04:36:40 PM
00:00:00:00:00:00 14	Continuous Feed	Active	Broadcast File System	BIGQAM, RF OUT, 603.00 MHz	03/20/2003 04:36:40 PM
00:00:00:00:00:00 16	Continuous Feed	Active	Broadcast File System	BIGQAM, RF OUT, 603.00 MHz	03/20/2003 04:36:40 PM
00:00:00:00:00:00 18	Continuous Feed	Active	Broadcast File System	BIGQAM, RF OUT, 603.00 MHz	03/20/2003 04:36:40 PM
00:00:00:00:00:00 20	Continuous Feed	Active	Broadcast File System	BIGQAM, RF OUT, 603.00 MHz	03/20/2003 04:36:40 PM
00:00:00:00:00:00 22	Continuous Feed	Active	Broadcast File System	BIGQAM, RF OUT, 603.00 MHz	03/20/2003 04:36:40 PM
00:00:00:00:00:00 3008	Continuous Feed	Active	CFSession UI	MQAM1, RF OUT 2, 627.00 MHz	04/11/2003 03:32:27 PM
00:00:00:00:00:00 3009	Continuous Feed	Active	CFSession UI	MQAM1, RF OUT 3, 633.00 MHz	04/11/2003 03:32:42 PM
00:00:00:00:00:00 3004	Continuous Feed	Active	CFSession UI	MQAM1, RF OUT 2, 627.00 MHz	04/11/2003 03:31:40 PM
00:00:00:00:00:00 3005	Continuous Feed	Active	CFSession UI	MQAM1, RF OUT 3, 633.00 MHz	04/11/2003 03:31:52 PM
00:00:00:00:00:00 3006	Continuous Feed	Active	CFSession UI	MQAM1, RF OUT 4, 639.00 MHz	04/11/2003 03:32:06 PM
00:00:00:00:00:00 3007	Continuous Feed	Active	CFSession UI	MQAM1, RF OUT 1, 621.00 MHz	04/11/2003 03:32:16 PM
00:00:00:00:00:00 3001	Continuous Feed	Active	CFSession UI	MQAM1, RF OUT 4, 639.00 MHz	04/11/2003 03:30:43 PM
00:00:00:00:00:00 3002	Continuous Feed	Active	CFSession UI	MQAM1, RF OUT 3, 633.00 MHz	04/11/2003 03:29:11 PM

- 3 Highlight the bottom row in the Session List; then, click **File** and select **Teardown**. The Teardown Session window opens.



The Teardown Session window displays a table of sessions to be torn down. The table has columns for Session ID, Start Time, and Teardown Status. The status bar at the bottom contains buttons for Teardown, Cancel, and Help.

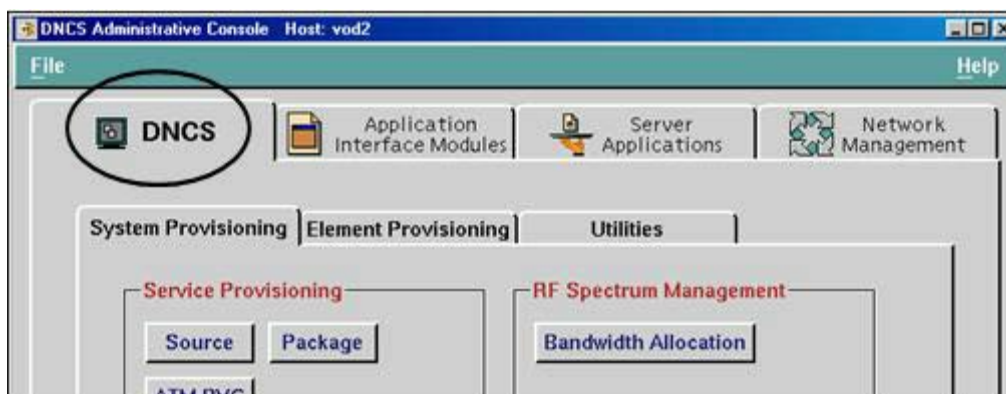
Session ID	Start Time	Teardown Status
00:00:00:00:00:00 10	03/20/2003 04:36:40 PM	
00:00:00:00:00:00 12	03/20/2003 04:36:40 PM	
00:00:00:00:00:00 14	03/20/2003 04:36:40 PM	
00:00:00:00:00:00 16	03/20/2003 04:36:40 PM	
00:00:00:00:00:00 18	03/20/2003 04:36:40 PM	
00:00:00:00:00:00 20	03/20/2003 04:36:40 PM	
00:00:00:00:00:00 22	03/20/2003 04:36:40 PM	
77:77:77:77:77:77 199	07/03/2003 02:20:03 PM	

- 4 Click **Teardown**. The system tears down the specified sessions.
- 5 Your next step is to update the BIG PAT table for the new carousels that you are about to create. Go to *Adding New Carousels to the BIG PAT Table* (on page 25).

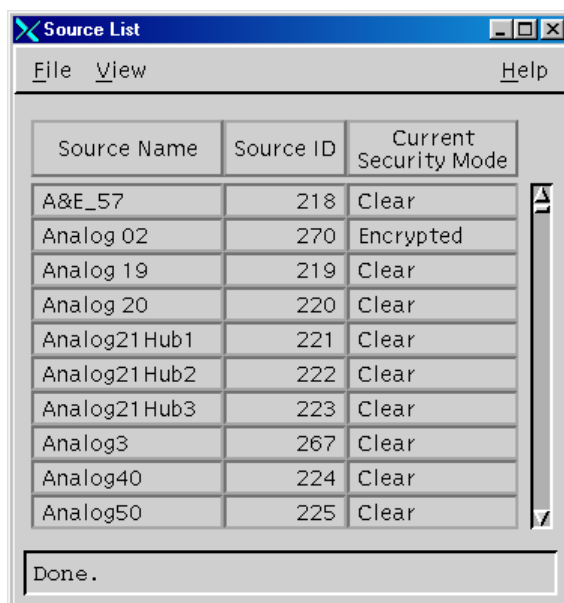
Adding New Carousels to the BIG PAT Table

Follow these steps to determine the session numbers that you will assign to the new inband BFS carousels and add those carousels to the BIG PAT table.

- 1 On the DNCS Administrative Console, click the **DNCS** tab if it is not already in the forefront.



- 2 Click the **System Provisioning** tab if it is not already in the forefront.
- 3 Click **Source**. The Source List window opens.

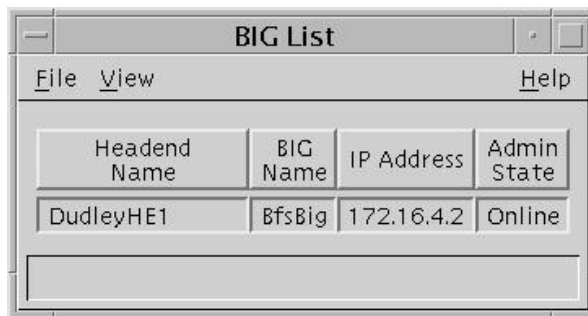


- 4 Click the **Source ID** column header to sort the list of sources by source ID.

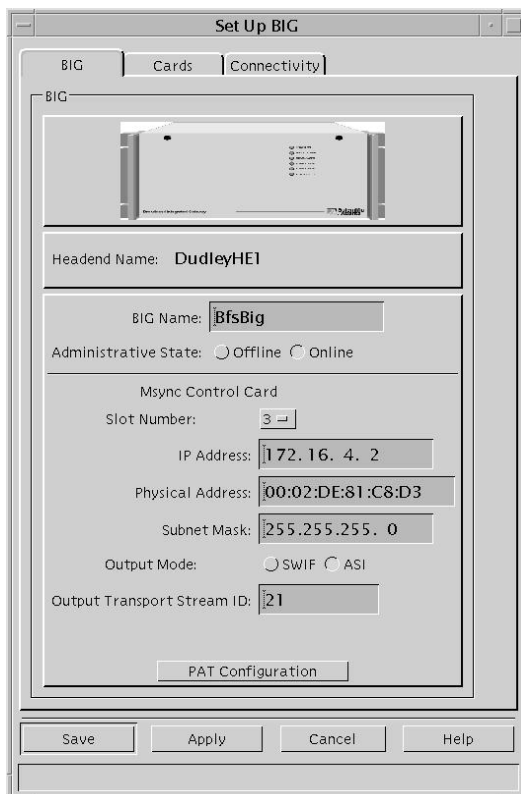
- 5 Write down an unused even number above 200 here _____. This is the number you will use for the xOD BFS source ID. You can use up to 5 numeric characters.

Notes:

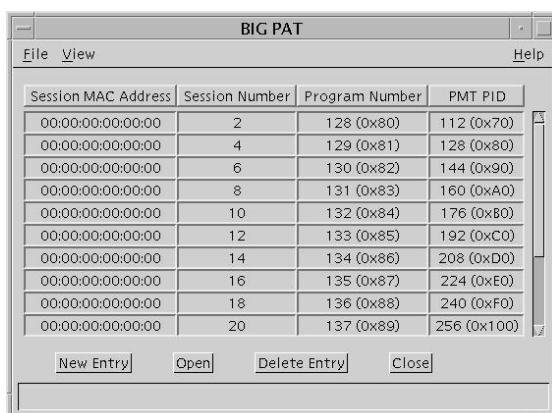
- You will use this number as the session number for this carousel and the source ID for the DNCS source and the BFS source.
 - Our numbering convention uses even numbers for inband BFS carousels.
 - You must use a number that is greater than 200 for the source ID. Source ID numbers 1 through 200 are reserved for system-built sources.
- 6 Close the Source List window.
 - 7 From the DNCS Administrative Console, select the **Element Provisioning** tab and then click **BIG**. The BIG List window opens.



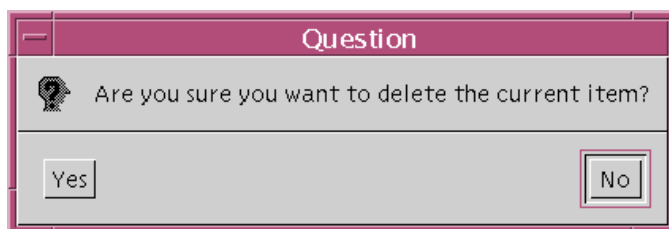
- 8 On the BIG List window, double-click the **BFS BIG**. The Set Up BIG window opens.



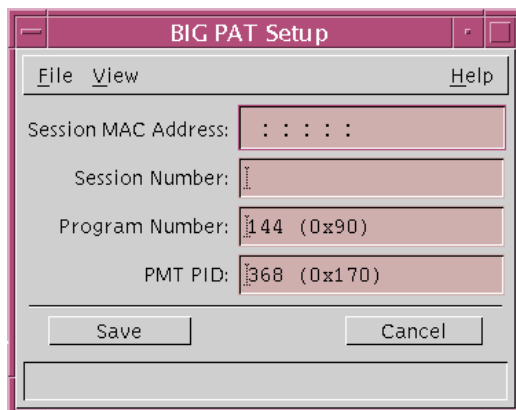
- 9 Click **PAT Configuration**. The BIG PAT window opens.



- 10 Use the scroll bar on the BIG PAT window to view the last entry in the table. Record the session number for that entry here: _____
- 11 Click the last entry to select it, and click **Delete Entry**. A message appears, asking if you want to delete entry.



- 12 Click **OK**.
- 13 Click **New Entry** on the BIG PAT window. The BIG PAT Setup window opens.



- 14 Type twelve zeros (00:00:00:00:00:00) in the Session MAC Address field, and press **Tab**.
Note: You do not have to type the colons in this field.
- 15 Type the source ID that you recorded in step 5 of this procedure in the Session Number field, and click **Save**.
Note: The values in the Program Number field and PMT PID field appear automatically.

- 16 Repeat steps 13 through 15 to add the small file carousel.

Note: Our engineers recommend that you add 2 to the number you use for the inband carousel session number, if possible. For example, if the session number for the inband carousel is 4444, use 4446 here. Record the session number that you use here: _____

- 17 Repeat steps 13 through 15 to add the large file carousel.

Note: Our engineers recommend that you add 2 to the number you use for small data files, if possible. For example, if the source ID for the inband carousel for small data files is 4446, use 4448 here. Record the session number that you use here: _____

- 18 Repeat steps 13 through 15 to add the OSM entry, using the following information:

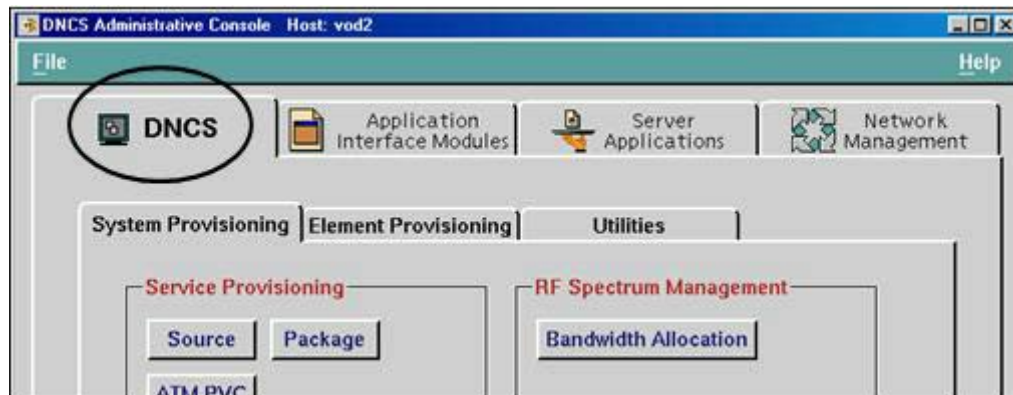
- The Session MAC Address should be twelve 7s (77:77:77:77:77:77).
- The Session Number should be the number you wrote down in step 10.

- 19 Your next step is to add the DNCS sources for the new carousels. Go to *Adding the xOD Sources* (on page 28).

Adding the xOD Sources

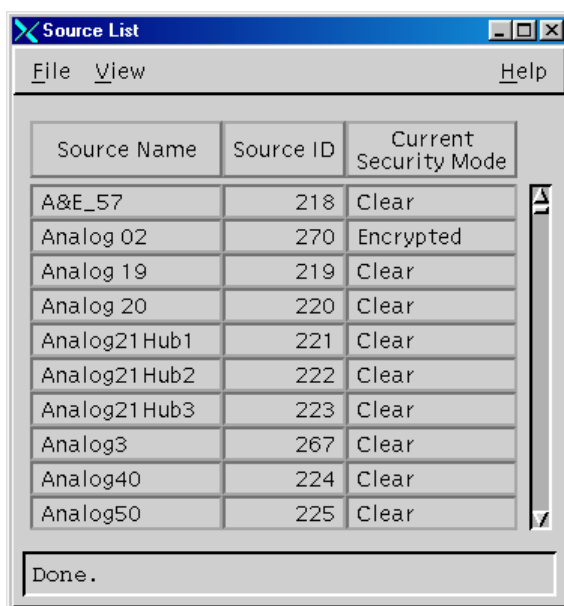
After you update the BIG PAT table, you must add new DNCS sources for the xOD application and for the xOD data files. Follow these steps to add the new sources.

- 1 On the DNCS Administrative Console, click the **DNCS** tab if it is not already in the forefront.

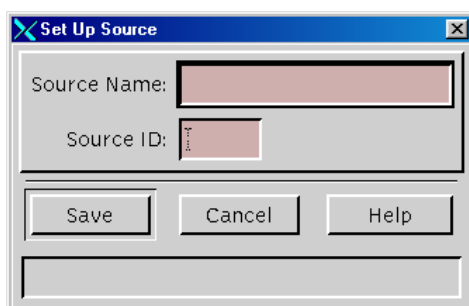


- 2 Click the **System Provisioning** tab if it is not already in the forefront.

- 3 Click **Source**. The Source List window opens.



- 4 Click **File** and select **New**. The Set Up Source window opens.



- 5 Click in the **Source Name** field and type **SAIXOD_IB**.
- 6 Click in the **Source ID** field and type the session number that you assigned to this carousel in the BIG PAT table.
- 7 Click **Save**. The system saves the source information in the DNCS database and closes the Set Up Source window. The Source List window updates to include the new source.
- 8 Repeat steps 4 through 7 to add an xOD source for the small content file carousel. Use the following information:
- The **Source Name** is **SAIXOD_IB_SM**.
 - The **Source ID** is the session number that you assigned to this carousel in the BIG PAT table.
- 9 Repeat steps 4 through 7 to add an xOD source for the large content file carousel. Use the following information:
- The **Source Name** is **SAIXOD_IB_LG**.
 - The **Source ID** is the session number that you assigned to this carousel in the BIG PAT table.

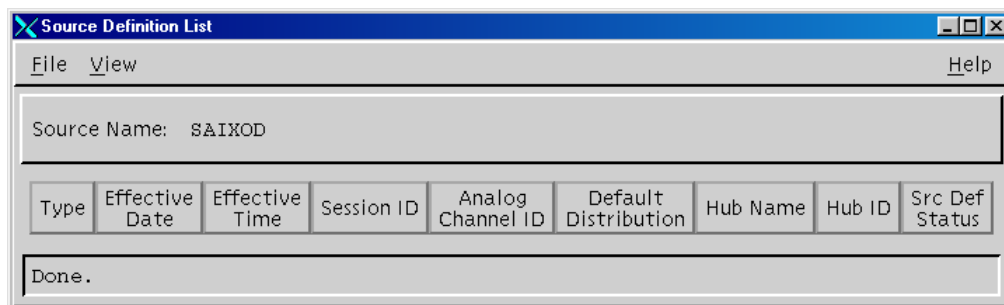
Defining the BFS Sources

After you add the xOD sources to the DNCS database, you must define parameters for those sources so that the BFS knows how to process the service content. When you define a source, you also build a session. Sessions define and allocate the resources that the network uses to deliver service content. It may help to think of a session as a pipeline through the DBDS that is allocated to deliver specific service content.

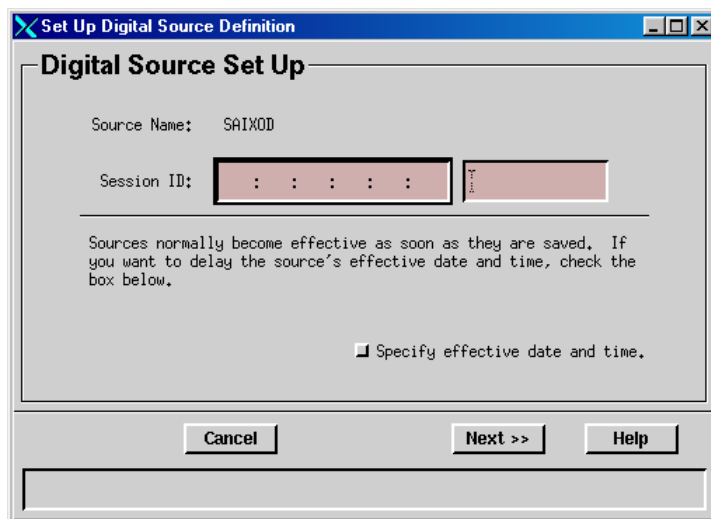
Complete these steps to define the BFS sources.

Note: This process is also known as *provisioning* the source.

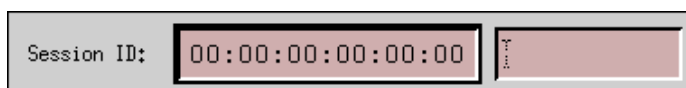
- 1 In the Source List window, click to highlight the **SAIXOD_IB** source.
- 2 Click **File** and select **Source Definitions**. The Source Definition List window opens for the SAIXOD_IB source.



- 3 Click **File** and select **New Digital**. The Set Up Digital Source Definition window opens.



- 4 Click in the left **Session ID** field and type 12 zeros as shown in the following example.



Note: The system inputs the colons for you.

- 5 Click in the right **Session ID** field and type the source ID you used when you added the source. Your final entry will look similar to the following example.

- 6 Digital source sessions normally become effective as soon as they are saved. Do you want to delay the effective date and time of this session?
- If **yes**, go to step 7.
 - If **no**, go to step 11.

Note: Subscribers see a blank channel until either the session is saved or the time that you specify arrives.

- 7 Click the **Specify effective date and time** option, and then click **Next**. The Set Start Time/Date window opens.

- 8 Click in the **Effective Date** field and type the month, day, and year you want subscribers to be able to start viewing content from this source. You must type two digits for the month and day, and four digits for the year.

Example: You would type July 13, 2005, as **07132005**. The system inputs the slashes for you and displays 07/13/2005.

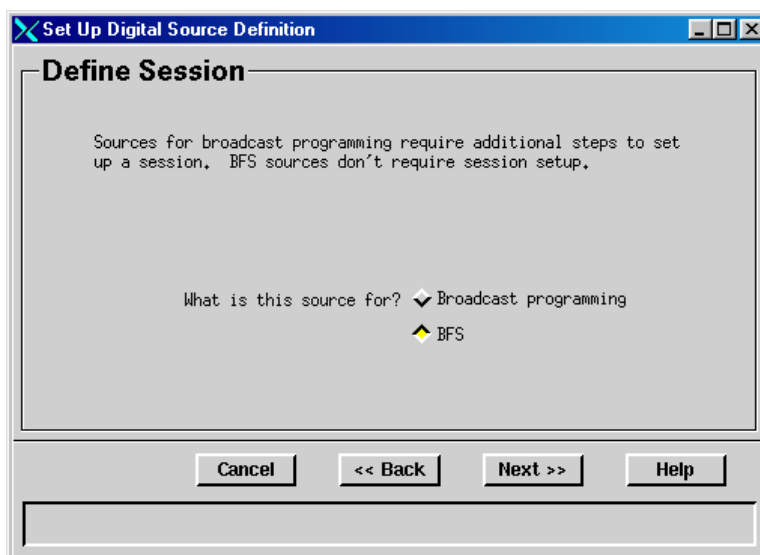
- 9 Click in the **Effective Time** field and type the hour, minute, and second you want subscribers to be able to start seeing content from this source. You must type two digits for each value.

Example: You would type eight o'clock as **080000**. The system inputs the colons for you and displays 08:00:00.

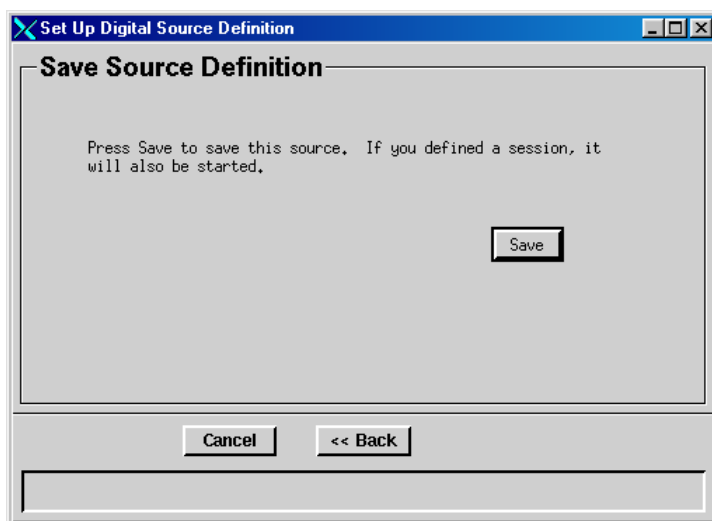
Note: You can also represent time in the 24-hour format. For example, **18:30:00** would represent 6:30 p.m.

- 10 Click **AM/PM** to establish which portion of the day you want subscribers to be able to start viewing content from this source.

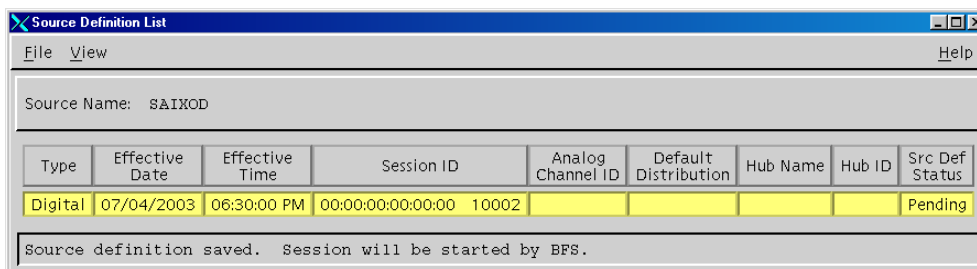
- 11 Click **Next**. The Define Session window opens.



- 12 Click the **BFS** option and click **Next**. The Save Source Definition window opens.



- 13 Click **Save**. The system saves the source definition in the DNCS database, and creates the session you built for it. The Source Definition List window updates to include the new source information as shown in the following example.



- 14 Click **File** and select **Close** to close the Source Definition List window and return to the Source List window.
- 15 Repeat steps 1 through 14 to define the SAIXOD_IB_SM source.

- 16 Repeat steps 1 through 14 to define the SAIXOD_IB_LG source.
- 17 Click **File** and select **Close** to close the Source List window and return to the DNCS Administrative Console.
- 18 Your next step is to create carousels for these BFS sources. Go to *Creating the Inband BFS Carousel* (on page 33).

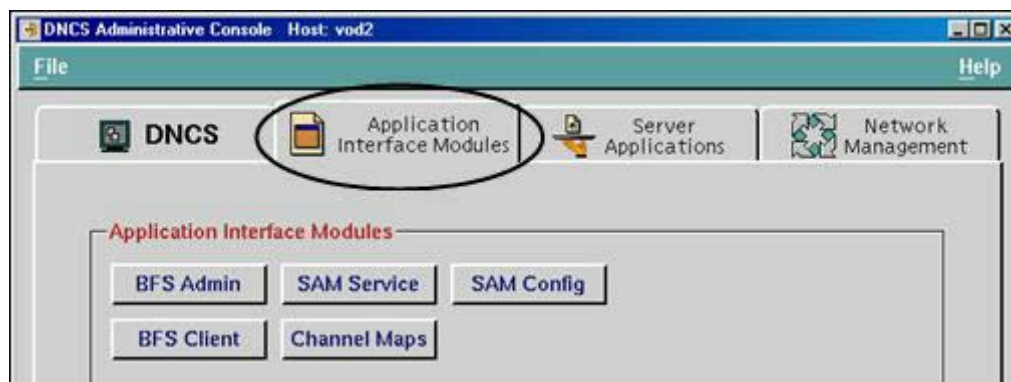
Creating the Inband BFS Carousel

After you define the BFS source, you must create the inband data carousel for the BFS source. The BFS uses data carousels to send the files that tell the DHCT how to properly run a specific application, such as xOD. Carousels make the information available to all DHCTs in the system. However, only those DHCTs specifically authorized and looking for the information will receive it.

An inband carousel sends data files through the BFS QAM modulator to the DHCTs in your system at a rate of at least 27 megabits per second (Mbps).

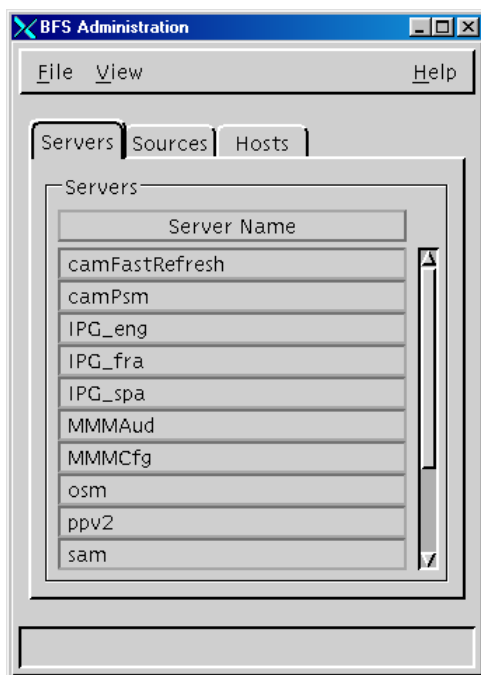
Complete these steps to create the inband BFS carousel.

- 1 On the DNCS Administrative Console, click the **Application Interface Modules** tab if it is not already in the forefront.

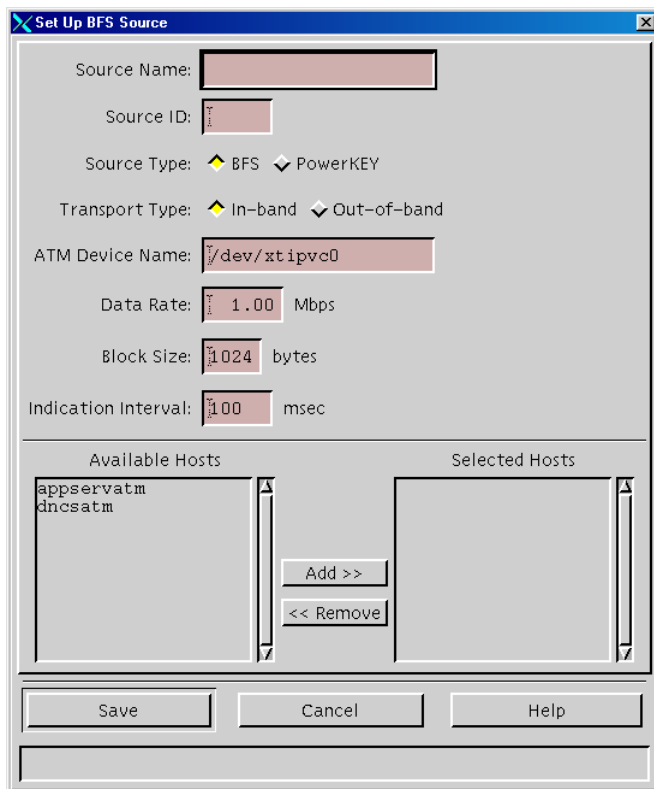


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- 2 Click **BFS Admin**. The BFS Administration window opens.



- 3 Click the **Sources** tab.
- 4 Click **File** and select **New**. The Set Up BFS Source window opens.



- 5 Click in the **Source Name** field and type **SAIXOD_IB** exactly as you did when you added the DNCS source.

- 6 Click in the **Source ID** field and type the source ID you used when you added the DNCS source.
- 7 For the **Source Type**, click the **BFS** option.
- 8 For the **Transport Type**, click the **In-band** option.
- 9 Click in the **Data Rate** field and type **2.00**.

Note: Our engineers recommend a data rate of 2.00 Mbps for optimum performance. However, you can use a data rate of 1.00 Mbps if you have concerns about DNCS performance or load.

- 10 Click in the **Block Size** field and type **4000**.

Note: Our engineers recommend a block size of 4000 bytes for optimum performance. However, if the Broadband Integrated Gateway (BIG) in your headend cannot process the data at this rate, use the default block size of 1024 bytes.

- 11 In the **Available Hosts** field, click to select **dncsatm** and click **Add**.

Important! Do not change any other fields.

Result: The selection moves to the Selected Hosts field. When you finish, the Set Up BFS Source window will look similar to the following example.

The screenshot shows the 'Set Up BFS Source' window with the following configuration:

- Source Name: SAIXOD
- Source ID: 10002
- Source Type: BFS (selected), PowerKEY
- Transport Type: In-band (selected), Out-of-band
- ATM Device Name: /dev/xtipvc0
- Data Rate: 2.00 Mbps
- Block Size: 4000 bytes
- Indication Interval: 100 msec

Hosts configuration:

- Available Hosts: appservatm
- Selected Hosts: dncsatm

Buttons: Add >>, << Remove, Save, Cancel, Help.

- 12 Click **Save**. The system saves the carousel information in the DNCS database and closes the Set Up BFS Source window. The Sources tab on the BFS Administration window updates to include the new carousel information.

Creating the Inband BFS Carousel for Large Files

After you create the inband carousel for small data files, you must create the inband carousel for large data files. This carousel provides larger data files (more than 70 KB in size) for the network.

Complete these steps to create the inband carousel for large files.

- 1 With the Sources tab still in the forefront of the BFS Administration window, click **File** and select **New**. The Set Up BFS Source window opens.
- 2 Click in the Source Name field and type **SAIXOD_IB_LG**. This should be the same name that you entered when you added the DNCS source.
- 3 Click in the **Source ID** field and type the source ID that you used when you added the DNCS source.

Notes:

- Our numbering convention uses even numbers for inband BFS carousels.
- You must use a number that is greater than 200 for the source ID. Source ID numbers 1 through 200 are reserved for system-built sources.
- Our engineers recommend that you add 2 to the source ID that you set for small data files, if possible. For example, if the source ID for the inband carousel for small data files is 4446, use 4448 here.

- 4 For the **Source Type**, click the **BFS** option.
- 5 For the **Transport Type**, click the **In-band** option.
- 6 For the **Data Rate**, type **2.0**.
- 7 Click in the **Block Size** field, and type **4000**.

Note: Our engineers recommend a block size of 4000 bytes for optimum performance. However, if the broadband integrated gateway (BIG) in your headend cannot process the data at this rate, use the default block size of 1024 bytes.

- 8 In the **Available Hosts** field, click to select **dnccsatm** and click **Add**.

Important: Do not change any other fields.

Result: The selection moves to the Selected Hosts field. When you finish, the Set Up BFS Source window will look similar to the following example.

- 9 Click **Save**. The system saves the carousel information in the DNCS database and closes the Set Up BFS Source window. The Sources tab on the BFS Administration window updates to include the new carousel information.
- 10 Your next step is to create an out-of-band BFS source. Go to *Creating an Out-of-Band BFS Source* (on page 37).

Creating an Out-of-Band BFS Source

After you create the inband carousel for large data files, you must create an out-of-band BFS source.

Complete these steps to create an out-of-band BFS source.

- 1 With the Sources tab still in the forefront of the BFS Administration window, click **File** and select **New**. The Set Up BFS Source window opens.
- 2 Click in the Source Name field and type **SAIXOD_OOB**. This should be the same name that you entered when you added the DNCS source.

- 3 Click in the **Source ID** field and type the source ID that you used when you added the DNCS source.

Notes:

- Our numbering convention uses even numbers for inband BFS carousels.
- You must use a number that is greater than 200 for the source ID. Source ID numbers 1 through 200 are reserved for system-built sources.

- 4 For the **Source Type**, click the **BFS** option.
- 5 For the **Transport Type**, click the **Out-of-band** option.
- 6 For the **Data Rate**, type **.01**.
- 7 Click in the **Block Size** field, and type **1024**.

Note: Our engineers recommend a block size of 1024 bytes for optimum performance. However, if the broadband integrated gateway (BIG) in your headend cannot process the data at this rate, use the default block size of 1024 bytes.

- 8 Is the **Indication Interval** entry set to **100 msec**?
 - If **yes**, go to step 9.
 - If no, type **100** in the **Indication Interval** field and then go to step 9.

- 9 In the **Available Hosts** field, click to select **dncsatm** and click **Add**.

Important: Do not change any other fields.

Result: The selection moves to the Selected Hosts field. When you finish, the Set Up BFS Source window will look similar to the following example.

The screenshot shows the 'Set Up BFS Source' dialog box. The fields are filled as follows:

- Source Name: SAIXOD_OOE
- Source ID: 4449
- Source Type: BFS (selected), PowerKEY
- Transport Type: In-band, Out-of-band (selected)
- ATM Device Name: (empty)
- Data Rate: .01 Mbps
- Block Size: 1024 bytes
- Indication Interval: 100 msec

Hosts list:

- Available Hosts: DNCSHOST, appservatm
- Selected Hosts: dncsatm

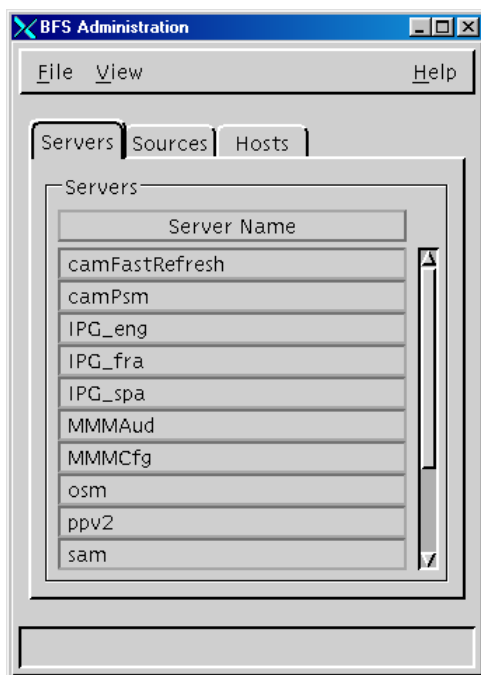
Buttons: Add >>, << Remove, Save, Cancel, Help.

- 10 Click **Save**. The system saves the carousel information in the DNCS database and closes the Set Up BFS Source window. The Sources tab on the BFS Administration window updates to include the new carousel information.
- 11 Your next step is to authorize BFS servers for the carousels you just created. Go to *Authorizing BFS Servers* (on page 39).

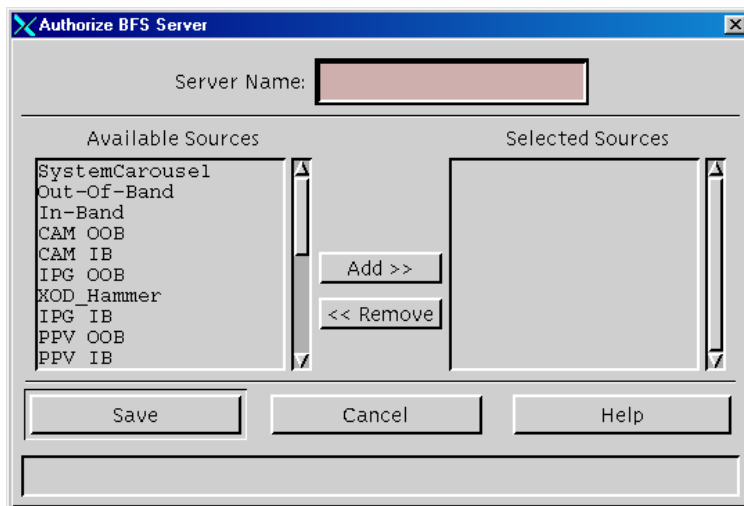
Authorizing BFS Servers

After you create the carousels, you must complete these steps to authorize BFS servers to hold the data for those carousels.

- 1 On the BFS Administration window, click the **Servers** tab.



- 2 Click **File** and select **New**. The Authorize BFS Server window opens.



- 3 Click in the **Server Name** field and type **xod**.
Important! Make sure you type the name in all lowercase letters and that the spelling is correct.
- 4 In the **Available Sources** field, click to select **SAIXOD_IB** and click **Add**. The selection moves to the Selected Sources field.

- 5 In the **Available Sources** field, click to select **SAIXOD_IB_SM** and click **Add**. The selection moves to the Selected Sources field.
- 6 In the **Available Sources** field, click to select **SAIXOD_IB_LG** and click **Add**. The selection moves to the Selected Sources field.
- 7 In the **Available Sources** field, click to select **SAIXOD_OOB** and click **Add**. The selection moves to the Selected Sources field.
- 8 Click **Save**. The system saves the server information in the DNCS database and closes the Authorize BFS Server window. The Servers tab on the BFS Administration window updates to include the new server.
- 9 Click **File** and select **Close** to close the BFS Administration window.
- 10 Your next step is to restart the OSM process. Go to *Restarting the OSM Process* (on page 41).

Restarting the OSM Process

After you authorize the BFS servers, use the dncsControl utility to restart the OSM process on the DNCS.

Follow these instructions to restart the OSM process.

- 1 In an xterm window on the DNCS, type **dncsControl** and then press **Enter**. The DnCS Control window opens.
- 2 Type **2** (for Startup / Shutdown Single Element Group) and then press **Enter**. The DnCS Control window updates to list all of the DNCS processes and servers.
- 3 Type the number associated with the **DNCS HCT Manager & OSM** element group and then press **Enter**. A message appears that prompts the user to enter the target status for the entire element group or to type **e** to display each individual element.
- 4 Type **e** and then press **Enter**. The DnCS Control window updates to list the individual elements that comprise the DNCS HCT Manager & OSM element group.
- 5 Type the number associated with **/dvs/dnCS/bin/osm** and then press **Enter**. A message appears that prompts the user to enter the target status for the selected element.
- 6 Type **2** (for running) and then press **Enter**. A confirmation message appears.
- 7 Type **y** (for yes) and then press **Enter**. The DnCS Control window updates to reflect the current status of each element in the group.
- 8 Wait until the current state (**Curr Stt**) of the **/dvs/dnCS/bin/osm** element is **running**.

Note: The DnCS Control window updates automatically in about 30 seconds or you can press **Enter** to force an update.

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- 9 When the current state is running, follow the on-screen instructions to return to the Main Menu of the DnCS Control window and then to exit from the dnCSControl utility.

Notes:

- When you finish this procedure, you can open the DNCS Session List to make sure that the OSM session and the BFS sessions are listed as “active.” (It may take several minutes for the OSM session to appear as “active.”)
 - Also, you can verify that the front panel LCD on the BFS QAM shows the same number of sessions as the BFS session list on the DNCS UI Session List window.
- 10 The BFS is now set up for xOD services. Your next step is to create a package for xOD. Go to *Create an xOD Package* (on page 43).

Create an xOD Package

Introduction

After you set up the BFS, you must define an xOD package. A package consists of one or more services that are available only to specifically authorized subscribers.

For example, because secure services are encrypted, the only way for a subscriber to access a secure service is for you to place the service in a package. Then, you can authorize the subscriber's DHCT to receive that package. When you authorize the DHCT to receive the package, you enable the DHCT to decrypt the service so that the subscriber can view it.

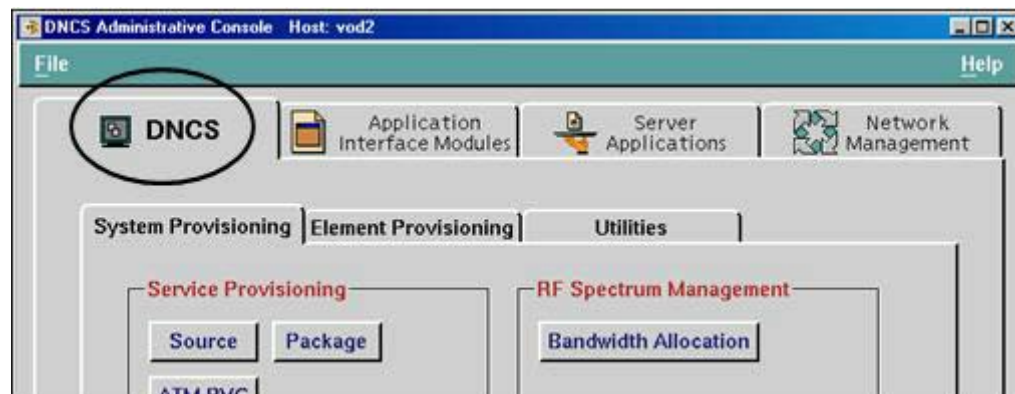
Important: If you have an existing package that you want to use for xOD, you do not need to complete this procedure. Instead, go to *Determining the xOD Package EID* (on page 45).

Creating an xOD Service Package

Complete these steps to define an xOD service package.

Note: If you have an existing package that you want to use for an xOD service, you do not need to complete this procedure for that service. Instead, you can go to **Determining the xOD Package EID**, later in this section.

- 1 On the DNCS Administrative Console, click the **DNCS** tab if it is not already in the forefront.



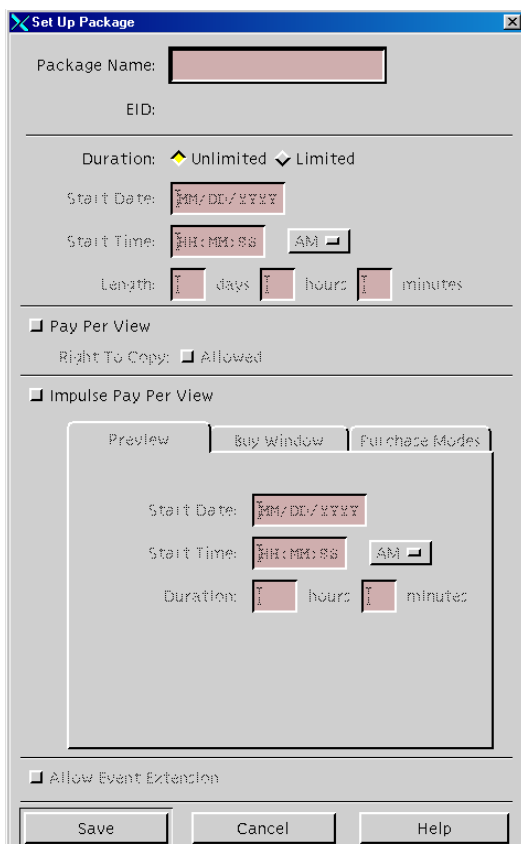
- 2 Click the **System Provisioning** tab if it is not already in the forefront.

- 3 Click **Package**. The Package List window opens.

Note: By default, the Package List window shows **Subscription Only** packages when you first open it. These include only packages that are not pay-per-view (PPV) packages. Click the **Show** button and select **All Packages** to view a list of all packages.



- 4 Click **File** and select **New**. The Set Up Package window opens.



- 5 Click in the **Package Name** field and type **SAIXOD**.
Important: The **Unlimited** option in the **Duration** field is selected by default. This option allows the subscriber to have unlimited access to the package. Do not change this option without first consulting Cisco Services.
- 6 Click **Save**. The system saves the package information in the DNCS database and closes the Set Up Package window. The Package List window updates to include the new package.
- 7 Do you need to create a package for another xOD service?
 - If **yes**, repeat steps 4 through 6.
 - If **no**, your next step is to determine the package Entitlement Identifier (EID). Go to *Determining the xOD Package EID* (on page 45).

Determining the xOD Package EID

When you add a package, the DNCS automatically assigns an EID to the package. The next step in configuring the DNCS to support xOD is to use the package EID to register the xOD package with the SAM.

However, the SAM can recognize only the *decimal* value of the package EID. For a variety of system design reasons, the Set Up Package window displays the EID as a *hexadecimal* value. In addition, the Set Up Package window displays the EID for only a second or two after you have saved the package.

Therefore, before you can register an xOD service with the SAM, you must first go back to the Set Up Package window and determine the package EID. Then, you must convert the EID from a hexadecimal value to a decimal value.

Complete these steps to locate the EID for the xOD package.

- 1 In the Package List window, click to highlight the xOD package.

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- 2 Click **File** and select **Open**. The Set Up Package window opens for the package you selected.

Set Up Package

Package Name: SAIXOD

EID: 1f (hex)

Duration: ☒ Unlimited ☐ Limited

Start Date: MM/DD/YYYY

Start Time: HH:MM:SS AM

Length: days hours minutes

☒ Pay Per View

Right To Copy: ☒ Allowed

☒ Impulse Pay Per View

Preview Buy Window Purchase Modes

Start Date: MM/DD/YYYY

Start Time: HH:MM:SS AM

Duration: hours minutes

☒ Allow Event Extension

Save Cancel Help

- 3 Record the number shown in the **EID** field here _____. In the example shown in step 2, the package EID is **1f**.
- 4 Click **Cancel** to close the Set Up Package window and return to the Package List window.
- 5 Click **File** and select **Close** to close the Package List window and return to the DNCS Administrative Console.
- 6 Your next step is to convert the package EID from a hexadecimal value to a decimal value. Go to *Converting a Package EID to Decimal* (on page 46).

Converting a Package EID to Decimal

After you determine the xOD package EID, use the following table to locate the EID in the **HEX** column. Then, locate the corresponding decimal value in the **DEC** column. For example, if the package EID is **1f**, the decimal value is **31**.

Record the decimal value for the package EID here _____. Then, go to *Register the xOD Package With the SAM* (on page 48).

HEX	DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX	DEC
0	0	20	32	40	64	60	96	80	128	a0	160	c0	192	e0	224
1	1	21	33	41	65	61	97	81	129	a1	161	c1	193	e1	225
2	2	22	34	42	66	62	98	82	130	a2	162	c2	194	e2	226
3	3	23	35	43	67	63	99	83	131	a3	163	c3	195	e3	227
4	4	24	36	44	68	64	100	84	132	a4	164	c4	196	e4	228
5	5	25	37	45	69	65	101	85	133	a5	165	c5	197	e5	229
6	6	26	38	46	70	66	102	86	134	a6	166	c6	198	e6	230
7	7	27	39	47	71	67	103	87	135	a7	167	c7	199	e7	231
8	8	28	40	48	72	68	104	88	136	a8	168	c8	200	e8	232
9	9	29	41	49	73	69	105	89	137	a9	169	c9	201	e9	233
a	10	2a	42	4a	74	6a	106	8a	138	aa	170	ca	202	ea	234
b	11	2b	43	4b	75	6b	107	8b	139	ab	171	cb	203	eb	235
c	12	2c	44	4c	76	6c	108	8c	140	ac	172	cc	204	ec	236
d	13	2d	45	4d	77	6d	109	8d	141	ad	173	cd	205	ed	237
e	14	2e	46	4e	78	6e	110	8e	142	ae	174	ce	206	ee	238
f	15	2f	47	4f	79	6f	111	8f	143	af	175	cf	207	ef	239
10	16	30	48	50	80	70	112	90	144	b0	176	d0	208	f0	240
11	17	31	49	51	81	71	113	91	145	b1	177	d1	209	f1	241
12	18	32	50	52	82	72	114	92	146	b2	178	d2	210	f2	242
13	19	33	51	53	83	73	115	93	147	b3	179	d3	211	f3	243
14	20	34	52	54	84	74	116	94	148	b4	180	d4	212	f4	244
15	21	35	53	55	85	75	117	95	149	b5	181	d5	213	f5	245
16	22	36	54	56	86	76	118	96	150	b6	182	d6	214	f6	246
17	23	37	55	57	87	77	119	97	151	b7	183	d7	215	f7	247
18	24	38	56	58	88	78	120	98	152	b8	184	d8	216	f8	248
19	25	39	57	59	89	79	121	99	153	b9	185	d9	217	f9	249
1a	26	3a	58	5a	90	7a	122	9a	154	ba	186	da	218	fa	250
1b	27	3b	59	5b	91	7b	123	9b	155	bb	187	db	219	fb	251
1c	28	3c	60	5c	92	7c	124	9c	156	bc	188	dc	220	fc	252
1d	29	3d	61	5d	93	7d	125	9d	157	bd	189	dd	221	fd	253
1e	30	3e	62	5e	94	7e	126	9e	158	be	190	de	222	fe	254
1f	31	3f	63	5f	95	7f	127	9f	159	bf	191	df	223	ff	255

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Register the xOD Package with the SAM

Introduction

After you define the xOD package and determine the decimal value of its EID, you must register the package with the SAM. Registering the xOD package with the SAM associates the xOD service with the xOD client software.

The xOD client software contains attributes that tell authorized DHCTs how to download xOD services so that subscribers can access them. To access an xOD service, a DHCT must download the client software from the **saixod.ptv** file.

Before You Begin

Before you can register the xOD package with the SAM, you must have the following information from your system administrator:

- Name of the xOD service as you want it to appear on the channel map
- Short description to identify the service on the IPG and channel banner (for example, the short description for HBO On DemandSM might be **HOD**); this must match the short description defined by your service provider
- Parameters to include in the Application URL (discussed in more detail in **Guidelines for the SAM Application URL**, next in this section)
- Number of the logo associated with the xOD service, if applicable (you can get a list of logo numbers from your account representative, or you can have our engineers create a logo for you and assign it a number)
- If applicable, the source ID of the video content you want to display in the quarter screen that appears in the Main Catalog window
- If applicable, the source ID of the audio content you want to play as background when the subscriber tunes to the Main Catalog window

Guidelines for the SAM Application URL

When you register the xOD package with the SAM, you must enter information about the service in the SAM Application URL field. This information tells DHCTs how to process the xOD service.

The basic format for the Application URL is shown in the following example:

```
bfs://xod/CPU/saixod.ptv;TunerInit=false;EID=31;level2=false;SEL=_MODQ;  
version=3605;arg=HOD,TIG,REQ1,SUB2
```

Important: When you enter this information, you allow the information to appear continuously on one line and do not insert any spaces.

The parameters you include in this URL are dependent upon how you want the DHCT to process the xOD service. Each parameter is separated from the others by a semicolon (;).

The previous example includes the following possible parameters that can appear in the Application URL:

- xOD client application path
- TunerInit
- EID
- level2
- SEL
- version
- argumentlist

Each of these parameters is described in more detail in the following subsections.

xOD Client Application Path (Required)

The first parameter that appears in the Application URL indicates the path on the BFS server where the client application resides. This parameter tells the DHCT where to go to download the xOD application. In the case of xOD, this parameter is **bfs://xod/CPU/saixod.ptv**.

TunerInit (Required)

The TunerInit parameter tells the DHCT whether or not to play background audio when the subscriber tunes to the xOD catalog window. If you do not want to play background audio, set this parameter to **false** (**TunerInit=false**).

EID (Required)

The EID parameter identifies the xOD package in decimal format as determined in the previous section of this chapter, Create an xOD Package. For example, if the decimal value of the xOD service package is 31, you would set this parameter to **31** (**EID=31**).

Note: If you are registering a TIG channel, use the base xOD package EID.

level2 (Required)

The level2 parameter specifies whether or not the client application is able to allow Level 2 functionality, such as changing the volume with the remote control. Set this value to **false** (**level2=false**).

SEL (Required)

The SEL indicates that you want your DHCTs to launch the xOD service from the IPG as an overlay service. If this is the case, set this parameter to **_MODQ** (**SEL=_MODQ**). If you do not include this parameter, the service will be accessible only by tuning directly to the channel.

version (Required)

The version parameter indicates the current version of the xOD client software.

When a subscriber tunes to an xOD channel, the SARA software on the DHCT checks the SAM for the xOD client version. SARA then compares that version with the version already installed on the DHCT, if any.

If these versions do not match, the DHCT automatically downloads the new client version. This process ensures that the latest version of the xOD client software is always installed on the DHCT.

Important: You must use the exact format of the complete software build number, minus any periods or dashes. For example, if software build number is **3.6.0.5**, you would set the version parameter to **3605 (version=3605)**. If there were any letters in the version number, you would record those (for example **3605b1**). If you do not type the version correctly into the SAM Application URL, when subscribers tune to an xOD channel and their DHCTs attempt to reload the xOD application, the DHCTs will not be able to tune to the channel. After you install or upgrade the ASI Server client software, you can find the build number by typing the string **saixod.ptv | grep -i version** and pressing **Enter**. The system displays the xOD client version number that is installed on the system as shown in this example “**Version:3605.**”

Argumentlist (Combination of Required and Optional)

The argumentlist (arg) parameter can contain a variety of elements (separated by commas) that further define the xOD service. The basic format of the argument list is as follows:

arg=appletname,TIG,REQ# | #,SUB#

appletname (Required)

The appletname parameter is a required element of the argument list. This parameter identifies the name of the xOD service as defined in the xOD metadata and the BMS. For example, the appletname for HBO On Demand is **HOD**. Therefore, this portion of the argumentlist would appear as follows: **arg=HOD**

Obtain the official list of applet names from your service provider.

Important: The applet name in the argumentlist *must match exactly* (including case) the applet name defined in the xOD metadata and the BMS. Therefore, do *not* just make up a name.

TIG (Optional)

The TIG parameter indicates that this space is being reserved on the SAM as a channel dedicated to displaying specific xOD program offerings. If this is not the case, do not use this parameter. Also, do not use this parameter for the base xOD package (for example, HBO On Demand).

If you are planning to use the TIG feature, you must register each TIG channel separately with the SAM. For example, you could choose to dedicate channel 200 to show specific movies from the HBO On Demand program lineup. This way, subscribers do not have to access the xOD catalog window to see that those particular movies are offered. Instead they could order them through the IPG.

Because the offerings are considered subsets of the HBO On Demand service, you do not need to add separate packages for them. You would simply use the HBO On Demand package EID in the SAM Application URL. However, you do need to allot the channel space on the SAM. In this example, you might call the TIG channel **HOD1**.

REQ##,SUB# (Optional)

Including the **REQ# | #,SUB#** parameters in the argument list indicates that you want the xOD application to function as an SVOD service. If you include only the REQ parameter in the argument list, the xOD application will function as a PPV service.

These parameters specify the base services that you require subscribers to have in order to receive PPV or SVOD and the type of service package that the SVOD application provides authorized subscribers. For subscribers to receive SVOD service, both of these parameters must be present in the argument list.

To specify the base services and service package that your PPV or SVOD application uses, replace the # symbols with the entitlement IDs (EIDs) of base services and the service package as described in the following paragraphs:

- The **REQ# | #** parameter indicates the base services that you require for PPV or SVOD, such as HBO or HBO Family. For example, if the base service you require is HBO and its EID is **1**, type **REQ1** in the argument list, replacing the # symbol with the number **1**. As another example, if the base service you require is HBO Family and its EID is **3**, type **REQ3** in the argument list.
- If you require that your subscribers have more than one base service to receive PPV or SVOD, add additional EIDs to this parameter and separate each EID with a pipe symbol (|). For example, if you require subscribers to have both HBO and HBO Family in order to receive PPV or SVOD, type **REQ1|3** in the argument list.

- The **SUB# parameter** indicates the service package that the SVOD application provides, such as HBO On Demand (HOD). If you want the SVOD application to provide authorized subscribers the HOD service package, specify the EID of the HOD package in **SUB#** portion of the parameter. For example, if the EID of the HOD package is **2**, type **SUB2** in the argument list, replacing the symbol # with the number **2**.

In this example, typing the parameters **REQ1 | 3,SUB2** in the argument list indicates that you want authorized subscribers to receive the HOD service as a subscription package. It also indicates that these subscribers will receive HBO and HBO Family as part of the HOD service package.

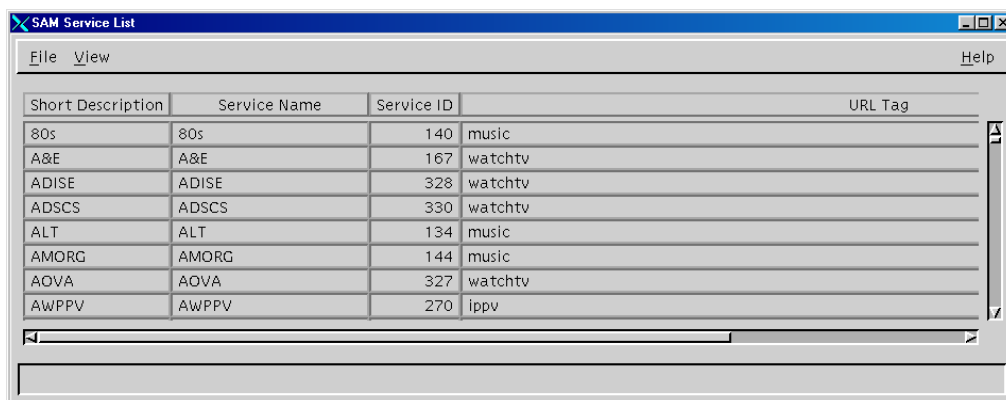
Important!

- For the xOD application to function as an SVOD service, both the REQ# | # parameter and the SUB# parameter must be included in the argument list. If only one of these parameters is present in the argument list, the xOD application will not function properly.
- You must type a comma to separate the REQ parameter from the SUB parameter.
- If you support more than one DNCS, remember that each DNCS uses service package EIDs that are unique to it. For the SVOD service to function correctly, make sure that you use the correct service package EIDs for each DNCS that you configure.

Registering the xOD Package

Complete these steps to register the xOD package with the SAM.

- 1 On the DNCS Administrative Console, click the **Application Interface Modules** tab if it is not already in the forefront.
- 2 Click **SAM Service**. The SAM Service List window opens.



The screenshot shows a window titled "SAM Service List" with a menu bar (File, View, Help) and a table of services. The table has four columns: Short Description, Service Name, Service ID, and URL Tag. The data is as follows:

Short Description	Service Name	Service ID	URL Tag
80s	80s	140	music
A&E	A&E	167	watchtv
ADISE	ADISE	328	watchtv
ADSCS	ADSCS	330	watchtv
ALT	ALT	134	music
AMORG	AMORG	144	music
AOVA	AOVA	327	watchtv
AWPPV	AWPPV	270	ippv

- 3 Click **File** and select **New**. The Set Up SAM Service window opens.

- 4 Click in the **Service Name** field and type the name you want to use to identify this service (for example, HBO On Demand or HOD1). You can use up to 20 alphanumeric characters. Record this information. You will need it when you add the service to a channel map.
- 5 Click in the **Short Description** field and type a brief description of this service. For example, for the HBO On Demand service, you might type **HOD**. This description appears on the IPG and on the channel banner on the subscriber's television screen.
- Important:** The short description must match the short description defined by your service provider. You will also need this information when you include the service on the IPG.
- 6 Click in the **Long Description** field and type a detailed description of this service. You can use up to 32 alphanumeric characters. This information appears on the TV screen when subscribers tune to the channel.
- 7 Click in the **Application URL** field and type the appropriate information based on the *Guidelines for the SAM Application URL* (on page 48).
- Important:** It is critical that you enter this information correctly. Please follow the guidelines provided previously. If you do not enter this information correctly, your DHCTs will not process the xOD service correctly and may not be able to process it at all.
- Note:** You can click **Select** to modify or use an existing URL.
- 8 Do you want to display a logo on the television screen when the subscriber tunes to this service?
- If **yes**, click in the **Logo** field and type the number for the logo associated with this service.
 - If **no**, click in the **Logo** field and type the number **0**.

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- 9 Do you want to show video in the quarter screen that appears on the Main Catalog window?
 - If **yes**, click in the **Number** field and type the source ID that corresponds to the video content you want to display. Then, go to step 11.

Note: For video to display, you must also set the CH_MODE_QTR_CONTENT behavior on the ASI server to **B**. Refer to the *xOD 1.6 Configuration Guide* (part number 4004032), for more information.
 - If **no**, click in the **Number** field and type the number **0**. Then, go to step 10.
 - 10 Do you want to play only background audio when the subscriber tunes to the xOD catalog window?
 - If **yes**, click in the **Number** field and type the source ID that corresponds to the audio content you want to play.
 - If **no**, click in the **Number** field and type the number **0**.
 - 11 Click **Save**. The system saves the information in the DNCS database, registers the xOD service with both the SAM and the BFS, and closes the Set Up SAM Service window. The SAM Service List window updates to include the new service with its Service ID.
 - 12 Record the Service ID that the system assigns to the service. You will need it when you add the service to the IPG. In the following example, the Service ID is **341**.
- | Short Description | Service Name | Service ID | URL Tag |
|-------------------|--------------|------------|---|
| xOD | xOD Hammer | 341 | paseng.ptv;level2=false;EID=25;app=hammer |
- 13 Do you need to register another xOD service with the SAM?
 - If **yes**, repeat steps 3 through 12.
 - If **no**, click **File** and select **Close** to close the SAM Service List window and return to the DNCS Administrative Console.
 - 14 Your next step is to add the xOD service to a channel map. Go to *Add the xOD Service to a Channel Map* (on page 55).

Add the xOD Service to a Channel Map

Introduction

The set of channels that specific subscribers are authorized to receive through their DHCTs is called a *channel map*. After you register an xOD service with the SAM, you must add the service to a channel map so that your subscribers can access it by tuning to a particular channel.

Before You Begin

Before you add a service to a channel map, you must have the following information:

- Channel number on which the service is to be displayed
- Name of the service as you defined it when you registered it with the SAM

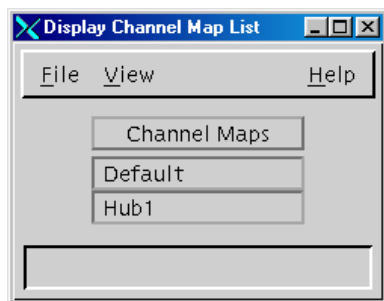
If you are adding this service to a new channel map, you must first complete the procedure in *Adding a Channel Map* (on page 55). If you are adding the service to an existing channel map, you can proceed to *Adding an xOD Service to a Channel Map* (on page 57).

Adding a Channel Map

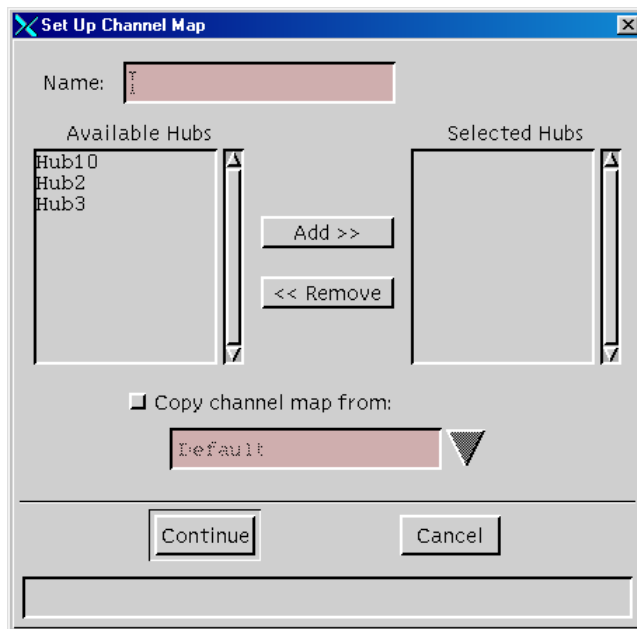
Complete these steps to create a new channel map.

Note: If a channel map already exists to which you want to add the xOD service, you do *not* need to complete this procedure. Instead, go to *Adding an xOD Service to a Channel Map* (on page 57).

- 1 On the DNCS Administrative Console, click the **Application Interface Modules** tab if it is not already in the forefront.
- 2 Click **Channel Maps**. The Display Channel Map List window opens.

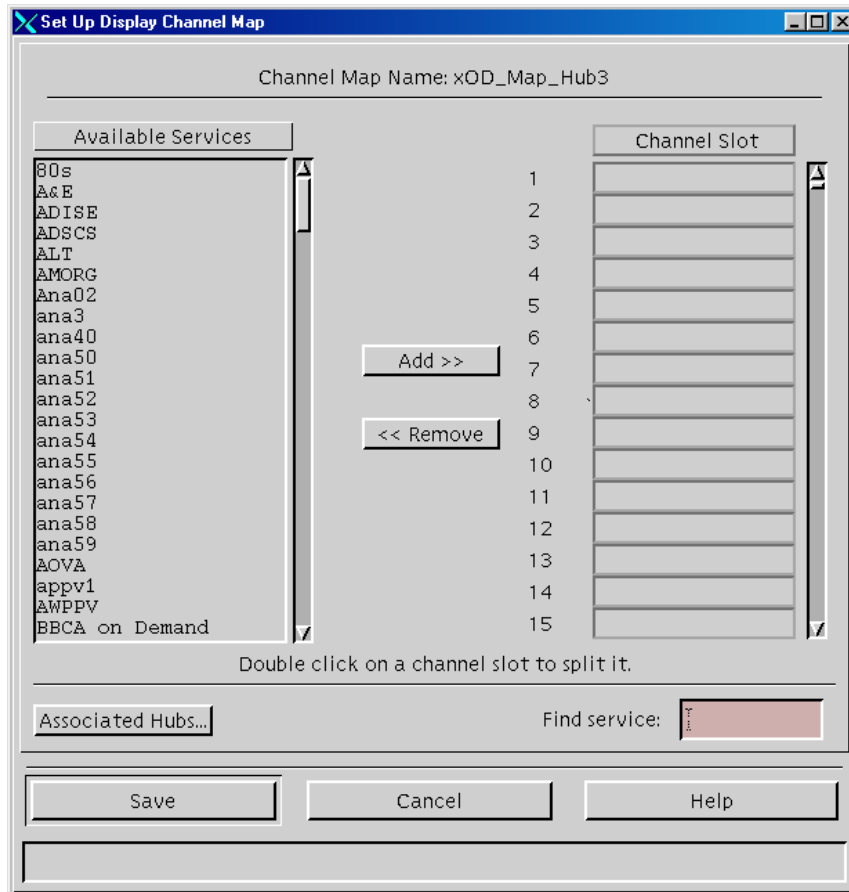


- 3 Click **File** and select **New**. The Set Up Channel Map window opens.



- 4 Click in the **Name** field and type the name you want to use to identify this channel map. You can use up to 20 alphanumeric characters.
- 5 In the **Available Hubs** field, click to select the hub you want to have access to this channel map, and then click **Add**. The hub name you selected moves from the Available Hubs field into the Selected Hubs field.
Note: You can select more than one hub by holding down the Shift key as you click on each hub name.
- 6 Do you want to base this channel map on an existing channel map so that it contains most of the same channel assignments?
 - If **yes**, click the **Copy channel map from** option. The field below this text becomes active. Click the corresponding arrow and select the channel map you want to copy from the list that appears. When finished, go to step 7.
 - If **no**, go to step 7.

- 7 Click **Continue**. The Set Up Display Channel Map window opens.



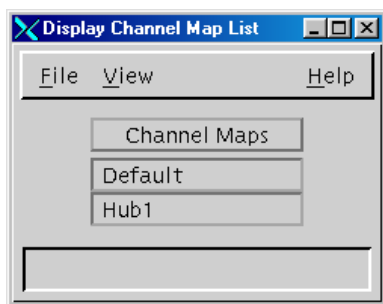
- 8 Your next step is to add a service to the channel map. Go to *Adding an xOD Service to a Channel Map* (on page 57).

Adding an xOD Service to a Channel Map

Complete these steps to add an xOD service to a channel map.

- 1 Is the Set Up Display Channel Map window open for the channel map you want to add this service to?
 - If **yes**, go to step 6.
 - If **no**, go to step 2.
- 2 On the DNCS Administrative Console, click the **Application Interface Modules** tab if it is not already in the forefront.

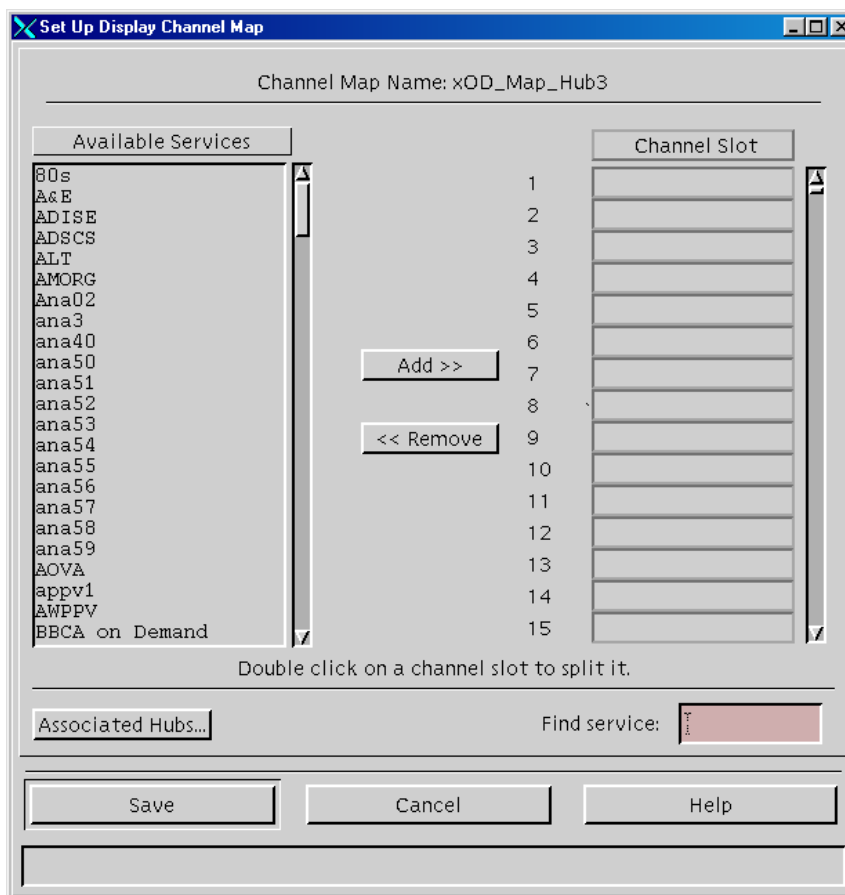
- 3 Click **Channel Maps**. The Display Channel Map List window opens.



- 4 Click once on the row containing the channel map to which you want to add this service.

Note: If you select the **Default** channel map, this service will be available to all hubs.

- 5 Click **File** and select **Open**. The Set Up Display Channel Map window opens for the channel map you selected.



- 6 Scroll through the **Available Services** field until you see the service you want to add, and then click to highlight that service.

Note: The service name is the name you entered when you registered the service.

- 7 Scroll through the **Channel Slot** field until you see the channel to which you want to assign the service, and then click to highlight that channel slot.

- 8 Click **Add**. The service name moves from the Available Services field to the Channel Slot field.
- 9 Do you need to add another service to this channel map?
 - If **yes**, repeat steps 6 through 8.
 - If **no**, click **Save**.

Result: The system saves the channel map information in the DNCS database, closes the Set Up Display Channel Map window, and returns to the Display Channel Map List window.

- 10 Click **File** and select **Close** to close the Display Channel Map List window and return to the DNCS Administrative Console.
- 11 Your next step is to include the name of the xOD service on your IPG. Go to *Add the xOD Service to the IPG* (on page 60).

Add the xOD Service to the IPG

Introduction

After you add the xOD service to a channel map, you can include the service name in the IPG as described in this section.

Before You Begin

The xOD IPG collector runs on the Application Server and collects the latest xOD IPG files from the ASI Server. Before you add the xOD service to the IPG, make sure you can ping the ASI Server from the Application Server. If not, you first need to establish a communication path between the two servers. If you need assistance, contact Cisco Services.

Process Overview

To add an xOD service to the IPG, you must complete the following procedures, which are detailed later in this section.

- 1 Add an entry for the ASI server to the Application Server hosts table.
- 2 Add the IPG xOD collector.
- 3 Add the xOD service to the list of IPG services.

Adding ASI Server to the Application Server Hosts Table

Before you create an xOD IPG collector, you must add the ASI server IP address and host name to the Application Server hosts table. This process allows you to type the host name, which is usually easier to remember, rather than the IP address every time you need to work with the ASI server through the Application Server.

In addition to the IP address for the ASI server, you need to have **su** privileges and the password.

Complete these steps to add the ASI server to the Application Server hosts table.

Note: This entry should match the ASI server entry you added to the DNCS Hosts Table. See *Add Entries to the DNCS Hosts Table* (on page 18).

- 1 In the xterm window, type **telnet appservatm** and press **Enter**. The system telnets to the Application Server and a prompt appears.
- 2 Log in as **su**. A prompt appears.
- 3 Type **vi /etc/hosts** and press **Enter**. The `/etc/hosts` file opens in vi editor.

- 4 Insert a blank line and add an entry for the ASI server using the following format:
`xxx.xx.xx.xxx asi`
Note: In the format shown above, xxx.xx.xx.xxx represents the IP address.
- 5 Type **:wq!** and press **Enter**. The system exits vi editor and a prompt appears.
- 6 Type **exit** and press **Enter**. The system exits **su** mode on the Application Server and a prompt appears.
- 7 Type **exit** and press **Enter**. The system closes the telnet connection with the Application Server, returns you to the DNCS, and a prompt appears. Leave the xterm window open. You will need it to complete some of the other procedures in this guide.
- 8 Go to *Adding the IPG xOD Collector* (on page 61).

Adding the IPG xOD Collector

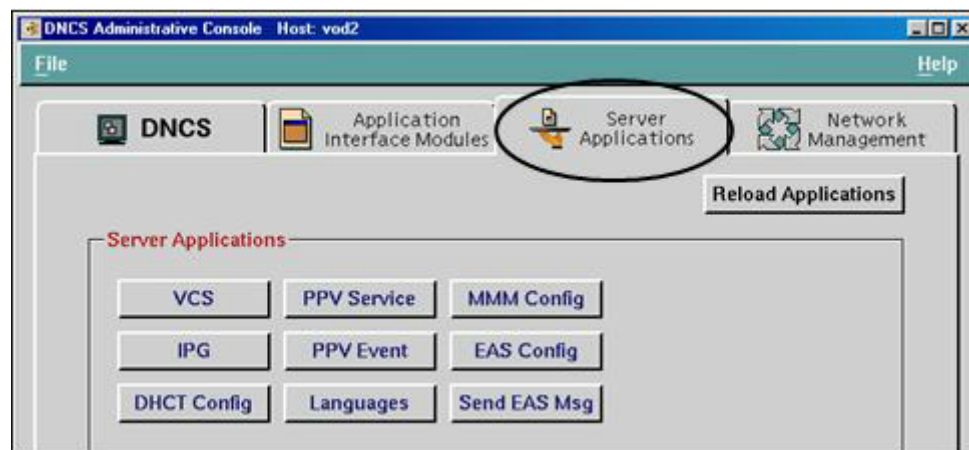
The IPG collector is a process that resides on the Application Server. The IPG collector runs automatically once a day to retrieve IPG data from the IPG data provider. You must add a separate IPG collector for xOD services. However, you need only one IPG collector for all xOD packages (for example, HBO On Demand, Starz On Demand, and Showtime On Demand).

Important:

- You need the ASI server **prasara** user password from your system administrator.
- You must select a unique number to use as the ID for this collector.
- Our engineers strongly recommend that you schedule the xOD IPG collector to run at least one hour before the collection time of your main IPG collector. So, you need to know what time your main IPG collector runs.

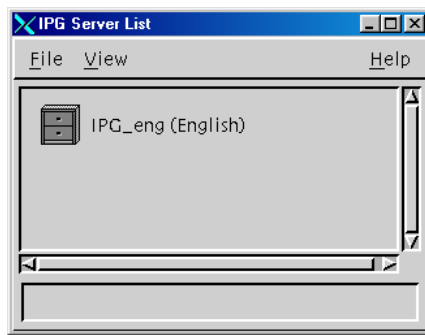
Complete these steps to set up an xOD IPG collector.

- 1 On the DNCS Administrative Console, click the **Server Applications** tab.



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- 2 Click **IPG**. The IPG Server List window opens.



- 3 Click to highlight your primary IPG collector (usually **IPG_eng**).
- 4 Click **File** and select **New Collector**. The Set Up IPG Collector window opens.

- 5 Click in the **ID** field and type a unique ID.
- 6 Click the **Service Provider** button and select **SACOMP**.
- 7 Click in the **Description** field and type the collector name or description (for example, **xOD Collector**).
- 8 Click in the **Host Name** field and type **asi** to indicate the ASI server.
- 9 Click in the **User Name** field and type **prasara**. This is the user name for logging on to the ASI server.
- 10 Click in the **Password** field and type the prasara user password.
- 11 Click in the **Directory** field and type **/export/home/prasara/ipgflatfiles**. This is the directory path where the daily zip file is updated on the ASI server.

12 Click in the **File Template** field and type the specified file format of the ZIP file (for example, **saixod<MMDDYY>.dat.gz**).

13 For **Daily Collection Time**, select the time you want the xOD IPG collector to gather xOD data. Use the military time format. For example, you would type 10:30 p.m. as 22:30.

Important: The time you select must match the time you specify during the xOD client software installation, which is described later in this guide. Our engineers strongly recommend that you schedule the xOD IPG collector to run at least one hour before the collection time of your main IPG collector.

14 If you see a **Maximum Long Description Length** field, type **240**. Otherwise, go to step 15.

Note: This field specifies the number of characters that can be stored for an IPG description and sent to DHCTs. Current versions of SARA software cannot display more than 240 characters.

15 Click **Save**. A Password Prompt window opens.

16 Type the prasara user password and click **Continue**. The system saves the collector information in the DNCS database, closes the Set Up IPG Collector window, and returns to the IPG Server List window, which updates to include the new collector.

17 Your next step is to add the xOD service to the list of IPG services. Go to *Adding the xOD Service to the List of IPG Services* (on page 63).

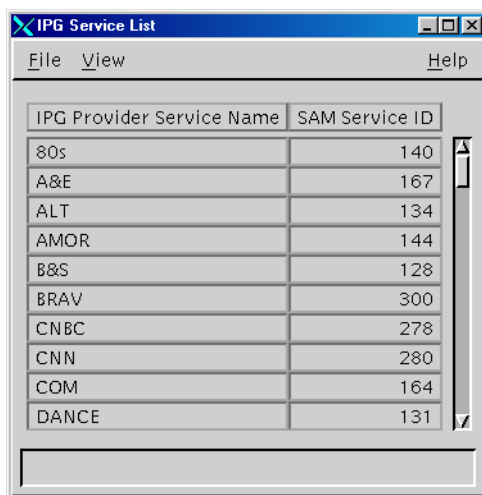
Adding the xOD Service to the List of IPG Services

After you add an xOD IPG collector, you can add the xOD service to the IPG Service List. This list determines which channel information gets populated on the IPG.

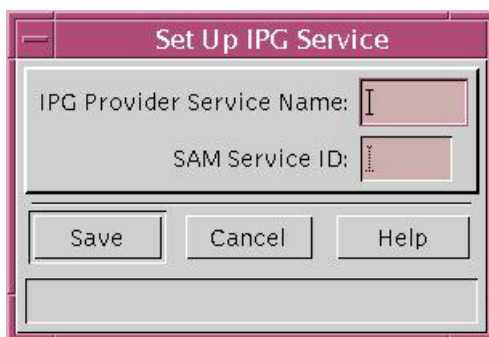
Important: If you are using the TIG feature, you must add the base xOD package (such as HBO On Demand), as well as each TIG service (HOD1, HOD2, and so on) to the IPG Service List.

Complete these steps to add an xOD service to the IPG Service List.

- 1 On the IPG Server List window, click **File** and select **Services**. The IPG Service List window opens.



- 2 Click **File** and select **New**. The Set Up IPG Service window opens.



- 3 Click in the **IPG Provider Service Name** field and type the same name you used for the short description on the Set Up SAM Service window.
- 4 Click in the **SAM Service ID** field and type the service ID that the system assigned for this service on the SAM Service List window.
- 5 Click **Save**. The system saves the information in the DNCS database and closes the Set Up IPG Service window. The IPG Service List window updates to include the new service.

- 6 Do you need to add another service to the IPG Service List?
 - If **yes**, repeat steps 2 through 5.
 - If **no**, click **File** and select **Close**. A message window opens asking if you want to update the server. Go to step 7.
- 7 Click **Yes**. The system updates the IPG server and closes the message window.
- 8 Click **File** and select **Close**. The system closes the IPG Service List window and returns to the IPG Server List window.
- 9 Click **File** and select **Close**. The system closes the IPG Server List window and returns to the DNCS Administrative Console.
- 10 Your next step is to verify that the session is active and that it contains the correct number of continuous feeds. Go to *Verify the Session* (on page 66).

Verify the Session

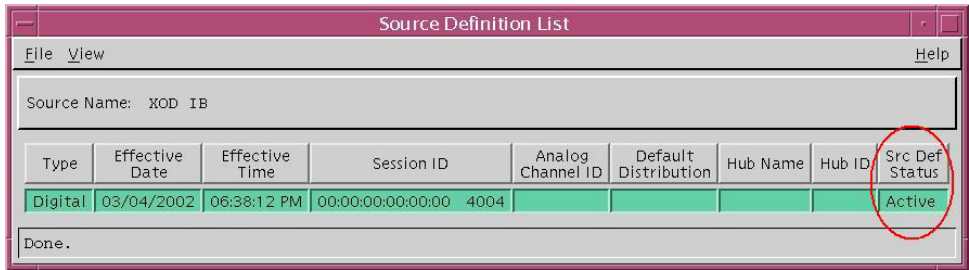
Overview

Perform both of the following checks to verify that the session is active for the xOD service and that it contains the correct number of continuous feeds.

Note: If you scheduled the session to start at a later time, you must wait to perform these checks until after the session starts.

Verifying That the Session is Active

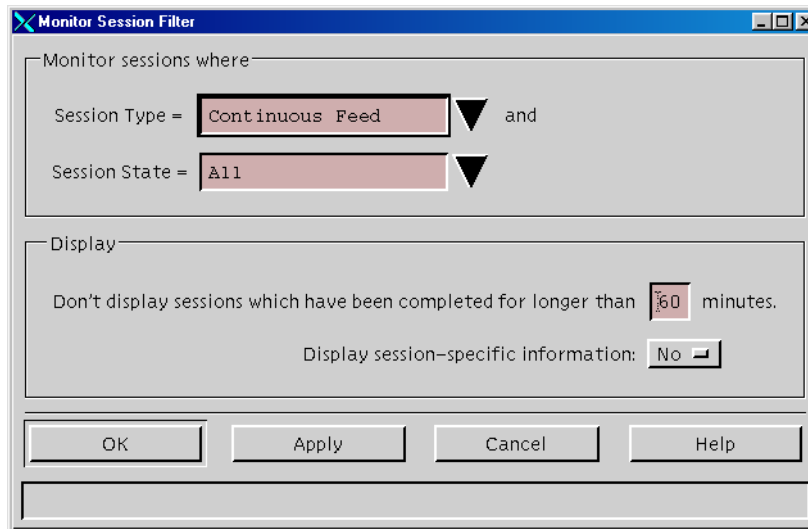
Complete these steps to verify that the session is active.

- 1 On the DNCS Administrative Console, click the **DNCS** tab if it is not already in the forefront.
 - 2 Click the **System Provisioning** tab if it is not already in the forefront.
 - 3 Click **Source**. The Source List window opens.
 - 4 Click to highlight the **SAIXOD_IB** source.
 - 5 Click **File** and select **Source Definitions**. The Source Definition List window opens for the SAIXOD_IB source.
 - 6 Make sure the **Src Def Status** column for the source session displays **Active** as shown in the following example. If it does not display **Active**, call Cisco Services.
- 
- | Type | Effective Date | Effective Time | Session ID | Analog Channel ID | Default Distribution | Hub Name | Hub ID | Src Def Status |
|---------|----------------|----------------|------------------------|-------------------|----------------------|----------|--------|----------------|
| Digital | 03/04/2002 | 06:38:12 PM | 00:00:00:00:00:00 4004 | | | | | Active |
- 7 Repeat steps 4 through 6 for the **SAIXOD_IB_SM** source and the **SAIXOD_BI_LG** source.
 - 8 Click **File** and select **Close** to close the Source Definition List window and return to the Source List window.
 - 9 Click **File** and select **Close** to close the Source List window and return to the DNCS Administrative Console.
 - 10 Your next step is to verify that the session has the correct number of CF sessions. Go to *Verifying the Number of CF Sessions* (on page 67).

Verifying the Number of CF Sessions

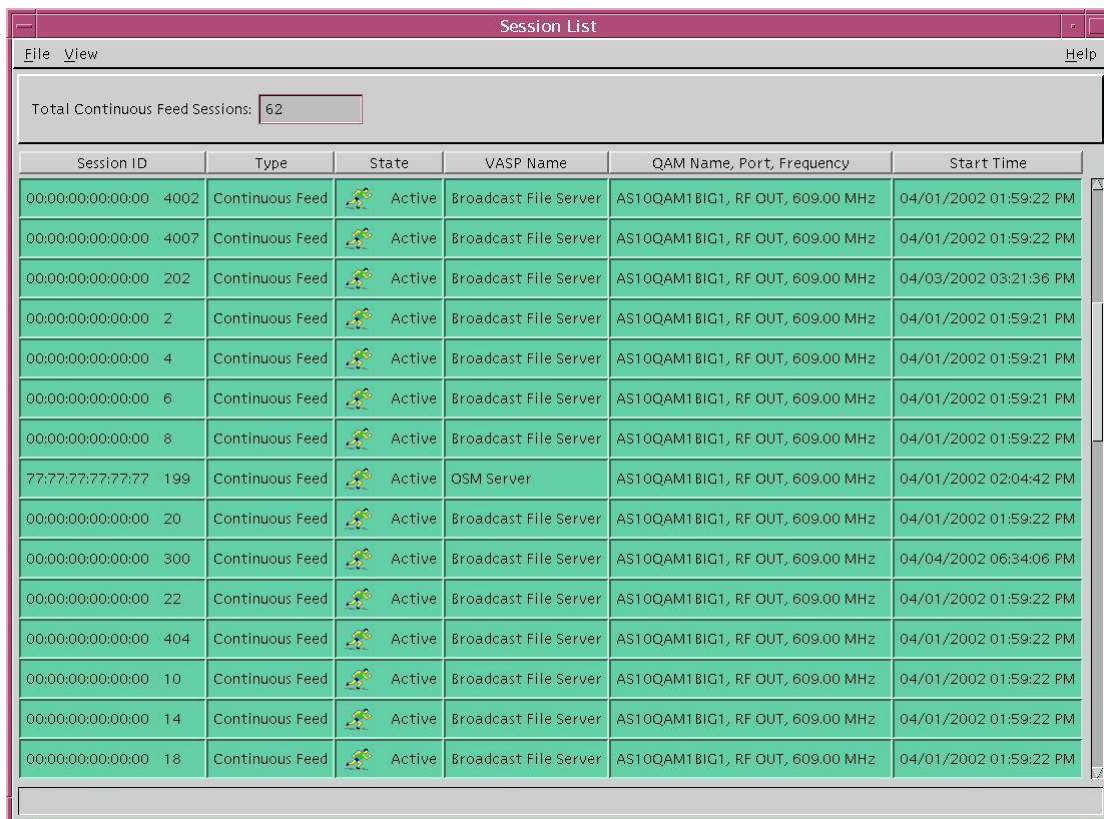
Complete these steps to verify that the number of CF sessions on the DNCS graphical user interface (GUI) matches the number of CF sessions on the front panel of the BFS QAM modulator.

- 1 On the DNCS Administrative Console, click the **DNCS** tab if it is not already in the forefront.
- 2 Click the **Utilities** tab.
- 3 Click **Session List**. The Monitor Session Filter window opens. The following example appears slightly different in systems with SR 2.1 or later.



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- 4 Make sure the **Session Type** is **Continuous Feed** and click **OK**. The Session List window opens.



Session ID	Type	State	VASP Name	QAM Name, Port, Frequency	Start Time
00:00:00:00:00:00 4002	Continuous Feed	Active	Broadcast File Server	AS10QAM1BIG1, RF OUT, 609.00 MHz	04/01/2002 01:59:22 PM
00:00:00:00:00:00 4007	Continuous Feed	Active	Broadcast File Server	AS10QAM1BIG1, RF OUT, 609.00 MHz	04/01/2002 01:59:22 PM
00:00:00:00:00:00 202	Continuous Feed	Active	Broadcast File Server	AS10QAM1BIG1, RF OUT, 609.00 MHz	04/03/2002 03:21:36 PM
00:00:00:00:00:00 2	Continuous Feed	Active	Broadcast File Server	AS10QAM1BIG1, RF OUT, 609.00 MHz	04/01/2002 01:59:21 PM
00:00:00:00:00:00 4	Continuous Feed	Active	Broadcast File Server	AS10QAM1BIG1, RF OUT, 609.00 MHz	04/01/2002 01:59:21 PM
00:00:00:00:00:00 6	Continuous Feed	Active	Broadcast File Server	AS10QAM1BIG1, RF OUT, 609.00 MHz	04/01/2002 01:59:21 PM
00:00:00:00:00:00 8	Continuous Feed	Active	Broadcast File Server	AS10QAM1BIG1, RF OUT, 609.00 MHz	04/01/2002 01:59:22 PM
77:77:77:77:77:77 199	Continuous Feed	Active	OSM Server	AS10QAM1BIG1, RF OUT, 609.00 MHz	04/01/2002 02:04:42 PM
00:00:00:00:00:00 20	Continuous Feed	Active	Broadcast File Server	AS10QAM1BIG1, RF OUT, 609.00 MHz	04/01/2002 01:59:22 PM
00:00:00:00:00:00 300	Continuous Feed	Active	Broadcast File Server	AS10QAM1BIG1, RF OUT, 609.00 MHz	04/04/2002 06:34:06 PM
00:00:00:00:00:00 22	Continuous Feed	Active	Broadcast File Server	AS10QAM1BIG1, RF OUT, 609.00 MHz	04/01/2002 01:59:22 PM
00:00:00:00:00:00 404	Continuous Feed	Active	Broadcast File Server	AS10QAM1BIG1, RF OUT, 609.00 MHz	04/01/2002 01:59:22 PM
00:00:00:00:00:00 10	Continuous Feed	Active	Broadcast File Server	AS10QAM1BIG1, RF OUT, 609.00 MHz	04/01/2002 01:59:22 PM
00:00:00:00:00:00 14	Continuous Feed	Active	Broadcast File Server	AS10QAM1BIG1, RF OUT, 609.00 MHz	04/01/2002 01:59:22 PM
00:00:00:00:00:00 18	Continuous Feed	Active	Broadcast File Server	AS10QAM1BIG1, RF OUT, 609.00 MHz	04/01/2002 01:59:22 PM

- 5 Click the **QAM Name, Port, Frequency** column to sort the list alphabetically by QAM modulator name.
- 6 Locate the BFS QAM modulator.
- 7 Count the number of sessions listed for this BFS QAM modulator.
- 8 Verify that the number of sessions counted matches the number of sessions displayed on the front panel of the BFS QAM modulator. If it does not, call Cisco Services.
- 9 Click **File** and select **Close** to close the Session List window and return to the DNCS Administrative Console.
- 10 Your next step is to authorize a test DHCT to receive the xOD package. Go to *Authorize a Test DHCT* (on page 69).

Authorize a Test DHCT

Introduction

Because you created a new package for xOD, you need to provision the targeted DHCTs with this new package. This section contains instructions for adding this package to the list of packages that are available to an individual DHCT.

Note: Use these instructions if you want to test an individual DHCT or a small sample of DHCTs. If you want to add the SAIXOD package to a large number of DHCTs at once, you must add this package through your billing system. In that case, refer to the billing system vendor's documentation for further details.

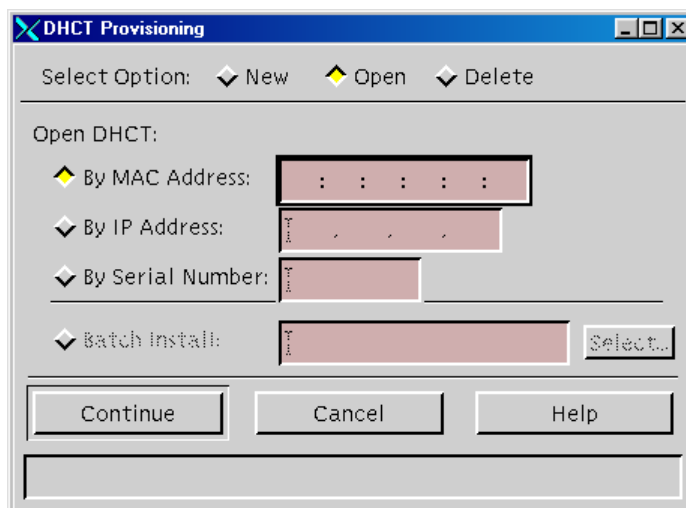
Before You Begin

Before you begin you must have the MAC address of the DHCT you plan to use.

Authorizing a DHCT with the SAIXOD Package

Follow these steps to authorize a test DHCT to receive the SAIXOD package.

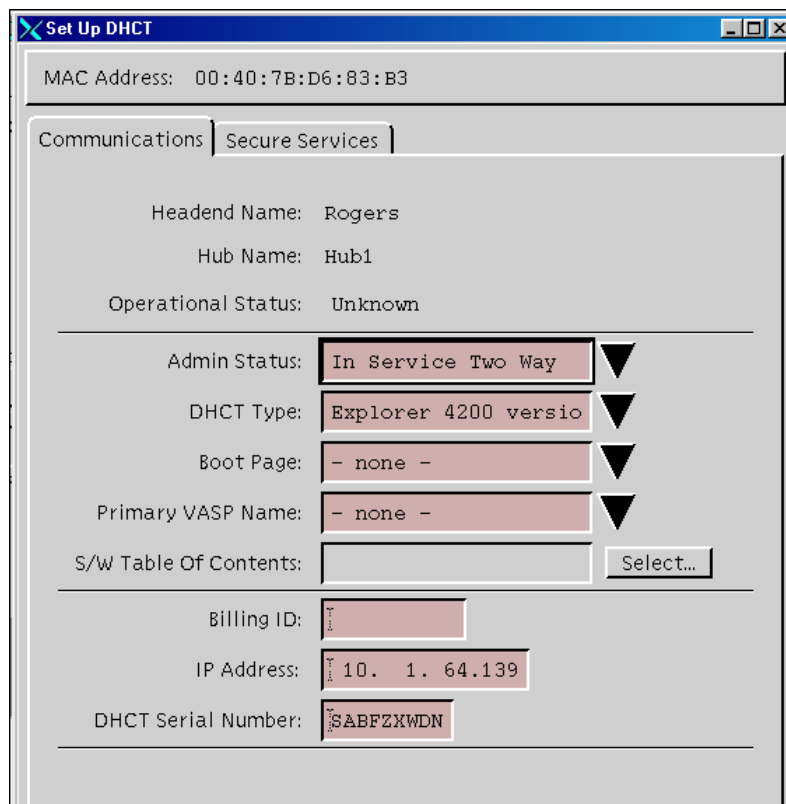
- 1 On the DNCS Administrative Console, click the **DNCS** tab if it is not already in the forefront.
- 2 Click the **Element Provisioning** tab.
- 3 Click **DHCT**. The DHCT Provisioning window opens.



- 4 Click the **Open** option.
- 5 Click the **By MAC Address** option.
- 6 Click in the **By MAC Address** field and type the **MAC address** of the test DHCT.

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- 7 Click **Continue**. The Set Up DHCT window opens.



The image shows a screenshot of the 'Set Up DHCT' window. The window has a title bar with the text 'Set Up DHCT' and standard window controls. Below the title bar, there is a field for 'MAC Address' with the value '00:40:7B:D6:83:B3'. The window is divided into two tabs: 'Communications' and 'Secure Services'. The 'Secure Services' tab is selected. Under this tab, there are several fields and a button. The 'Headend Name' is 'Rogers', 'Hub Name' is 'Hub1', and 'Operational Status' is 'Unknown'. Below these, there is a section with several dropdown menus and a button. The 'Admin Status' dropdown is set to 'In Service Two Way'. The 'DHCT Type' dropdown is set to 'Explorer 4200 versio'. The 'Boot Page' dropdown is set to '- none -'. The 'Primary VASP Name' dropdown is set to '- none -'. The 'S/W Table Of Contents' field is empty, and there is a 'Select...' button next to it. Below this section, there are three more fields: 'Billing ID' (empty), 'IP Address' (set to '10. 1. 64.139'), and 'DHCT Serial Number' (set to 'SABFZXWDN').

MAC Address: 00:40:7B:D6:83:B3

Communications | Secure Services

Headend Name: Rogers
Hub Name: Hub1
Operational Status: Unknown

Admin Status: In Service Two Way ▼
DHCT Type: Explorer 4200 versio ▼
Boot Page: - none - ▼
Primary VASP Name: - none - ▼
S/W Table Of Contents: Select...

Billing ID:
IP Address: 10. 1. 64.139
DHCT Serial Number: SABFZXWDN

- 8 Click the **Secure Services** tab. The Secure Services tab of the Set Up DHCT window opens.

Set Up DHCT

MAC Address: 00:40:7B:D6:83:B3

Communications Secure Services

Secure Element Serial Number: 00:40:7B:8F:A7:52

Key Certificate

Name: C=US;O=Scientific-Atlanta;OU=Scientific-Atlanta Mexico;CN=PK00407b8fa752

Clear Load from batch CD...

Packages

Available Selected

SOD Base
ClassicGames
Concurrent
DMMTEST
Discovery
HBO
HOD
IPG
Music
PVR_Access

Add >> << Remove

Options

☒ IPPV Enable
IPPV Credit Limit: 250
Max. IPPV Events: 50

☒ DMS Enable ☒ DIS Enable ☐ Analog Enable
☐ Fast Refresh Enable

- 9 In the **Available** field, click to select the **SAIXOD** package *and* any **SVOD** base and upsell packages. Then, click **Add**.
Example: For example, add HBO and HBO Family as the base (required) packages, and then add HBO On Demand as the upsell (subscription) package. You can select more than one package by holding down the Shift key as you click on each package name.
Result: The packages move to the Selected field.
- 10 Click **Save**. The system authorizes the DHCT to receive the selected package(s).
- 11 Click **DHCT Instant Hit**. The system downloads the new package information to the test DHCT.
- 12 Click **Close**. The system closes the Set Up DHCT window.

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- 13 Do you need to authorize another test DHCT?
 - If **yes**, repeat steps 4 through 12.
 - If **no**, click **Cancel** to close the DHCT Provisioning window and return to the DNCS Administration Console.
- 14 Your DNCS is now configured to support xOD services. Did you purchase your ASI Server from us?
 - If **yes**, your next step is to install the xOD client software on the server. Go to Chapter 5, *Install the xOD Client Software* (on page 109).
 - If **no**, your next step is to install the Solaris operating system (OS) on the server. Go to Chapter 3, *Install Solaris on the ASI Server* (on page 73).

3

Install Solaris on the ASI Server

Introduction

This chapter provides instructions for installing the Solaris 8 OS (5/03) onto the ASI server. The Solaris 8 OS is necessary for xOD 1.6 to operate properly.



CAUTION:

- The procedures in this chapter are used to install xOD on a new system. If you are upgrading an existing xOD system, use the procedures listed in Appendix A and Appendix B. Failure to do so may erase your xOD configuration.
- If you purchased your ASI server from us, do NOT use the procedures in this chapter. Our factory engineers install the correct version of Solaris on the server before shipping the server to you.
- If you are using equipment other than a Sun Netra 20 or Sun V240 for your ASI server, do not use these instructions.

Time to Complete

Installing Solaris onto the ASI server takes approximately 1 to 2 hours to complete.

Performance Impact

Installing Solaris onto the ASI server has no impact on system performance.

In This Chapter

- Before You Begin..... 75
- Drive Configurations..... 76
- Connect the ASI Server to the DNCS..... 78
- Install Solaris 80

Before You Begin

Before you install Solaris on the ASI server, make sure you have the following:

- ASI server (a Sun V240) and its IP address
- LOM serial adapter
- Ethernet cable
- Interface machine with a video card, monitor, and keyboard (usually the DNCS)
- Solaris 8 System Software CD 1 of 2 (5/03)
- Solaris 8 System Software CD 2 of 2 (5/03)
- Subnet mask that allows communication between the DNCS, your DHCTs, the BMS (ISA), the video server, and any other system devices necessary for processing xOD data
- IP address of the interface on the default router that connects to the ASI server
- Password for the **root** user on the ASI server (from your system administrator)

Drive Configurations

Overview

As you install the Solaris OS, you must specify partitions for the hard disks in the ASI server. For example, you might specify partitions for the disks c0t0d0 and c0t1d0. Use the table shown below to determine the partition values you should use as you complete the procedures in this chapter.

Partitioning Specifications

The following tables give partition values for each of the two disk configurations that the ASI server uses. When completing the procedures in this chapter, use the table that provides partition values for the disk configuration of your ASI server.

Table 1. Partition Values for a 2-Disk, 36 GB Configuration

Disk	Slice	File System/ Mount Point	Size in MB (unless noted otherwise)
1	s0	/	6000 MB
	s1	Swap	2 GB (recommended) or match the amount of RAM
	s3	/export/home	2000 MB
	s4	/u00	6000 MB
	s5	/u02	6000 MB
	s6	/u04	6000 MB
	s7	/u06	Amount of free space left over
2	s0	/u01	6000 MB
	s1	/u03	6000 MB
	s3	/u05	6000 MB
	s4	/backups	Amount of free space left over

Table 2. Partition Values for a 2-Disk, 73 GB Configuration

Disk	Slice	File System/ Mount Point	Size in MB (unless noted otherwise)
1	s0	/	12000 MB
	s1	swap	Match the amount of RAM
	s3	/export/home	4096 MB
	s4	/u00	12000 MB
	s5	/u02	12000 MB
	s6	/u04	12000 MB
	s7	/u06	Amount of free space left over
2	s0	/u01	12000 MB
	s1	/u03	12000 MB
	s3	/u05	12000 MB
	s4	/backups	Amount of free space left over

Connect the ASI Server to the DNCS

Introduction

Before installing the Solaris OS onto the ASI server, first connect the ASI server to the DNCS and configure the connection.

Because the ASI server does not have a video card installed in it, use an LOM serial adapter to create a TTY (terminal) connection from the ASI server to another server with a video card, monitor, and keyboard.

The terminal connection is also called a *TIP hardwire* connection. The other server is called the *interface machine*.

Important: The instructions in this guide assume you are using your DNCS as your interface machine.



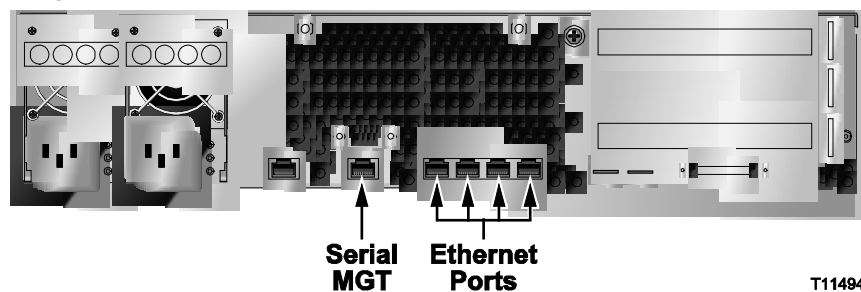
CAUTION:

The procedures in this chapter are used to install xOD on a new system. If you are upgrading an existing xOD system, use the procedures listed in Appendix A and Appendix B. Failure to do so may erase your xOD configuration.

Connecting the Hardware

Complete these steps to connect the ASI server to the DNCS.

- 1 Connect the Ethernet cable to the back of the ASI server (refer to the following diagram).



- 2 Connect the LOM serial adapter to the serial port on the back of the interface machine.
- 3 Connect the available end of the Ethernet cable into the serial adapter.
- 4 Your next step is to configure the ASI server-to-DNCS connection. Go to *Configuring the TIP Hardwire Connection* (on page 79).

Configuring the TIP Hardware Connection

Follow these steps to modify the hardware entry in the **/etc/remote** file on the DNCS so that it can receive a TTY connection from the ASI server:

Important: Do not perform these steps unless you are skilled in the use of the UNIX vi text editor.

- 1 From an xterm window on the DNCS, log in as the user **root**.
- 2 Type **cd /etc** and press **Enter**. The /etc directory becomes the working directory.
- 3 Type **vi remote** and press **Enter**. The remote file opens for editing using the UNIX vi text editor.
- 4 Find the hardware entry in the file. The following is an example of how this entry might appear:

hardware:\:dv=/dev/term/b:br#9600:el=^C^S^Q^U^D:ie=%\$:oe=^D:

Notes:

- In this example, the entry **dv=** specifies the TTY serial port that is used to receive input from another device. By default, the ASI server uses serial port TTY A as its input/output method when a video card, monitor, and/or keyboard are not available during startup.
 - In this example, the entry **/dev/term/b** corresponds to the serial port **TTY B** connection on the back of the DNCS.
- 5 Modify the hardware entry by changing **dev/term/b** to **dev/term/a**. The DNCS is now configured to receive a TTY connection from the ASI server.
 - 6 **Save** the file and exit the vi text editor.
 - 7 Your next step is to install the Solaris OS. Go to *Install Solaris* (on page 80).

Install Solaris

Introduction

After you connect the ASI server to the DNCS and configure the TIP hardware connection, install Solaris onto the ASI server as described in this section.

Process Overview

To install Solaris onto the ASI server, complete the following instructions listed in this overview in the order shown. This section provides detailed instructions for each process.

- 1 Create a TIP connection from the DNCS to the ASI server.
Note: This connection is sometimes referred to as *tipping in* to a server.
- 2 Install the Solaris 8 Software 1 of 2 CD files.
- 3 Install the Solaris 8 Software 2 of 2 CD files.

Creating a TIP Connection

Follow these steps to create a TIP connection from the DNCS to the ASI server.

- 1 From the xterm window on the DNCS, type **tip hardware** and press **Enter**. The system displays “connect” to indicate that the DNCS has established a connection with the ASI server.
- 2 Press **Enter**. An LOM prompt appears.
- 3 Type **poweron** and press **Enter**. The system begins to boot up, displays information about the software package, and then displays the “Time out waiting for ARP/RARP packet” message.
- 4 Type **#.** and press **Enter**. Make sure that you type both **#** and a period (**.**). An LOM prompt appears.
- 5 Type **break** and press **Enter** twice. An ok prompt appears.
- 6 Your next step is to install the Solaris 8 Installation CD files onto the ASI server. Go to *Installing the Solaris 8 Software 1 of 2 CD* (on page 80).

Installing the Solaris 8 Software 1 of 2 CD

Follow these steps to install the Solaris 8 Software 1 of 2 CD files onto the ASI server.

- 1 Insert the **Solaris 8 Software 1 of 2** CD into the ASI server. Then type **boot cdrom** and press **Enter**. The system displays the boot sequence and starts the installation process by prompting you to select a language.
- 2 Type the number that corresponds to **English** and press **Enter**. The system prompts you to select a locale.
- 3 Type the number that corresponds to your locale and press **Enter**. For example, if your headend is in the U.S., type **0** for English. The system prompts you to enter the terminal type.
- 4 Type the number that corresponds to **DEC VT100** and press **Enter**. The system displays information about the Solaris installation program and prompts you to continue.
- 5 Press **ESC-2** to continue. The system prompts you to begin the process of identifying your system.
- 6 Press **ESC-2** to continue. The system prompts you to enter information about your network connectivity.
- 7 Select **Yes** and press **ESC-2**. The system prompts you to specify whether the system uses DHCP for network interface configuration.
- 8 Select **No** and press **ESC-2**. The system prompts you to specify the network adapters on the system's primary network interface.
- 9 Select the number that corresponds to **eri0** and press **ESC-2**. The system prompts you to enter your host name.
- 10 Type **asi** and press **ESC-2**. The system asks for the IP address of the ASI server.
- 11 Type the IP address of the ASI server and press **ESC-2**. The system prompts you to define whether or not the system is part of a subnet.
- 12 Select **Yes** and press **ESC-2**. The system asks for the subnet mask.
- 13 Type the subnet mask and press **ESC-2**. This subnet must allow communication between the DNCS, the DHCTs, the BMS (ISA), the video server (non-ISA), and any other devices in the system that are necessary for processing xOD data. The system asks whether or not to enable IPv6.
- 14 Select **No** and press **ESC-2**. The system prompts you to confirm the information you have just entered.
- 15 Review the information and make your selection based on the following:
 - If the information is *correct* press **ESC-2**.
 - If the information is *not correct*, press **ESC-4** to correct the information.

Result: The system asks whether or not to enable the Kerberos security mechanism.

- 16 Select **No** and press **ESC-2**. The system prompts you to confirm the selection you just made.
- 17 Review the information and make your selection based on the following:
 - If the information is *correct*, press **ESC-2**.
 - If the information is *not correct*, press **ESC-4** to correct the information.

Result: The system prompts you to name the service the system will use.
- 18 Select the number that corresponds to **None** and press **ESC-2**. The system asks you to confirm the selection you just made.
- 19 Review the information and make your selection based on the following:
 - If the information is *correct* press **ESC-2**.
 - If the information is *not correct*, press **ESC-4** to correct the information.

Result: The system prompts you for your region.
- 20 Select **United States** and press **ESC-2**. The system asks you for the correct time zone.
- 21 Depending upon your location, type the number that corresponds to the correct zone and press **ESC-2**. For example, if your headend is in Atlanta, select the number that corresponds to Eastern. The system displays the current date and time and asks you to confirm that this information is correct.
- 22 Review the date and time and make your selection based on the following:
 - If the date and time are *correct*, press **ESC-2**.
 - If the date and time are *not correct*, correct the date and time and then press **ESC-4**.

Result: The system displays the time zone and the date and time you have selected and asks you to confirm that the information is correct.
- 23 Review the information and make your selection based on the following:
 - If the information is *correct* press **ESC-2**.
 - If the information is *not correct*, press **ESC-4** and make the corrections.

Result: The system prompts you to select the type of installation needed.
- 24 Press **ESC-4** to select **Initial Install**. The system asks how the software should be installed.
- 25 Press **ESC-2** to select **Standard**. The system prompts you to select the regions for which support should be installed.
- 26 Select **North America** and press **ESC-2**. The system prompts you for the desired Solaris software group.
- 27 Press the number that corresponds to **Entire Distribution Plus OEM support 64-bit** and press **ESC-2**. The system prompts you to select the disks where Solaris will be installed.

- 28 Press **ESC-4** (Edit) and type an **X** in each of the brackets next to the two the disks where you will install Solaris and press **ESC-2** to continue. The system asks if you want to preserve existing data.
 - 29 Press **ESC-2** to continue without preserving the existing data. The system prompts you to select whether the file systems should be laid out automatically or manually.
 - 30 Press **ESC-4** to select **Manual Layout**. The system displays your current file system and disk layout for the disks you have selected.
 - 31 Highlight one disk and press **ESC-4** to customize it. The system displays the file system and disk layout of this disk for you to customize.
 - 32 Refer to the *Partitioning Specifications* (on page 76) table in the **Drive Configurations** section, to enter File System/Mount Point and Size in MB information for each slice that is shown in the **Customize Disk** screen. When you have finished, press **ESC-2** to continue. The system prompts you to select a disk to customize.
 - 33 Highlight the other disk and press **ESC-4** to customize it. The system displays the file system and disk layout of this disk so that you can customize it.
 - 34 Refer to the *Partitioning Specifications* (on page 76) table in the **Drive Configurations** section, to enter File System/Mount Point and Size in MB information for each slice that is shown in the **Customize Disk** screen. When you have finished, press **ESC-2** to continue. The system prompts you to select a disk to customize.
 - 35 Select **ESC-2** (OK) to continue without customizing. The system displays a summary of the file system and disk layout reflecting your customization.
 - 36 Press **ESC-2** to continue. The system asks if you want to mount software from a remote file server.
 - 37 Press **ESC-2** to continue without mounting software from a remote file server. The system displays your profile for installing the software based on the information you have entered.
 - 38 Review the information and make your selection based on the following:
 - If the information is *correct*, press **ESC-2** to continue.
 - If the information is *not correct*, press **ESC-4** and make the corrections.
- Result:** The system asks if you want to automatically or manually reboot the ASI server after the system installs the software.
- 39 Select **Auto Reboot** and press **ESC-2** to reboot the server and begin the installation. The system begins installing the Solaris 8 software. When it is finished, it asks you for a root user password for the ASI server.
 - 40 Type the password for the root user on the ASI server and press **Enter**. The system asks you to retype the root user password to confirm it.
 - 41 Retype the root user password and press **Enter**. The system prompts you to select the media that will be used to install Solaris 8 Software 2 of 2 CD.

Chapter 3 Install Solaris on the ASI Server

- 42 Select the number that corresponds to **CD/DVD** and press **Enter**. The system ejects the Solaris 8 Software 1 of 2 CD.
- 43 Your next step is to install the Solaris 8 Software 2 of 2 CD files onto the ASI server. Go to *Installing the Solaris 8 Software 2 of 2 CD* (on page 85).

Installing the Solaris 8 Software 2 of 2 CD

Complete these steps to install the Solaris 8 Software 2 of 2 CD files onto the ASI server.

- 1 Remove the **Solaris 8 Software 1 of 2** CD and insert the **Solaris 8 Software 2 of 2** CD into the ASI server. The server mounts the CD and then directs you to press Enter to continue with the installation.
- 2 Press **Enter** to continue. The system begins installing the Solaris 2 of 2 software CD. This process takes about 3 minutes. When the installation is complete, the system displays installation details and prompts you to select 2 to continue.
- 3 Press **2** to continue. The system prompts you to select the media that will be used to install Solaris 8 Languages CD or to indicate if you do not want to install the software on this CD.
- 4 Type **3** to skip installation and press **Enter**. The system prompts you to confirm that you do not want to install the Solaris 8 Languages CD.
- 5 Type **1** to confirm that you do not want to install the Solaris 8 Languages CD. The system ejects the Solaris 8 Software 2 of 2 CD and prompts you to reboot the system.
- 6 Press **Enter** to reboot the system. The system reboots.
- 7 You are finished installing Solaris on the ASI server and are ready to install the xOD server software. Go to Chapter 4, *Install the ASI Server Software* (on page 87).

4

Install the ASI Server Software

Introduction

This chapter describes how to install the ASI Server software.



CAUTION:

- The procedures in this chapter are used to install xOD on a new system. If you are upgrading an existing xOD system, use the procedures listed in Appendix A and Appendix B. Failure to do so may erase your xOD configuration.
- If you purchased your ASI server from us, do NOT use the procedures in this chapter. We install the correct version of the ASI server software on the server before shipping it to you.

Important: The procedures in this chapter reflect an installation for sites that support ASI Server 1.6.0 and xOD Client 1.5.0. If you are running earlier versions of code, some of the installation prompts in these instructions will not appear or apply.

The procedures detailed in this chapter install the following ASI components:

- Oracle 9i
- ASI Database
- ASI Schema Objects
- ASI Java Components

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Overlay Systems

Introduction

This section describes an *overlay* system. This chapter includes procedures for both the standard ASI installation and an ASI overlay installation. Therefore, in some of the installation prompts, you will be asked to respond based on whether or not you have an overlay system.

What Is an Overlay System?

An overlay system is one in which more than one vendor is providing applications to an ISA system. For example, Showrunner overlay refers to sites that use the Passport resident application, as well as SARA.

Each application normally registers all of its applications (or applets) with its associated products on the Business Management System (BMS). Each product on the BMS supports the registration of only one application.

In an overlay system, two vendors provide applications that register with the same product. Therefore, you must make sure that only *one* of the vendor's applications registers with each product on the BMS. In addition, you also need to make sure that each unique application registers with its product on the BMS.

You meet these requirements by responding appropriately to the prompts that apply to overlay and by configuring applets for overlay support. For more information on configuring applets, refer to the *xOD 1.6 Configuration Guide* (part number 4004032).

Install the ASI Server Software

Introduction

After you install Solaris onto the ASI server, you can complete the procedure in this section to install the ASI Server software.



CAUTION:

The procedures in this chapter are used to install xOD on a new system. If you are upgrading an existing xOD system, use the procedures listed in Appendix A and Appendix B. Failure to do so may erase your xOD configuration.

Before You Begin

Before you perform the server software installation, you must complete the following tasks.

- 1 Have the **ASI Server 1.6.0** CD.
- 2 Make sure the following file systems were created when you installed Solaris:
 - /export/home
 - /u00
 - /u01
 - /u02
 - /u03
 - /u04
 - /u05
 - /u06
 - /backups

Important: You must create the **/u00**, **/u01**, **/u02**, **/u03**, and **/u04** file systems before you begin the server installation procedure. Otherwise, the installation process creates these as directories under the root file system and you may run out of disk space.

- 3 If you have an ISA environment, make sure that the ASI server host name (**asi**) and IP address are listed in the **/etc/hosts** file on the name server. You will configure the hosts file on the ASI server later in this chapter.

Time to Complete

Installing the ASI Server software takes approximately 2 hours to complete.

Performance Impact

Installing the ASI Server software has no impact on system performance.

Installing the ASI Server Software

Complete these steps to install the ASI Server software.

- 1 At the asi console login prompt in the xterm window, log in as **root** user.
- 2 Insert the **ASI Server 1.6.0** CD into the ASI server.
- 3 At the prompt for the root user (#), type **cd /cdrom/cdrom0** and press **Enter**. The system accesses the CD directory and displays a prompt.
- 4 Type **./install.sh** and press **Enter**. The script copies packages. This process takes approximately 5 to 10 minutes. When finished, the system checks to see if the users **oracle** and **prasara** have been created. If not, the script creates these users and prompts you for the passwords.
- 5 Did the system prompt you for the **oracle** user password?
 - If **yes**, type **oracle1** and press **Enter**. The system prompts you to re-enter the password to confirm it. Go to step 6.
Note: If you require this password to be changed, contact Cisco Services.
 - If **no**, go to step 7.
- 6 Retype the oracle user password and press **Enter**.
- 7 Did the system prompt you for the **prasara** user password?
 - If **yes**, type **prasara1** and press **Enter**. The system prompts you to re-enter the password to confirm it. Go to step 8.
Note: If you require this password to be changed, contact Cisco Services.
 - If **no**, go to step 9.

- 8 Retype the prasara user password and press **Enter**.



CAUTION:

Do not press any keys until prompted to reboot the server. Doing so will harm the installation process.

Result: If not already installed, the script processes the SAI9iorcl package and installs the Oracle software. After the installation is complete, the script automatically relinks the Oracle executables and then begins installing the Oracle Database package, the ASI Server package, the ASI Client package, the Backup utilities package, and the Check Schema package. This process takes approximately 40 minutes. When finished, the system prompts you to reboot the server.

Note: If desired, you can check /u00/install/install.log, pkg.log, and make.log for errors after the Oracle executables are relinked. Cisco Services may request these files if errors do occur and you call them for troubleshooting assistance.

- 9 Type **reboot** and press **Enter**. The ASI server reboots. This process takes approximately 15 minutes. When finished, a login prompt appears.
- 10 Log in as the **root** user. The system displays a prompt for the root user.
- 11 Type **cd /export/home/oracle/asi** and press **Enter**. A prompt for the root user appears.
- 12 Type **./run_asl_unix.bat** and press **Enter**. The system prompts you to choose an ASI server environment.
- 13 If you have an ISA configuration, type the number that corresponds to **ISA** and press **Enter**. The system creates and alters tables and packages, and it upgrades the ASI schema. Then the system displays the message, "ASI schema Installation Complete."
- 14 Make sure that you are logged in as the root user, and type **cd /u00/install/ptvisa** and press **Enter**. A prompt for the root user appears.
- 15 Type **./install.sh** and press **Enter**. The software license agreement appears.
- 16 Read the license agreement. Press the **Spacebar** at the end of each section to see the next section. At the end of the license agreement, the system asks whether or not you agree with the terms of the license.
- 17 Type **yes** and press **Enter**. If OS patches exist, the system checks and installs these packages. This process takes approximately 5 to 10 minutes. After these packages are installed, the system asks whether or not you want to continue with the installation.
- 18 Type **y** and press **Enter**. The system installs Apache 1.3.12 and then prompts you to enter a password for the **asset** user.

- 19 Type **tincup** and press **Enter**. The system asks you to retype the password to confirm it.
- 20 Type **tincup** and press **Enter**. The system installs the ASI-XOD package and the ISA Configuration Tool menu appears.

Note: This configuration tool appears during the installation process. However, you can run the configuration tool any time you like by logging in as root user and typing **/opt/Prasara/bin/isa_cfg**.

- 21 Your next step is to configure the ASI server. Go to *Configure the ASI Server* (on page 94).

Configure the ASI Server

Introduction

This section provides steps for configuring the ASI server.

Configuring the ASI Server

Complete these steps to configure the ASI server.

- 1 At the ISA Configuration Tool menu, type the number that corresponds to **Configure Base Properties** and press **Enter**. The system prompts you to choose your name service vendor.
- 2 If you have an ISA configuration, type the number that corresponds to **Orbacus** and press **Enter**.
Important: You *must* type the corresponding number. Do *not* simply press **Enter** to accept the default.
Result: The system prompts you for the name service host.
- 3 If you have an ISA configuration, type **nameserver** and press **Enter**. The system prompts you for the name service port.
- 4 Press **Enter** to accept the default of 5000. The system asks whether or not ORB Persistence is enabled.
- 5 If you have an ISA configuration, press **Enter** to accept the default of *true*. The system prompts the user for the **Jacorb connection client timeout** value.
- 6 Press **Enter** to accept the default value of 30000. The ISA Configuration Tool menu appears.
- 7 If you have an ISA configuration, type the number that corresponds to **Configure XOD Properties** and press **Enter**. The system prompts you for the IXOD Database User.
- 8 Press **Enter** to accept the default user of *ixod*. The system prompts you for the IXOD Database Password.
- 9 Press **Enter** to accept the default password of *ixod*. The system prompts you for the IXOD Database Host.
- 10 Press **Enter** to accept the default of *localhost*. The system prompts you for the IXOD Database SID.
- 11 Press **Enter** to accept the default of *asi*. The system prompts you for the session gateway name.
- 12 If you have an ISA environment, type the number that corresponds to **N2BB, Factories.Context/N2BBSessionGateway.Factory** and press **Enter**. The system prompts you for the DCI Port.

- 13 Press **Enter** to accept the default of *7000*. The system prompts you for the Web Server hostname:port.
- 14 If you have an ISA environment, press **Enter** to accept the default of *asi:81*. The system asks whether or not to auto-disable offers when offers are no longer on the BMS.
- 15 Type **true** and press **Enter**. The system asks whether or not to auto-delete offers (assets) automatically when their license agreement expires.
- 16 Type **true** and press **Enter**. The system asks whether or not to enable session-based encryption.
- 17 Make your selection based on the system release that you are running:
 - For a DNCS that is operating with a system release *prior* to SR 2.x, press **Enter** to accept the default of *false*.
 - For a DNCS that is operating with a system release of SR 2.x or later, type **true** and press **Enter**.

Result: The system prompts you for the BMS metadata name delimiter.

- 18 Do one of the following:
 - For standard operation, press **Enter** to accept the default of *:: (double colon)*.
 - For Showrunner Overlay operation, type *:* (single colon) and press **Enter**.

Result: The system asks whether or not to register the product when the applet is created.

- 19 Do one of the following:
 - For standard operation, type **true** and press **Enter**.
 - For Showrunner Overlay operation, type **false** and press **Enter**.

Result: The system prompts you for the minimum wait time (in seconds) before sending a batch of purchases.

- 20 Press **Enter** to accept the default of *60 seconds*. The system prompts you for the maximum wait time (in seconds) before sending a batch of purchases.
- 21 Press **Enter** to accept the default of *3600 seconds*. The system asks whether or not to log purchases with the Asset process.
- 22 Make your selection based on the following considerations:
 - If your system uses versions of BMS software that are pre-ISA 1.1.5 compliant, type **false** and press **Enter**.
 - If your system uses versions of BMS software that are ISA 1.1.5 and beyond, type **true** and press **Enter**.

Result: The system asks for the maximum log size.

Chapter 4 Install the ASI Server Software

- 23 Press **Enter** to accept the default value of *1048576*. The system asks for a maximum log index.
- 24 Press **Enter** to accept the default of *100*. The ISA Configuration Tool menu appears.
- 25 Type **e** and press **Enter** to exit the ISA Configuration Tool menu and commit the changes. The system restarts xOD services. Then it notifies you that the installation is complete.
- 26 Your next step is to install the ASI Server Utilities. Go to *Install the ASI Server Utilities* (on page 97).

Install the ASI Server Utilities

Introduction

This section provides steps for installing the ASI server utilities onto the ASI server. For information on using these utilities, refer to the *xOD 1.6 Configuration Guide* (part number 4004032).

Before You Begin

Before you begin, you must have the ASI Server Utilities CD (**xOD Utilities 1.6.0**) that came with your installation package.

Time to Complete

Installing the ASI server utilities takes approximately 5 to 10 minutes to complete.

Performance Impact

Installing the ASI server utilities has no impact on system performance.

Installing the ASI Server Utilities

Complete these steps to install the ASI server utilities onto the ASI server.

- 1 Make sure you are logged in as **root**.
- 2 Insert the **xOD Utilities 1.6.0.2** CD into the ASI server.
- 3 Type **cd /cdrom/cdrom0** and press **Enter**. The **/cdrom/cdrom0** directory becomes the current directory.
- 4 Type **./install.sh** and press **Enter**. The system prompts you to specify whether you want to enable the automatic rebuilding of indexes.
- 5 Type **y** and then press **Enter**. The system prompts you to specify the day of the week that you want the indexes rebuilt. Valid choices are **MONDAY**, **TUESDAY**, **WEDNESDAY**, or **THURSDAY**.
- 6 Move the cursor to the desired day and then press **Enter**. The system prompts you to specify the hour of the day when you want the indexes rebuilt. Valid choices are **1** through **8 AM**.

Note: The system will rebuild the indexes on a weekly basis. The rebuilding of the indexes does not require any system downtime. However, to maximize the efficiency of the rebuild, schedule the rebuild during a time of low database activity.

- 7 Move the cursor to the desired time and then press **Enter**. The system prompts you to choose whether you want to add a crontab entry for backing up xOD Logs.
Note: You can examine the log file at `/u00/install_utl/rebuildIndexSetup.log` to verify that the configuration of index-rebuilding activities proceeded without error.
- 8 Do you want a crontab entry for backing up xOD logs?
 - If **yes**, type **y** and press **Enter**.
 - If **no**, type **n** and press **Enter**.**Result:** The installation of the ASI server utilities completes, and the UNIX prompt appears.
- 9 Type **cd** and press **Enter**.
- 10 Type **eject** and press **Enter**. The system ejects the **xOD Utilities 1.6.0** CD and displays the UNIX prompt.
- 11 Log on to the ASI server as the **oracle** user. A prompt for the oracle user appears.
- 12 Type **cd /export/home/oracle/asi_check** and press **Enter**. The `/export/home/oracle/asi_check` directory becomes the working directory.
- 13 Type **./check_schema.sh ixod ixod 1.6.0.xx** and press **Enter**. (Be sure to type a period before the slash.) The system verifies that the installation was successful.
- 14 Your next step is to configure the ASI server hosts table. Go to *Configure the ASI Server Hosts Table* (on page 99).

Configure the ASI Server Hosts Table

Introduction

Make sure all host names and IP addresses listed in the following tables are entered in the ASI server hosts table (/etc/hosts). Make sure that you use the correct table for your system environment.

Note: Your system administrator should have IP addresses assigned for each host.

Important: The tables on the following pages contain host entries that must be present in the ASI server hosts table. However, a particular vendor may use multiple host names for the same IP address. Therefore, it may be necessary to list multiple variations of the host names provided in the following table (for example, nameserver and bmsnameserver).

Also, you may have additional host entries that are specific to your video server. Check with your video server vendor to make sure that you have all required host entries.

When you are finished using the tables to enter information in the ASI server hosts table, the next step you take depends on your server environment:

- If you have an ISA environment, go to *ISA Environments: Register Host Entries With BMS* (on page 101).
- If you use a Seachange server, go to *Seachange Environments: Edit the ISA.props File* (on page 104).

Host Table Entries for an ISA System

The following table contains host entries that must be present in the ASI server hosts table for the ISA implementation of xOD. Use the **IP Address** column to record the IP addresses for each host per your system administrator or vendor.

Important: The twisahost and sessiongateway hosts must be on the same machine, but may have different IP addresses. The ISA BMS server may have multiple network interfaces. The twisahost needs to be able to communicate with the DHCTs, and the session gateway must be able to communicate with the ASI server.

When you are finished, continue preparing your ISA system by going to *ISA Environments: Register Host Entries With BMS* (on page 101).

Host Alias	Vendor	IP Address
asi	SA	
asset	N2BB	
content	Video Server	
customer	N2BB	
dncs	SA	10.253.0.1
droxyhost	SA	
localhost	SA	127.0.0.1
loghost	SA	127.0.0.1
metadata	N2BB	
nameserver	N2BB	
nameservice	N2BB	
notificationserver	N2BB	
package	N2BB	
product	N2BB	
provider	N2BB	
purchase	N2BB	
seachange seachangecontentstore seachangecontentstorefactory	ISA Seachange Video Server	
servicegateway	N2BB	
sessiongateway	N2BB	
stream	Video Server	
terminal	N2BB	
twisahost	N2BB	
ve1a1	Concurrent Video Server	

ISA Environments: Register Host Entries with BMS

Registering ASI Server Hosts with the BMS

Important: If you have an ISA system, you *must* register host entries with the BMS.

Complete these steps to register the ASI server host table entries with the BMS.

- 1 Make sure you are logged in as **root**.
- 2 Type **cd /opt/Prasara/bin** and press **Enter**. The system accesses that directory and displays a prompt.
- 3 Type **/isactl restart** and press **Enter**. The system registers the host entries with the BMS and then displays a prompt.
- 4 Continue configuring your ISA system by adding an entry to `resolv.conf` file to create an association for proper name resolution. Go to *ISA Environments: Add an Entry to resolv.conf* (on page 102).

ISA Environments: Add an Entry to resolv.conf

Create an Association for Proper Name Resolution

Important: If you have an ISA system that uses a domain name server (DNS) service, you *must* add an entry to the resolv.conf file.

In an ISA system that uses a DNS service, you must make sure the ASI server is associated with the **bms.n2bb.com** domain. This association is necessary for name resolution to work properly.

If the **resolv.conf** file does not exist on the ASI server, you need to create it. Then, add **domain bms.n2bb.com** to the /etc/resolv.conf file.

Make sure you save the resolv.conf file before closing the file. Then continue configuring your ISA system by going to *ISA Environments: Configure the BMS Host Table* (on page 103).

ISA Environments: Configure the BMS Host Table

Add asi Entry to BMS Host Table

Important: If you have an ISA system, you must configure the BMS host table.

After you add the bms.n2bb.com domain entry to the /etc/resolv.conf file, make sure that the host name for the ASI server (**asi**) and its IP address are in the host table for the BMS.

When finished, you are ready to install the xOD client software. Go to Chapter 5, *Install the xOD Client Software* (on page 109).

Seachange Environments: Edit the ISA.props File

Introduction

Important: If you have a Seachange server, you must change the setting for `jacorb.connection.client_timeout` from 30 to 0 in the `ISA.props` file.

Changing the `jacorb.connection.client_timeout` value

Follow these steps to change the `jacorb.connection.client_timeout` value in the `ISA.props` file.

- 1 Login as root user.
- 2 Type `cd/opt/Prasara/servlets` and press **Enter**.
- 3 Type `vi ISA.props` and press **Enter** to edit the `ISA.props` file.
- 4 Find `jacorb.connection.client_timeout` in the file.
- 5 Change the value for `jacorb.connection.client_timeout` from **30** to **0**.
- 6 Press **ESC**, then type `:wq` and press **Enter** close the `ISA.props` file.
- 7 Type `cd /opt/Prasara/bin` and press **Enter**.
- 8 Type `./isactl restart` and press **Enter** to restart the ASI processes.

Install the Daylight Saving Time Patch Onto the ASI Server

Starting in the spring of 2007, U.S. Daylight Saving Time (DST) starts the second Sunday in March (March 11, 2007) and ends the first Sunday in November (November 4, 2007) in response to the decision by the U.S. Congress to extend DST by 4 weeks.

In these procedures, you will log on to our FTP server, obtain the DST2007 patch, and then install the patch onto the ASI server. The DST2007 Patch accommodates the new DST rules and provides support for changing time on the dates that are appropriate for different parts of the world.

Obtaining the DST2007 Patch

Follow these instructions to install the DST2007 patch onto the ASI server.

- 1 Log on to the ASI server as **root** user.
- 2 Type **cd /u00** and then press **Enter**. The /u00 directory becomes the working directory.
- 3 Type **ls -la /DST2007Patch** and then press **Enter**. The system lists the characteristics of the /DST2007Patch directory, if the directory exists.
- 4 Does the /DST2007Patch directory already exist?
 - If **yes**, follow these instructions.
 - a Type **cd DST2007Patch** and then press **Enter**.
 - b Type **rm *** and then press **Enter**. The system deletes the contents of the /DST2007Patch directory.
 - c Type **cd ..** and then press **Enter**. The /u00 directory becomes the working directory.
 - If **no**, type **mkdir DST2007Patch** to create the DST2007Patch directory.
- 5 Telnet into the DNCS and log on as **dncs** user.
- 6 From the DNCS, type **cd /tmp** and then press **Enter**. The /tmp directory becomes the working directory.
- 7 Log on to our FTP server.

Notes:

- The address of the server is **ftp.sciatl.com** or **192.133.243.133**.

Note: The address for the FTP server is subject to change. If you are unable to reach the FTP server, please contact Cisco Services for the latest address.
- The username is **anonymous**.
- The password is the e-mail address of the person logging in.

- 8 Type **cd /external_pub/scicare/RELEASED/xOD/DSTPatches** and then press **Enter**. The /external_pub/scicare/RELEASED/xOD/DSTPatches directory on the FTP server becomes the working directory.
- 9 Type **bin** and then press **Enter** to establish the binary transfer mode.
- 10 Type **get DST2007Patch.tar** and then press **Enter**. The system transfers the compressed patch file to the /tmp directory of the DNCS.
- 11 Type **bye** and then press **Enter** to close the connection with the FTP server.
- 12 Open an FTP connection with the ASI server.
- 13 Type **cd /u00/DST2007Patch** and then press **Enter**. The /u00/DST2007Patch directory on the ASI server becomes the working directory.
- 14 Type **bin** and then press **Enter** to set the binary transfer mode.
- 15 Type **put DST2007Patch.tar** and then press **Enter**. The system transfers the DST2007Patch.tar file from the /tmp directory of the DNCS to the /u00/DST2007Patch directory of the ASI server.
- 16 Type **bye** and then press **Enter** to close the FTP connection with the ASI server.

Installing the DST2007 Patch

If you have correctly followed the preceding procedure, you should have obtained the DST2007Patch.tar file from our FTP server and have loaded it into the /u00/DST2007Patch directory of the ASI server. In this procedure, you will uncompress and extract the compressed patch file, configure it, and then run the installation script.

- 1 Log on to the ASI server as **root** user.
- 2 Type **cd /u00/DST2007Patch** and then press **Enter**. The /u00/DST2007Patch directory becomes the working directory.
- 3 Type **tar xvf DST2007Patch.tar .** and then press **Enter**. The system uncompresses and extracts the components of the DST2007Patch.tar file.
Important: Be sure to press the **Spacebar** and type a period after typing DST2007Patch.tar.
- 4 Type **chmod 777 install_patches** and then press **Enter**. The system configures the installation and cleanup script with the proper permissions.
- 5 Type **./install_patches** and then press **Enter**. The system displays a confirmation prompt about licensing terms for the Java Development Kit (JDK).

- 6 Select **yes** to begin installing the JDK software and several DST patches.

Important: Do not press any key while the software installs.

Notes:

- Several of the DST patches may take as long as 5 minutes each to install, and there may be several occasions when there is no visible screen output.
- A message similar to the following appears when the installation is complete:

Installation of <SAIpatch> was successful.

***** **Patch Installation Complete** *****

***** Important *** Important*** Important*****

*** You Should Now Reboot The System ***

- 7 Type **more /var/sadm/install_data/SA_Recommended_log** and then press **Enter** to examine the installation log file.
- 8 Did the software install without error?
 - If **yes**, type **init 6** and then press **Enter**. The ASI server reboots.
 - If **no** (the log file shows installation errors), call Cisco Services for assistance.

5

Install the xOD Client Software

Introduction

This chapter provides instructions for installing the xOD client software on the ASI server.

Important: The procedures in this chapter reflect an installation for sites that support ASI Server software 1.6.0 and xOD Client software 1.5.0. If you are running earlier versions of code, some of the installation prompts in these instructions will not appear or apply.



CAUTION:

The procedures in this chapter are used to install xOD on a new system. If you are upgrading an existing xOD system, use the procedures listed in Appendix A and Appendix B. Failure to do so may erase your xOD configuration.

Time to Complete

Installing the xOD client software takes approximately 10 to 15 minutes to complete.

Performance Impact

Installing the xOD client software has no impact on system performance.

In This Chapter

- Before You Begin..... 110
- Install the xOD Client..... 111

Before You Begin

Before you begin installing the xOD client software on the ASI server, you must have the following information:

- xOD Client 1.6.0 CD
- Time that you set the xOD IPG Collector to run daily (refer to Chapter 2 of this guide, if necessary)
- Source ID of the inband xOD BFS carousel (refer to Chapter 2 of this guide, if necessary)
- Source ID of the inband carousel for small files (refer to Chapter 2 of this guide, if necessary)
- Source ID of the inband carousel for large files (refer to Chapter 2 of this guide, if necessary)
- Source ID for the out-of-band carousel
- A test DHCT and television

Install the xOD Client

Overview

This section describes how to install the xOD client software onto the ASI server.



CAUTION:

The procedures in this chapter are used to install xOD on a new system. If you are upgrading an existing xOD system, use the procedures listed in Appendix A and Appendix B. Failure to do so may erase your xOD configuration.

Installing the xOD Client

Complete these steps to install the xOD client.

- 1 Are you tipped in to the ASI server?
 - If **yes**, go to step 5.
 - If **no**, go to step 2.
- 2 Open an xterm window on the DNCS.
- 3 Log in to the DNCS as **root**.
- 4 Telnet to the ASI server.
- 5 Log in to the ASI server as **root**.
- 6 Insert the **xOD Client 1.6.0 CD** into the ASI server.
- 7 Type **cd /cdrom/cdrom0** and press **Enter**. The system accesses the CD directory and displays a prompt.
- 8 Type **./installbase.ksh** and press **Enter**. (Be sure to type a period before the slash.) The system prompts you to select the packages you want to process.
- 9 Press **Enter** to choose the default of *All Packages*. The script processes the package information, verifies disk space, and checks for conflicts with packages already installed. A message appears asking if you want to install conflicting packages.
- 10 Type **y** and press **Enter**. The system installs the xOD client software onto the ASI server. When finished, the **Installation of <GNUlstdc> was successful** message appears. The system then prompts you to select the packages you want to process.
- 11 Press **Enter** to choose the default of *All Packages*. When installation is complete, the **Installation of <FSFgcc> was successful** message appears. The system then prompts you to select the packages you want to process.
- 12 Press **Enter** to choose the default of *All Packages*. The script processes package instance <SMCperl>, verifies disk space, and checks for conflicts with packages already installed. A message asks whether or not to install conflicting files.

- 13 Type **y** and press **Enter**. When installation is complete, the **Installation of <SMCperl> was successful** message appears. The system then prompts you to select the packages you want to process.
- 14 Press **Enter** to choose the default of *All Packages*. The script processes package instance <PRASutil>. The system asks whether or not to e-mail logging support to prasara.com.
- 15 Type **n** and press **Enter**. The system asks whether or not to install conflicting files.
- 16 Type **y** and press **Enter**. The system informs you that this package contains scripts that will be executed with super-user permission during the process of installing this package. Then, the system asks if you want to continue with the installation.
- 17 Type **y** and press **Enter**. The script installs Prasara Utilities as <PRASutil>. Upon completion of the install, the **Installation of <PRASutil> was successful** message appears. Then, the Prasara Package Installer (PPI) menu appears.
- 18 Type the number that corresponds to **Install Server Packages** and press **Enter**. The system prompts you for the package would you like to install.
- 19 Type the number that corresponds to the Package: "PRASipg" option and press **Enter**. The system prompts you to select the packages you want to process.
- 20 Press **Enter** to choose the default of *All Packages*. The script processes package instance <PRASipg>. The system then prompts you to enter the DROXY_HOST.
- 21 Press **Enter** to accept the default of localhost. The system prompts you to enter the Droxy port number.
- 22 Type **7000** and press **Enter**. The system checks for the required BMS-stored procedures, and then prompts you to enter the Master App Name.
- 23 Type **SAIXOD** and press **Enter**. The system prompts you to enter the hour the xOD IPG Collector runs on the DNCS daily.
- 24 Type the same hour (0-23) you entered when you set up the xOD IPG Collector. If necessary, refer to Chapter 2 of this guide.

Important: The xOD IPG Collector must be set to run at least one hour before the main IPG Collector runs on the DNCS each day. Make sure you enter the time using 24-hour format.

Result: The system prompts you to enter the minutes the xOD IPG Collector runs on the DNCS daily.
- 25 Type the same minutes (0-59) you entered when you set up the xOD IPG Collector and press **Enter**. If necessary, refer to Chapter 2 of this guide. The system asks whether or not to install conflicting files.
- 26 Type **y** and press **Enter**. The **Installation of <PRASipg> was successful** message appears. Then the system prompts you to press **Enter** to continue.
- 27 Press **Enter**. The PPI menu appears.
- 28 Type the number that corresponds to **Install Client Packages** and press **Enter**. The system prompts you to choose a package to install.

- 29 Type the number that corresponds to the **Package: "SAIxod"** option and press **Enter**. An error message appears that states no DNCS directories exist. The system then asks you to define on which DNCS you would like to install SAIXOD.
- 30 Type **c** and press **Enter** to create a new DNCS directory. The system prompts you for the name of the new DNCS directory.
- 31 Type a name for the directory (for example, **xod**) and press **Enter**. The system prompts you to choose a package you want to install.
- 32 Type the number that corresponds to the **Package: "SAIxod"** option and press **Enter**. The system asks you to define on which DNCS you would like to install SAIXOD.
- 33 Type the number that corresponds to the DNCS where you just created a new directory and press **Enter**. The system prompts you to choose a package you want to install.
- 34 Press **Enter** to choose the default of *All Packages*. The script processes package instance <SAIxod>. The system then prompts you to enter the SAIXOD BFS Source ID.
- 35 Type the same number you used when you added the inband BFS carousel and press **Enter**. Refer to Chapter 2 of this guide, if necessary. The system prompts you for the out-of-band Source ID.
- 36 Type the same number you used when you added the out-of-band BFS carousel. The system prompts you for the BFS Source ID for content files more than 70 KB.
- 37 Type the same number you used when you added the inband BFS carousel for large files and press **Enter**. Refer to Chapter 2 of this guide, if necessary. The system prompts you for the BFS Source ID for content files less than 70 KB.
- 38 Type the same number you used when you added the inband BFS carousel for small files and press **Enter**. Refer to Chapter 2 of this guide, if necessary. The system prompts you to enter the hostname or IP address of your DNCS.
- 39 Type **dncs** and press **Enter**. The system prompts you to enter the port number for bfsman.

- 40 Press **Enter** to accept the default of 3333. The system prompts you to choose which client platforms to install.

```
(***Note: This will remove any xOD platforms not selected that are currently
installed.)

Would you like to install xOD on:

1) Legacy Explorer platforms only
2) Legacy Explorer and supported third-party platforms
3) All Explorer platforms (legacy and next generation)
4) All supported xOD platforms

Legacy Explorer platforms are those settop models based on a Micro SPARC
processor. These include the 8300, 4250, 3250, 2000, 940, and related models.
Next generation Explorer platforms are based on a MIPS processor and include the
8550, 4550, 1540, RNG, and later models.

Please make your selection {1/2/3/4)?
```

- 41 Type your answer (1, 2, 3, or 4) based upon what set-tops are deployed on the site you are upgrading.

Notes:

- If you support Pace, Pioneer, or Panasonic set-tops, then you have non-Explorer set-tops deployed.
- If you have any of the newer Explorer models, like models 8550, 4550, 1550, or RNG, then you have next-generation set-tops deployed.
- All other set-tops should be considered legacy Explorer platforms.

Important: If you have any doubt as to what set-tops are deployed on your system, type 4, otherwise you risk having some of your deployed set-tops being unable to run xOD.

Result: The system prompts you to select a Video Server Type.

- 42 Type the number that corresponds to your video server and press **Enter**.

Note: For ISA configurations, choose **twisa**.

Result: The system asks whether or not to enable Service Group Auto Discovery and Session Based Encryption.

- 43 Type **y** and then press **Enter**.

- 44 Do you want empty genres to be shown with a single “No Titles” menu item? Make your selection based on the following considerations:
- If this is an ISA system, or if you want genres without active movies to appear in the list of genres, type **y** (yes) and press **Enter**. Subscribers will see these genres listed, but if they highlight one of these genres, the television screen will display “No Titles.”
- Important:** You must type **y** to enable billboard genres. See the *xOD 1.6 Configuration Guide* (part number 4004032) for more information on billboard genres.
- If you do *not* want genres without active movies to appear in the list of genres, type **n** (no) and press **Enter**. Subscribers will not see genres that have no active movies.
- Results:**
- The script checks for the required BMS-stored procedures.
 - The system processes the information you have specified, verifies that there is enough disk space for the installation, and then begins installing the xOD client software as **SAIXOD**. The **Installation of [SAIxod] was successful** message appears. The system then prompts you to press **Enter** to continue.
- 45 Press **Enter**. The PPI menu appears.
- 46 Type **b** to select BFSctl and press **Enter**. The **BFSMAN: disabled not-running** message appears. Then, the system prompts you to select a DNCS.
- 47 Type **1** to select the DNCS and press **Enter**. A list of options appears.
- 48 Type **1** to start bfsman and press **Enter**. The system starts the BFSMAN process and writes the xOD files to the /dvs/dvsFiles/BFS/xod directory on the DNCS. When finished, the system displays the list of available DNCS workstations.
- 49 Type **1** to select DNCS and press **Enter**.
- 50 Does the message **BFSMAN: enabled running** appear?
- If **yes**, go to step 51.
 - If **no**, contact Cisco Services.
- 51 Type the number that corresponds to **Quit** and press **Enter**. The system closes the BFS Control Utility.
- 52 Type the number that corresponds to **Quit** and press **Enter**. The system closes the PPI menu.
- 53 Type **q** and press **Enter**. The system displays a prompt.
- 54 Type **cd /export/home/prasara/DNCS.1.xod/BFS/xod/cpu1** and press **Enter**.
- 55 Type **ls** and press **Enter**. A list of files appears.
- Note:** The “l” is a lowercase “L.”

- 56 Are *both* the **saixod.ptv** and **saixod.vid** files present?
- If **yes**, go to step 57.
 - If **no**, contact Cisco Services.
- Important:** If either one of these files is missing, contact Cisco Services. Otherwise, go to step 57.
- 57 Type **cd /cdrom** and press **Enter**. A prompt appears.
- 58 Type **eject** and press **Enter**. The system ejects the **xOD Client 1.6.0** CD and displays a prompt.
- 59 Remove the xOD Client CD. Are you tipped into the ASI server?
- If **yes**, type **~** and press **Enter**. The system closes the TIP connection to the ASI server and displays a prompt. You are once again logged into the DNCS.
 - If **no**, go to step 60.
- 60 Type the directory path where the xOD files reside on the DNCS and press **Enter**. In a standard installation, this path looks like the following example:
- ```
cd /dvs/dvsFiles/BFS/xod/cpu1
```
- 61 Type **strings saixod.ptv | grep -i version** and press **Enter**. The system displays the xOD client version number that is installed on the system. In the following example, the xOD client version is **3605**.
- Version:3605**
- 62 Record the version number exactly as shown \_\_\_\_\_.
- Important:** You must use the exact format of the version number as shown in xOD file. This is the format you should use when entering version information in the SAM Application URL. In the example in step 61, you would record **3605**. If there are hyphens in the version number, record the hyphens (for example, **3-6-0-5**). If there are any letters in the version number, record those as well (for example **3605b1**).
- 63 Type **exit** and press **Enter**. The system exits root mode and displays a prompt.
- 64 Type **exit** and press **Enter**. The system closes the DNCS xterm window.
- 65 Go back to the xOD Set Up SAM Service window and verify that you have recorded the version information correctly. If not, update the information accordingly. If necessary, refer to Chapter 2 of this guide for assistance.
- 66 You have successfully installed the xOD client. You are ready to go to the *xOD 1.6 Configuration Guide* (part number 4004032) to configure your xOD services. When you are finished configuring your xOD services, test the installation by using a test DHCT to access and purchase those services. See *Verifying the xOD Client Installation* (on page 117) for instructions.

## Verifying the xOD Client Installation

After you configure xOD services, complete the following steps to verify that the xOD Client 1.6.0 installation was successful. To complete these steps, use a test DHCT and television.

- 1 On the test DHCT, tune to an xOD channel and access Page 3 of the diagnostic screens. Look for the **saixod** version number.  
**Note:** The DHCT may take a few minutes to update the version number.
- 2 Does the saixod version number match the xOD client version number you just installed?
  - If **yes**, go to step 3.
  - If **no**, refer to the topic *version (Required)* (on page 50), and repeat that procedure for this xOD service. If the saixod version is still incorrect, contact Cisco Services.
- 3 Try to purchase and view an xOD event on that channel. Were you able to purchase and view the event successfully?
  - If **yes**, go to step 4.
  - If **no**, contact Cisco Services.
- 4 Repeat steps 1 through 3 for each xOD service. After verifying that each xOD service functions correctly, you have completely and successfully installed xOD Client 1.6.0.
- 5 After successfully installing xOD Client 1.6.0, verify that the Emergency Alert System (EAS) is correctly configured. Refer to *Configuring and Troubleshooting the Digital Emergency Alert System* (part number 4004455), for additional information on configuring and troubleshooting your EAS.



# 6

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## 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..



# A

## Upgrade the ASI Server Software

### Introduction

This appendix describes how to upgrade the ASI Server software from version 1.5.

If you are upgrading from version 1.4 or earlier, you must first upgrade to version 1.5. Refer to the *xOD 1.5 Installation Guide* (part number 4000140) for instructions on upgrading to version 1.5.



#### CAUTION:

The procedures in this appendix are used to upgrade an existing xOD system. If you are installed xOD on a new system, use the procedures beginning in Chapter 2. Failure to do so may erase your xOD configuration.

**Important:** If you are upgrading both the server and client software you must *upgrade the server first*.

### In This Appendix

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| ■ Complete the Pre-Upgrade Tasks.....       | 124 |
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## Determine Your System Configuration

### Introduction

The process that you will follow to upgrade to xOD 1.6.0 depends on the ASI Server version that you are currently running. This section helps you to determine your current ASI Server version.

### Determining Your System Configuration

Follow these steps to determine your current ASI Server version.

- 1 Open a Web browser window on any client that is located on the same subnet as the ASI Server.
- 2 Point the browser to the IP address of the ASI Server, followed by :81/xod/

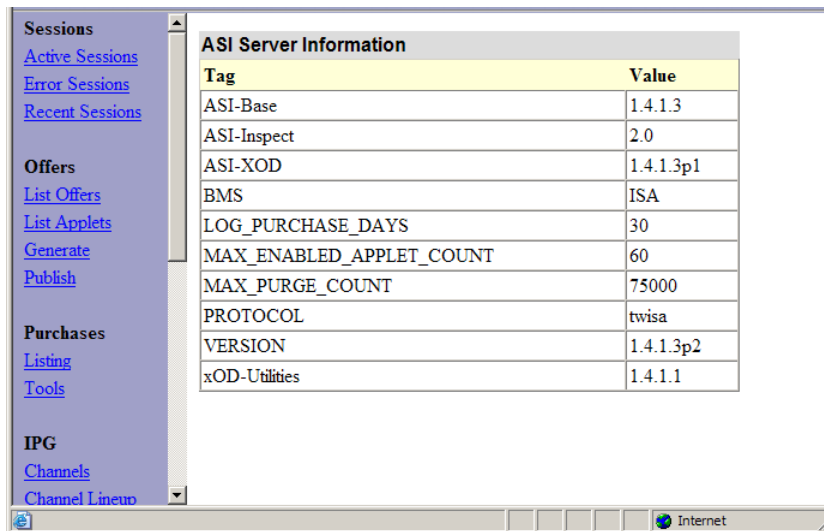
**Example:** `http://asi:81/xod/`

**Result:** The ISA Services window opens. You can use this window to view status information on ISA services.



- 3 Does the system prompt you to enter a user name and password?
  - If **yes**, type your user name and password, and then press **Enter**. Go to step 4.
  - If **no**, go to step 4.

- 4 Click **ASI Info** under the **Logs** topic in the navigation pane. The ASI Server Information window opens.



| ASI Server Information   |           |
|--------------------------|-----------|
| Tag                      | Value     |
| ASI-Base                 | 1.4.1.3   |
| ASI-Inspect              | 2.0       |
| ASI-XOD                  | 1.4.1.3p1 |
| BMS                      | ISA       |
| LOG_PURCHASE_DAYS        | 30        |
| MAX_ENABLED_APPLET_COUNT | 60        |
| MAX_PURGE_COUNT          | 75000     |
| PROTOCOL                 | twisa     |
| VERSION                  | 1.4.1.3p2 |
| xOD-Utilities            | 1.4.1.1   |

- 5 Does the BMS field contain a value of ISA?
- If **yes**, your system is an ISA site. This guide contains all of the procedures you need to upgrade to xOD 1.6.0. Go to step 6.
  - If **no**, you cannot upgrade to xOD 1.6.0.
- 6 Locate the Version field and record the version number in the space provided here: \_\_\_\_\_

**Note:** This field identifies your current ASI Server version.

## Complete the Pre-Upgrade Tasks

### Introduction

The following tasks should be performed before upgrading to ASI Server 1.6.0. Most of these tasks should be performed a few hours (up to one day) before the upgrade is to take place. You should also verify that they have been completed immediately before you begin the upgrade process.



**CAUTION:**

**The procedures in this appendix are used to upgrade an existing xOD system. If you are installing xOD on a new system, use the procedures beginning in Chapter 2. Failure to do so may erase your xOD configuration.**

### Pre-Upgrade Checklist

This section provides a checklist that you can use to verify that you have completed all of the necessary tasks before upgrading a server to ASI Server 1.6.0. The procedures for each of these tasks appear later in this section.

- 1 Install the xOD 1.6.0 Utilities software.
- 2 Verify that you have the Solaris ISO-8859 locale installed.
- 3 Verify that hot backups are not running, and disable the hot\_backup.sh process.
- 4 Verify that the isactl cron script is disabled.
- 5 Verify that generate and publish is not running, and disable the xod\_cron.sh process.
- 6 Disable DBA\_JOBS.
- 7 Run the preupgrade\_ck script to verify that all checks are successful.

## Install the xOD 1.6.0 Utilities Software

Complete these steps to install the ASI server utilities onto the ASI server.

- 1 Make sure you are logged in as **root**.
- 2 Insert the **xOD Utilities 1.6.0.2** CD into the ASI server.
- 3 Type **cd /cdrom/cdrom0** and press **Enter**. The **/cdrom/cdrom0** directory becomes the current directory.
- 4 Type **/install.sh** and press **Enter**. The system prompts you to specify whether you want to enable the automatic rebuilding of indexes.
- 5 Type **y** and then press **Enter**. The system prompts you to specify the day of the week that you want the indexes rebuilt. Valid choices are **MONDAY**, **TUESDAY**, **WEDNESDAY**, or **THURSDAY**.
- 6 Move the cursor to the desired day and then press **Enter**. The system prompts you to specify the hour of the day when you want the indexes rebuilt. Valid choices are **1** through **8** AM.

**Note:** The system will rebuild the indexes on a weekly basis. The rebuilding of the indexes does not require any system downtime. However, to maximize the efficiency of the rebuild, schedule the rebuild during a time of low database activity.

- 7 Move the cursor to the desired time and then press **Enter**. The system prompts you to choose whether you want to add a crontab entry for backing up xOD Logs.

**Note:** You can examine the log file at **/u00/install\_utl/rebuildIndexSetup.log** to verify that the configuration of index-rebuilding activities proceeded without error.

- 8 Do you want a crontab entry for backing up xOD logs?
  - If **yes**, type **y** and press **Enter**.
  - If **no**, type **n** and press **Enter**.

**Result:** The installation of the ASI server utilities completes, and the UNIX prompt appears.

- 9 Type **cd** and press **Enter**.
- 10 Type **eject** and press **Enter**. The system ejects the **xOD Utilities 1.6.0** CD and displays the UNIX prompt.

## Checking the ISO-8859-1 Locale

Follow these steps to check the ISO-8859-1 locale.

- 1 Telnet into the ASI server and log in as the **root** user.
- 2 At the # prompt, type **/usr/bin/locale -a | grep -i en\_US.ISO8859-1** and press **Enter**. You should see **en\_US.ISO8859-1** if the locale is installed.
- 3 If the locale is not installed, continue with step 4 to install the locale before the upgrade.
- 4 Insert the Solaris Software version 8 revision 02/02 or 05/03 Disk 1 CD into the ASI Server.
- 5 Type **cd /cdrom/cdrom0/s0/Solaris\_8/Product/** and press **Enter**. A prompt appears.
- 6 Type the following command and then press **Enter**.  
**# pkgadd -d . SUNWnamos SUNWnamox SUNWislcx SUNWi1of  
SUNWi15rf SUNWi1cs SUNWi15cs SUNWnamdt SUNWnamow SUNWplow  
SUNWplow1**  
**Result:** You will be prompted with several “package add” prompts. Select ‘Y’ to install each package.
- 7 At the # prompt, type **/usr/bin/locale -a | grep -i en\_US.ISO8859-1** and press **Enter**. You should see **en\_US.ISO8859-1** if the locale is installed.

## Disable Hot Backups

Follow these steps to disable hot backups.

- 1 At the # prompt, type **ps -ef | grep -i hot** and press **Enter**.
- 2 Does the ASI Server indicate that the hot\_backup process is currently running?
  - If **yes**, you must wait until the process is complete to continue. Then, go to step 3.
  - If **no**, go to step 3.
- 3 At the # prompt, type **EDITOR=vi; export EDITOR** and press **Enter**.
- 4 Type **crontab -e oracle** and press **Enter**.
- 5 Look through the file to find the following line:
 

```
00 01 * * * /export/home/oracle/scripts/cron/hot_backup.sh
```

**Note:** The first four characters of this line indicate the time that the hot\_backup process is scheduled to run. These characters may be different on your system.
- 6 Type # at the beginning of that line to mark it as a comment.
- 7 Press **Esc**, then type **wq!** and press **Enter** to save and close the file.
- 8 Type **crontab -l oracle** and press **Enter** to verify that the changes were saved. The line that you modified should appear as:
 

```
#00 01 * * * /export/home/oracle/scripts/cron/hot_backup.sh.
```

## Verify isactl cron Script is Disabled

Follow these steps to disable the isactl cron script.

- 1 Login as root user.
- 2 At the # prompt, type **crontab -e root** and press **Enter**.
- 3 Look through the file to find the following line:
 

```
00 04 * * * /opt/Prasara/bin/isactl restart
```

**Note:** The first four characters of this line indicate the time that the isactl process is scheduled to run. These characters may be different on your system.
- 4 Type # at the beginning of that line to mark it as a comment.
- 5 Press **Esc**, then type **wq!** and press **Enter** to save and close the file.
- 6 Type **crontab -l root** and press **Enter** to verify that the changes were saved. The line that you modified should appear as:
 

```
00 04 * * * /opt/Prasara/bin/isactl restart
```

## Disable xod\_cron.sh

Follow these steps to disable the xod\_cron.sh process.

- 1 At the # prompt on the ASI Server, type **ps -ef | grep -i xod\_cron.sh** and press **Enter**.
- 2 Does the ASI Server indicate that the xod\_cron process is currently running?
  - If **yes**, you must wait until the process is complete to continue. Then, go to step 3.
  - If **no**, go to step 3.
- 3 Type **crontab -e asset** and press **Enter**.
- 4 Look through the file to find the following line:  
00 02 \* \* \* /opt/Prasara/bin/xod\_cron.sh  
**Note:** The first four characters of this line indicate the time that the xod\_cron.sh process is scheduled to run. These characters may be different on your system.
- 5 Type # at the beginning of that line to mark it as a comment.
- 6 Press **Esc**, then type **wq!** and press **Enter** to save and close the file.
- 7 Type **crontab -l asset** and press **Enter** to verify that the changes were saved. The line that you modified should appear as:  
#00 02 \* \* \* /opt/Prasara/bin/xod\_cron.sh.

## Disable DBA\_JOBS

Follow these steps to disable DBA\_JOBS.

- 1 Type **su - oracle** and press **Enter** to login as oracle.
- 2 At the **oracle:SID=asi** prompt, type **sqlplus ixod/ixod** and press **Enter**.
- 3 Type **alter system set job\_queue\_processes = 0;** and press **Enter**.
- 4 Type **exit** and press **Enter**.
- 5 Type **exit** and press **Enter** a second time to exit Oracle completely.

## Execute preupgrade\_ck Script

After you complete all of the Pre-Upgrade tasks, follow these steps to verify that all pre-upgrade checks are successful.

- 1 Log on as root user.
- 2 At the # prompt, type `cd /export/home/oracle/asi_util/sql/1.4-preupgrade` and press **Enter**.
- 3 Type `./preupgrade_ck` and press **Enter**. The ASI Server displays a message similar to the following:  
 Starting ASI Server 1.6.0 Pre-Upgrade Checks.  
 Hot Backup not running.  
 Hot Backup script disabled.  
 xOD Cron script not running.  
 xOD Cron script disabled.  
 Isactl cron restart script disabled.  
 DBA Jobs Disabled.  
 No DBA jobs currently running.  
 All Pre-Upgrade Checks Passed. You may proceed with 1.6.0 Upgrade.
- 4 Did the ASI Server indicate that you may proceed with the 1.6.0 upgrade?
  - If **yes**, you may begin upgrading to ASI Server 1.6.0 during the next maintenance window. Go to *Upgrade the ASI Server* (on page 130).
  - If **no**, verify that you have completed all of the pre-upgrade steps before proceeding.

**Important:** After you have successfully completed the pre-upgrade checks, please complete *all* of the steps to perform the ASI Server Upgrade. If for any reason you cancel the ASI server upgrade, you *must* revert *all* pre-upgrade tasks back to their original form. You can complete this by performing the Post-Upgrade tasks of this Appendix. If you fail to revert these changes back to their original form, your site will experience a serious loss of ASI server function and your subscribers will not be able to order xOD services.

# Upgrade the ASI Server

## Introduction

This section describes how to upgrade the ASI Server software.

## Before You Begin

You need the following to upgrade the ASI Server software:

- IP address for the ASI Server
- Privileges and password for root user on the ASI Server (from your system administrator)
- ASI Server 1.6.0 Upgrade CD



### WARNING:

**You must successfully complete all of the pre-upgrade tasks described in this section before upgrading the ASI Server software to version 1.6.0. Attempting to upgrade the ASI Server software without performing these tasks may cause the upgrade to fail.**

## Time to Complete

Upgrading the ASI Server takes approximately 30 minutes to complete.

## Performance Impact

During the upgrade process, subscribers cannot order any xOD, PPV, or VOD services.

## Logging On to the ASI Server

Before you can upgrade the ASI Server software, you must complete these steps to log on to the ASI Server.

- 1 Make sure that you have completed the pre-upgrade tasks. If you have not completed the pre-upgrade tasks, go to *Complete the Pre-Upgrade Tasks* (on page 124), and follow the pre-upgrade task instructions. Attempting to upgrade the ASI Server software without completing the pre-upgrade tasks may cause the upgrade to fail.
- 2 Open an xterm window on the DNCS.
- 3 Telnet to the ASI Server and log on to it as the **asset** user. The system prompts you to enter a password for the asset user.
- 4 Type **tincup** and press **Enter**. The system displays a prompt for the asset user.
- 5 Log on to the ASI Server as the root user. The system displays a prompt for the root user.

## Upgrading the ASI Server Software to xOD 1.6.0

Complete these steps to upgrade the server software to xOD 1.6.0.

- 1 Insert the **ASI Server 1.6.0 Upgrade** CD into the ASI Server. Wait for the light to stop flashing on the CD drive.
- 2 In the DNCS xterm window where you have a telnet connection to the ASI Server, type **cd /cdrom/cdrom0** and press **Enter**. The system accesses the CD directory and displays a prompt.
- 3 Type **/upgrade.sh** and press **Enter**. The system begins upgrading ASI Server 1.6.0 software. When the upgrade is complete, the system displays a root user prompt.
- 4 Review the upgrade log (/u00/upgrade/upgrade.log) for errors.
- 5 Review the messages that appeared under the heading “Checking ASI Schema Objects” during the upgrade process. Do any of those messages indicate that an object check failed?
  - If all of the results are listed as “PASSED,” you have completely and successfully upgraded the ASI Server software. Go to step 6.
  - If any one of the results is listed as “FAILED,” contact Cisco Services for assistance in troubleshooting the reason for the failure.

**Note:** You will be asked to send the **/tmp/list.tar** file to Cisco Services for use in troubleshooting the reason for the failure.
- 6 Type **eject** and press **Enter**. The ASI Server ejects the ASI Server 1.6.1 Upgrade CD and returns you to the root user prompt.

**Appendix A**  
**Upgrade the ASI Server Software**

- 7 Remove the **ASI Server 1.6.0 Upgrade** CD.
- 8 Complete these steps to reboot the ASI Server.
  - a Type **sync** and press **Enter**.
  - b Type **init 6** and press **Enter**.

**Result:** The ASI Server reboots.
- 9 Wait approximately 10 to 15 minutes and then go to step 10.
- 10 If your system uses an Emergency Alert System (EAS), verify that your EAS is still properly configured in the DNCS. Refer to *Configuring and Troubleshooting the Digital Emergency Alert System* (part number 4004455), for additional information on configuring and troubleshooting your EAS.
- 11 Go to *Complete the Post-Upgrade Tasks* (on page 133).

# Complete the Post-Upgrade Tasks

## Introduction

This section identifies tasks that you should perform after you complete the upgrade to ASI Server 1.6.0 software, or if, for any reason, you cancel the ASI Server upgrade after starting or completing the pre-upgrade checks.

## Post-Upgrade Checklist

This section provides a checklist that you can use to verify that you have completed all of the necessary tasks after upgrading to ASI Server 1.6.1. The procedures for each of these tasks appear later in this section.

- 1 Enable hot backups.
- 2 Perform a system check.
- 3 Enable xod\_cron.sh.
- 4 Verify that DBA\_JOBS are enabled.
- 5 Add the isactl restart script to the crontab file.

## Enable Hot Backups

Follow these steps to enable hot backups.

- 1 Log in to the ASI Server as root user.
- 2 At the # prompt, type **crontab -e oracle** and press **Enter**.
- 3 Look through the file to find the following line:  

```
#00 01 * * * /export/home/oracle/scripts/cron/hot_backup.sh
```

**Note:** The numerals near the beginning of this line indicate the time that the hot\_backup process is scheduled to run. These characters may be different on your system.
- 4 Remove the # at the beginning of that line.
- 5 **Save** and close the file.
- 6 Type **crontab -l oracle** and press **Enter** to verify that the changes were saved. The line that you modified should appear as:  

```
00 01 * * * /export/home/oracle/scripts/cron/hot_backup.sh.
```

## Perform System Check

To complete the 1.6.1 server upgrade, you must verify that all ISA components are functional. Follow these steps to perform a system check.

- 1 In the ISA Services window, select **SA Application Tools** and then click **xOD**.
- 2 Verify that the status for all relevant services is “In Service.”

## Enable xod\_cron.sh

Follow these steps to enable the xod\_cron.sh process.

- 1 At the # prompt on the ASI Server, type **crontab -e asset** and press **Enter**.
- 2 Look through the file to find the following line:  
`#00 02 * * * /opt/Prasara/bin/xod_cron.sh`  
**Note:** The numerals near the beginning of this line indicate the time that the xod\_cron.sh process is scheduled to run. These characters may be different on your system.
- 3 Remove the # at the beginning of that line.
- 4 **Save** and close the file.
- 5 Type **crontab -l asset** and press **Enter** to verify that the changes were saved. The line that you modified should appear as:  
`00 02 * * * /opt/Prasara/bin/xod_cron.sh.`

## Verify That DBA\_JOBS Are Enabled

Follow these steps to verify that DBA\_JOBS are enabled.

- 1 Type **su - oracle** and press **Enter** to login as oracle user.
- 2 At the **oracle:SID=asi** prompt, type **sqlplus ixod/ixod** and press **Enter**.
- 3 Type **select value from v\$parameter where name = 'job\_queue\_processes';** and press **Enter**.
- 4 Does the system indicate that there are two DBA\_JOBS running?
  - If **yes**, go to step 5.
  - If **no**, type **alter system set job\_queue\_processes=2;** and press **Enter**.
- 5 Type **exit** and press **Enter**.

## Add isactl Restart Script to the Crontab File

Follow these steps to add the isactl restart script to the crontab file.

- 1 If you have not already done so, login as root user.
- 2 At the # prompt, type **crontab -e root** and press **Enter**.
- 3 Add the following line in the crontab file:

```
00 04 * * * /opt/Prasara/bin/isactl restart
```

**Note:** The first four characters of this line indicate the time that the isactl process is scheduled to run.

- 4 Press **Esc**, then type **wq!** and press **Enter** to save and close the file.
- 5 Type **crontab -l root** and press **Enter** to verify that the changes were saved.

**Result:** The line that you added should appear as:

```
00 04 * * * /opt/Prasara/bin/isactl restart
```



# B

## Upgrade the xOD Client Software

### Introduction

This appendix describes how to upgrade the xOD client software on the ASI server.

**Important:** Note these important points:

- The procedures in this appendix are used to upgrade an existing xOD system. If you are installing xOD on a new system, use the procedures beginning in Chapter 2. Failure to do so may erase your xOD configuration.
- You must upgrade the ASI server software before you upgrade the xOD Client software on the ASI server. Otherwise, the upgrade may fail.

### In This Appendix

- Upgrade the xOD Client ..... 138

# Upgrade the xOD Client

## Introduction

This section describes how to upgrade the xOD client software on the ASI server.

## Before You Begin

Before you begin to upgrade the xOD client software, you must upgrade the ASI Server software to 1.6.0. You also need the following items to upgrade the xOD client:

- ASI server **asset** user privileges and password (from your system administrator)
- ASI server **root** user privileges and password (from your system administrator)
- **xOD Client 1.6.0** CD
- IP address or host name (usually **asi**) for the ASI server
- IP address or host name (usually **dncs**) for the DNCS
- A test DHCT and television

## Time to Complete

Upgrading the xOD client takes approximately 40 minutes to complete.

## Performance Impact

When you finish upgrading the xOD client, the next time an authorized DHCT tunes to an xOD channel, it will update its xOD client software. Therefore, the next time subscribers try to tune to an xOD channel, the DHCT will take a few seconds longer than usual to load the channel.

## Creating an Out-of-Band BFS Source

Complete these steps to create an out-of-band BFS source.

**Important:** Skip this procedure if the out-of-band source is already configured.

- 1 With the Sources tab in the forefront of the BFS Administration window, click **File** and select **New**. The Set Up BFS Source window opens.
- 2 Click in the Source Name field and type **SAIXOD\_OOB**. This should be the same name that you entered when you added the DNCS source.

- 3 Click in the **Source ID** field and type the source ID that you used when you added the DNCS source.

**Notes:**

- Our numbering convention uses even numbers for inband BFS carousels.
- You must use a number that is greater than 200 for the source ID. Source ID numbers 1 through 200 are reserved for system-built sources.

**Example:** For example, if the source ID for the inband carousel for small data files is 4446, use 4449 here.

- 4 For the **Source Type**, click the **BFS** option.
- 5 For the **Transport Type**, click the **Out-of-band** option.
- 6 For the **Data Rate**, type **.01**.
- 7 Click in the **Block Size** field, and type **1024**.

**Note:** Our engineers recommend a block size of 1024 bytes for optimum performance. However, if the Broadband Integrated Gateway (BIG) in your headend cannot process the data at this rate, use the default block size of 1024 bytes.

- 8 Verify that the **Indication Interval** is set to **100 msec**.
- 9 In the **Available Hosts** field, click to select **dncsatm** and click **Add**.

**Important:** Do not change any other fields.

**Result:** The selection moves to the **Selected Hosts** field. When you finish, the Set Up BFS Source window will look similar to the following example.

The screenshot shows the 'Set Up BFS Source' window with the following configuration:

- Source Name: SAIXOD\_OOB
- Source ID: 4449
- Source Type: BFS (selected)
- Transport Type: Out-of-band (selected)
- ATM Device Name: (empty)
- Data Rate: .01 Mbps
- Block Size: 1024 bytes
- Indication Interval: 100 msec
- Available Hosts: DNCSHOST, appservatm
- Selected Hosts: dncsatm

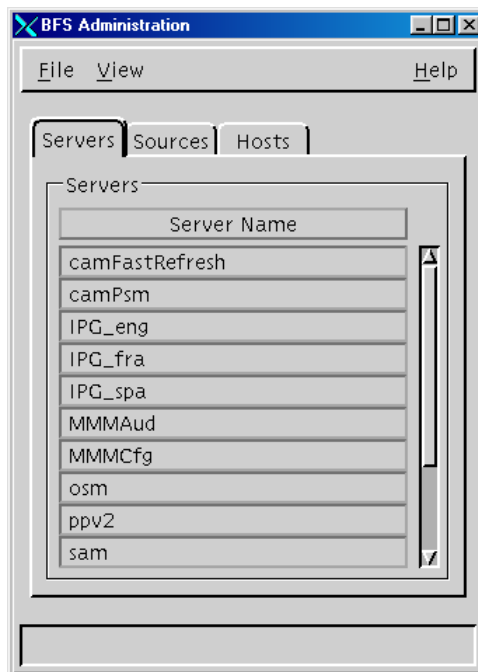
- 10 Click **Save**. The system saves the carousel information in the DNCS database and closes the Set Up BFS Source window. The Sources tab on the BFS Administration window updates to include the new carousel information.
- 11 Your next step is to authorize BFS servers for the out-of-band carousels you just created. Go to *Authorizing BFS Servers* (on page 39).

## Authorizing BFS Servers

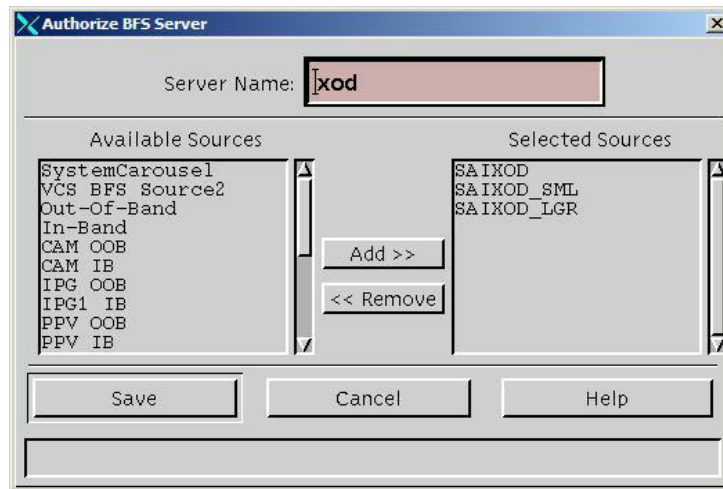
After you create the carousels, you must complete these steps to authorize BFS servers to hold the data for those carousels.

**Important:** Skip this procedure if the BFS server for xOD is already authorized.

- 1 On the BFS Administration window, click the **Servers** tab.



- 2 With the Servers tab still in the forefront of the BFS Administration window, select the Server name **xod**, choose **File**, and then click **Open**. The Authorize BFS Server window opens.



- 3 In the **Available Sources** field, click to select **SAIXOD\_OOB** and click **Add**. The selection moves to the Selected Sources field.
- 4 Click **Save**. The system saves the server information in the DNCS database and closes the Authorize BFS Server window. The Servers tab on the BFS Administration window updates to include the new server.
- 5 Click **File** and select **Close** to close the BFS Administration window.

## Upgrading the xOD Client

After you have updated the xOD version in the SAM URL, your next step is to upgrade the xOD client software on the ASI server. You must wait at least 30 minutes after you update the SAM URL before you begin this procedure.

Complete these steps to upgrade the xOD client software on the ASI server.

- 1 If not already done, do the following:
  - Open a DNCS xterm window.
  - Telnet to the ASI server.
  - Log in to the ASI server as **asset** user.
  - Log in again as **root** user.
- 2 Insert the **xOD Client 1.6.0** CD into the ASI server. Wait for the light to stop flashing on the CD drive.
- 3 Type **cd /cdrom/cdrom0** and press **Enter**. The system accesses the CD directory and displays a prompt.
- 4 Type **/ppi.ksh** and press **Enter**.

**Important:** Be sure to type a period before the slash. The system displays the Prasara Package Installer (PPI) menu.

## Appendix B

### Upgrade the xOD Client Software

- 5 Type the number that corresponds to **Install Client Packages** and press **Enter**. The system prompts you to choose a package to install.
- 6 Type the number that corresponds to **Package: "SAIxod"** and press **Enter**. The system prompts you to choose the DNCS where you want to upgrade the xOD client.
- 7 Type the number that corresponds to the desired DNCS and press **Enter**. The system prompts you to select the package(s) you want to process.
- 8 Press **Enter** to select the default of All Packages. The script processes the SAIxod package, and then prompts you to enter the saixod BFS source ID.
- 9 Press **Enter** to select the default value. The system prompts you for the out-of-band Source ID.
- 10 Type the same number you used when you added the out-of-band BFS carousel. The system prompts you for the "BFS Source ID for Content Files More than 70Kb."
- 11 Press **Enter** to select the default value. The system prompts you to enter the "BFS Source ID for Content Files Less than 70kb."
- 12 Press **Enter** to select the default value. The system prompts you to enter the DNCS hostname.
- 13 Type the DNCS host name (usually **dncs**) as you entered it into the DNCS host table and press **Enter**.

**Important:** If you did not add the DNCS host name to the DNCS host table (/etc/hosts), you need to type the IP address for the DNCS instead.

**Result:** The system prompts you to choose which client platforms to install.

```
(***Note: This will remove any xOD platforms not selected that are currently
installed.)

Would you like to install xOD on:

1) Legacy Explorer platforms only
2) Legacy Explorer and supported third-party platforms
3) All Explorer platforms (legacy and next generation)
4) All supported xOD platforms

Legacy Explorer platforms are those settop models based on a Micro SPARC
processor. These include the 8300, 4250, 3250, 2000, 940, and related models.
Next generation Explorer platforms are based on a MIPS processor and include the
8550, 4550, 1540, RNC, and later models.

Please make your selection (1/2/3/4)?
```

- 14 Type your answer (1, 2, 3, or 4) based upon what set-tops are deployed on the site you are upgrading.

**Notes:**

- If you support Pace, Pioneer, or Panasonic set-tops, then you have non-Explorer set-tops deployed.
- If you have any of the newer Explorer models, like models 8550, 4550, 1550, or RNG, then you have next-generation set-tops deployed.
- All other set-tops should be considered legacy Explorer platforms.

**Important:** If you have any doubt as to what set-tops are deployed on your system, type 4, otherwise you risk having some of your deployed set-tops being unable to run xOD.

**Result:** The system prompts you to select a Video Server Type.

- 15 Type the number that corresponds to your video server and press **Enter**.

**Note:** For ISA configurations, choose **twisa**.

**Result:** The system asks whether or not to enable Service Group Auto Discovery and Session Based Encryption.

- 16 Do one of the following based on your DNCS system release:

- For a DNCS that is operating with a system release *prior* to SR 2.x, type **n** and press **Enter**.
- For a DNCS that is operating with a system release of SR 2.x or later, type **y** and press **Enter**.

- 17 Do you want empty genres to be shown with a single “No Titles” menu item? Make your selection based on the following considerations:

- If this is an ISA system or if you want genres without active movies to appear in the list of genres, type **y** (yes) and press **Enter**. Subscribers will see these genres listed; however, if they highlight one of these genres, the television screen will display “No Titles.”

**Important:** You must type **y** to enable billboard genres. See the *xOD 1.6 Configuration Guide* (part number 4004032) for more information on billboard genres.

- If you do *not* want genres without active movies to appear in the list of genres, type **n** (no) and press **Enter**. Subscribers will not see genres that have no active movies.

**Result:** The system processes the information you have specified, verifies that there is enough disk space for the installation, and then begins installing the xOD client upgrade as **SAIXOD**. The **Installation of [SAIxod] was successful** message appears. Then, the system then prompts you to press **Enter** to continue.

- 18 Press **Enter**. The PPI menu appears.

- 19 Type **b** to select BFSctl and press **Enter**. The BFS Control Utility appears and displays the **BFSMAN: disabled not-running** message. Then, the system prompts you to select a DNCS.

- 20 Does your ASI server use multiple DNCSs?
    - If **yes**, repeat steps 7 through 19 for each DNCS; then, go on to step 21.
    - If **no**, go to step 21.
  - 21 Type the number that corresponds to the desired DNCS and press **Enter**. A list of options appears.
  - 22 Type **1** and press **Enter** to start the BFSMAN process. The system starts the BFSMAN process and writes the upgraded xOD files to the /dvs/dvsFiles/BFS/xod/cpu1 directory on the DNCS. When finished, the system displays the list of available DNCS workstations.
  - 23 Select the number that corresponds to the desired DNCS, and press **Enter** to verify that BFSMAN is enabled and running.
  - 24 Does the message BFSMAN: enabled running appear?
    - If **yes**, go to step 25.
    - If **no**, contact Cisco Services.
  - 25 Type the number that corresponds to Quit and press **Enter**. The system closes the BFS Control Utility.
  - 26 Type the number that corresponds to **Quit** and press **Enter**. The PPI menu appears.
  - 27 Type **q** and press **Enter**. The system displays a prompt.
  - 28 Type **cd /export/home/prasara/<DNCS.1.xod>/logs** and press **Enter**.

**Note:** The value in **<DNCS.1.xod>** is a virtual DNCS directory. The value you enter for the DNCS name should match the DNCS name you entered previously in this procedure. For example, if your DNCS name is xod3, then you should type DNCS.3.xod3.
  - 29 Use the text editor of your choice to open the bfsman.log file.
  - 30 Verify that there are no recent errors in the file.
  - 31 Go to the end of the file and search backward for the phrase **BFSMAN STARTING**.
  - 32 Verify that the following entries have recent timestamps, which indicate the time that the bfsman was started:
    - BFSMAN STARTING
    - BFS ADD DIR
    - BFS ADD FILE
- Important!** If any errors are noted, if any of the entries listed above are missing, or if any of these entries have an old timestamp, contact Cisco Services at 1-800-283-2636. Otherwise, go to the next step.

- 33 Did you notice any errors, such as missing entries, or did any of the entries have an old timestamp?
- If **yes**, contact Cisco Services.
  - If **no**, close the `bfsman.log` file.
- 34 Type **cd /cdrom** and press **Enter**. A prompt appears.
- 35 Type **eject** and press **Enter**. The system ejects the xOD Client 1.6.0 CD and displays a prompt.
- 36 Remove the xOD Client 1.6.0 CD, and close the xterm window to the ASI server. The system logs off of the ASI server.
- 37 Open an xterm window to the DNCS, type the directory path where the `saixod.ptv` file resides on the DNCS, and press **Enter**. In a standard installation, this path looks like the following example:
- ```
cd /dvs/dvsFiles/BFS/xod/cpu1
```
- 38 Type **strings saixod.ptv | grep -i version** and press **Enter**. The system displays the xOD client version number that is installed on the system. In the following example, the xOD client version is 37012:
- Version: 37012**
- 39 Does the system show the upgraded xOD client version?
- If **yes**, record the version number exactly as shown _____. Then, go to the next step.
- Important!** You must use the exact format of the version number as shown in xOD file. This is how the information should appear in the SAM Application URL. In the example in step 38, you would record **3605**. If there are hyphens in the version number, record the hyphens (for example, **3-6-0-5**). If there are any letters in the version number, record those as well (for example **3605b1**).
- If **no**, repeat this procedure, beginning with step 1.
- 40 Type **exit** and press **Enter**. The system closes the DNCS xterm window.

Upgrading the xOD Version in the SAM URL

Before you upgrade the xOD client software, you must update the SAM URL for each xOD service to reflect the new software version. This process ensures that your DHCTs always have the latest version of the xOD client software.

Note: You must complete this procedure at least 30 minutes before you begin to upgrade the xOD client.

When a subscriber tunes to an xOD channel, SARA checks the xOD client version number that is installed on the DHCT against the xOD client version number that is recorded in the SAM. If these version numbers do not match exactly, the DHCT attempts to reload the xOD application.

Important: When you update the SAM URL, make sure you update the version number for each xOD service, including those services on TIG channels.

Complete these steps to update the version number in the SAM URL.

- 1 Open an xterm window on the DNCS.
- 2 Type **doctor -g** and press **Enter** to run the Doctor Report. The Doctor Report is generated.
- 3 In the Unused SAM URL Check section of the Doctor Report, look to see whether your system is at risk of exceeding the allowable bulk.tbl file size. A warning message appears if the bulk.tbl file size is greater than 45 KB, and an error message appears if the bulk.tbl file size is greater than 55 KB.

Notes:

- The bulk.tbl file is typically less than 45 KB. Therefore, these warning and error thresholds have been established to provide you with ample warning before a problem with this file is encountered.
- For more information about the bulk.tbl file size, refer to *Preventing Unexpected SAM Server File Errors* (part number 4004155).

Example: bulk.tbl File Size Threshold Exceeded

```
Unused SAM URL Check
=====
Used URL Entries:          57
Unused Entries:           261

Warning: SIZE of bulk.tbl above threshold

*****
* Reduce file size and unused SAM URLs, run "chkSamUrl -r" *
*****
```

- 4 Does an error or warning message appear in the Unused Entries section of the Doctor report?

- If **yes**, type **/export/home/dnCS** and press **Enter** to change to the /export/home/dnCS directory. Go to step 5.
- If **no**, go to step 7.

Note: If you see other errors in the Doctor Report, consult the *DBDS Utilities Version 5.1 Installation Instructions and DNCS Utilities User's Guide* (part number 740020), or call Cisco Services.

- 5 At the prompt, type **chkSamUrl -r** and then press **Enter**.

Results:

- The chkSamUrl script begins to run and the current database statistics appear.
- A confirmation message appears and asks you to confirm the removal of unused SAM URLs.

```
/export/home/dnCS> chkSamUrl -r
```

```
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
```

```
Removing unused SAM URL's from the database
```

```
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
```

```
- List current database stats:
```

```
SAM URL bulk table:    /dvs/dvsFiles/SAM/bulk.tbl
Last Updated:         Jan 20 23:37
Size:                 51694
Used URL Entries:      57
Unused URL Entries:    261
```

```
warning: Size of bulk.tbl above threshold
```

```
Do you wish to continue with removal of unused SAM URL's? [y/n]: y
```

6 Type y.

Result: The chkSamUrl script runs to completion.

Note: If unused URLs were removed from the DNCS, the bulk.tbl file size will not change at this point in the procedure.

```
- First, backup affected database tables:
```

DATABASE Table	DATABASE Backup file location
applicationurl	-> /tmp/applicationurl.unl
samservices	-> /tmp/samservices.unl
displaychannels.unl	-> /tmp/displaychannels.unl

```
- Backups created:
-rw-r--r-- 1 dncs dncs 30839 Jan 25 15:41 /tmp/applicationurl.unl
-rw-r--r-- 1 dncs dncs 3442 Jan 25 15:41 /tmp/displaychannels.unl
-rw-r--r-- 1 dncs dncs 12593 Jan 25 15:41 /tmp/samservices.unl

- Now removing unused SAM URL entries from the database

Database selected.

261 row(s) deleted.

Database closed.

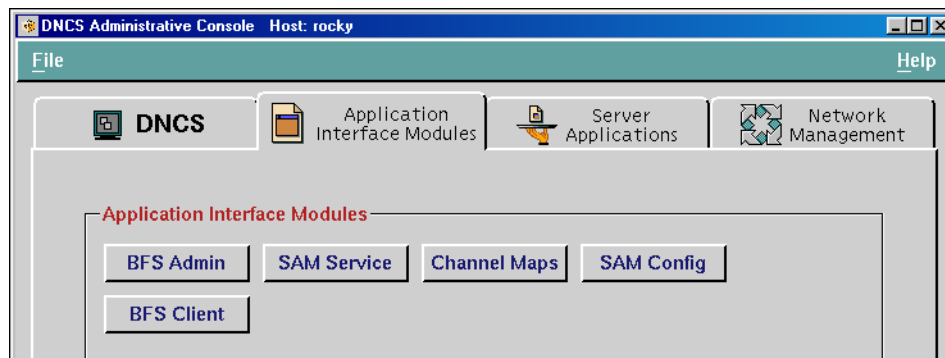
- List updated database stats:

SAM URL bulk table: /dvs/dvsFiles/SAM/bulk.tbl
Last updated: Jan 20 23:37
Size: 51694
Used URL Entries: 57
Unused URL Entries: 0

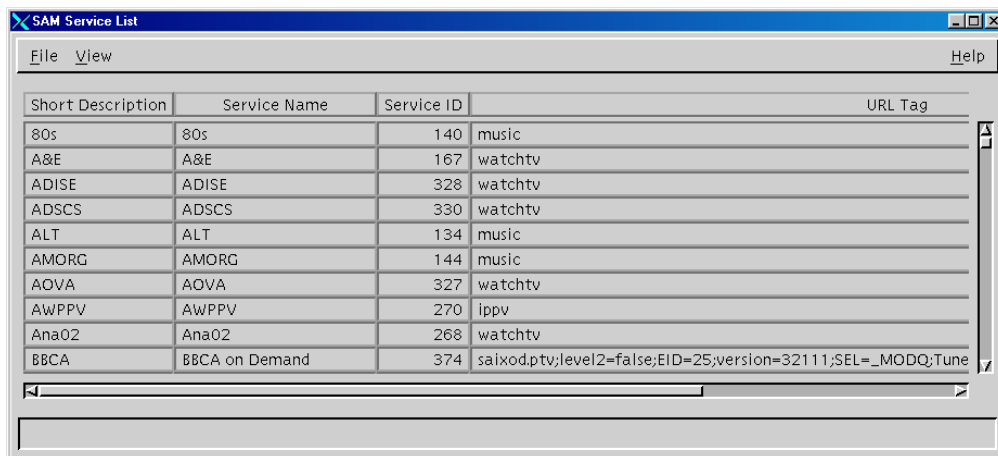
#####
Although the unused SAM URL's have been removed from the database,
a SAM services save will need to be performed in order to get the
samanager to acknowledge the changes made to the database.
#####
```

Same as file size *prior* to running the chkSamUrl script

7 On the DNCS Administrative Console, click the **Application Interface Modules** tab.



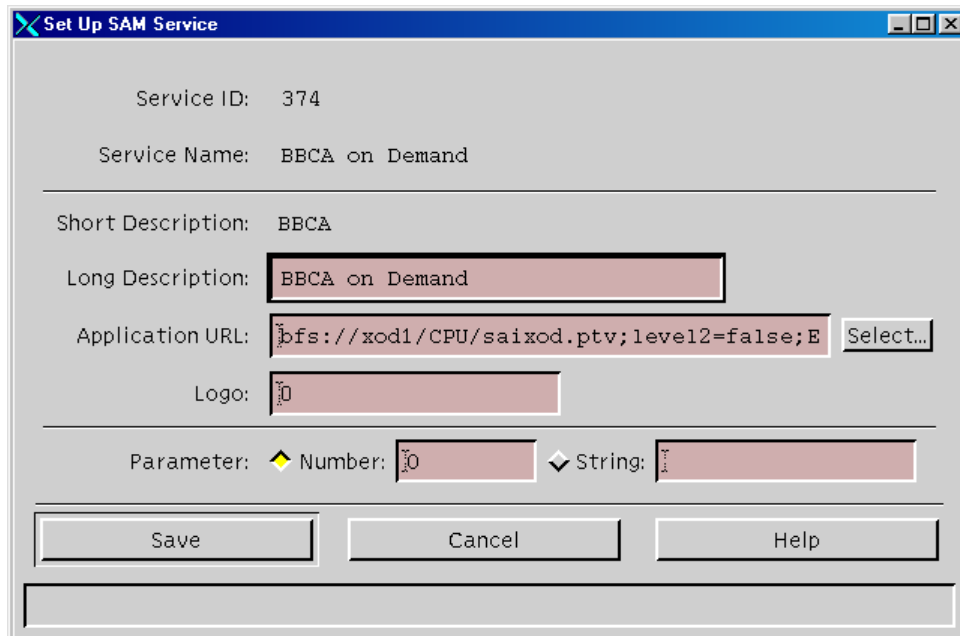
- 8 Click **SAM Service**. The SAM Service List window opens.



Short Description	Service Name	Service ID	URL Tag
80s	80s	140	music
A&E	A&E	167	watchtv
ADISE	ADISE	328	watchtv
ADSCS	ADSCS	330	watchtv
ALT	ALT	134	music
AMORG	AMORG	144	music
AOVA	AOVA	327	watchtv
AWPPV	AWPPV	270	ippv
Ana02	Ana02	268	watchtv
BBCA	BBCA on Demand	374	saixod.ptv;level2=false;EID=25;version=32111;SEL=_MODQ;Tune

- 9 Click to highlight the xOD service you need to update, then click **File** and select **Open**. The Set Up SAM Service window opens for that service.

Note: You could also double-click on the xOD service to open the window.



Service ID: 374

Service Name: BBCA on Demand

Short Description: BBCA

Long Description: BBCA on Demand

Application URL: bfs://xod1/CPU/saixod.ptv;level2=false;E Select...

Logo: 

Parameter:  Number: 30  String: 1

Save Cancel Help

- 10 Click in the **Application URL** field and use the arrow keys to move the cursor to the right and find the xOD client version number. In the following example, the xOD client version number is **35117**.

Example: bfs://xod/CPU/saixod.ptv;TunerInit=false;EID=2;level2=false;SEL=_MODQ;version=**35117**;arg=HOD,TIG,REQ1|3,SUB2

- 11 Record the existing version= value here: _____

Note: You may need this version number later, if you need to roll back from xOD client 3.7.0 to xOD client 3.6.0.

- 12 Replace the **version=** value with the new xOD client version number in the exact format as you recorded it when you checked the /dvs/dvsFiles/BFS/xod directory on the DNCS.



CAUTION:

The format for the xOD client version number must match the version number exactly as recorded in the /dvs/dvsFiles/BFS/xod/cpu1 directory on the DNCS. Otherwise, when subscribers tune to an xOD channel, their DHCTs will attempt to reload the xOD application. If the format is entered incorrectly into the Application URL, the DHCTs will not be able to tune to the channel.

- 13 If necessary, enter any other applicable parameters in the **Application URL** field based on the guidelines provided in *Register the xOD Package With the SAM* (on page 48).

Important: It is critical that you type this information correctly. Please follow the guidelines provided previously. If you do not enter this information correctly, your DHCTs will not process the xOD service correctly and may not be able to process it at all.

- 14 Look at the **arg=** parameter in the URL field. Does the arg= parameter include any references to RBH or RBM?
 - If **yes**, delete those references from the URL field. For example, if the URL field contains arg=HOD,TIG,REQ1 | 3,SUB2,RBH17,RBM45, you will delete RBH15,RBM45 so that the field now contains arg=HOD,TIG,REQ1 | 3,SUB2.
 - If **no**, go to step 15.
- 15 Click **Save** to save the new information, and return to the SAM Service List window.
- 16 Repeat steps 9 through 15 for each xOD service. When finished, go to step 17.

Notes:

- You must update all xOD services for xOD to function correctly.
- You will not need to re-record the existing version= value each time.

- 17 Click **File** and select **Close** to close the SAM Service List window and return to the DNCS Administrative Console.
- 18 Your next step is to verify that the upgrade was successful by using a test DHCT and television. Go to *Verifying the xOD Client Upgrade* (on page 150).

Verifying the xOD Client Upgrade

After you update the SAM URL for each xOD service to reflect the new software version, you must complete these steps to verify that the upgrade was successful.

- 1 On the ASI user interface, verify that the setting for the behavior SCR_CANCEL_NOTIFY_NO_CHARGE_TXT matches the value that you recorded in *Upgrading the xOD Version in the SAM URL* (on page 145). If the value does not match, change this setting so that it matches the value you recorded.

- 2 Using a test DHCT and television, tune to an xOD channel and access the Versions and Serial Numbers diagnostic screen. Look for the **saixod** version number.

Note: The DHCT may take a few minutes to update the version number.

Does the saixod version number match the xOD client version number you just installed?

- If **yes**, go to step 3.
 - If **no**, verify that the SAM Application URL contains the correct parameter for the software version. See *Register the xOD Package With the SAM* (on page 48), for SAM application URL guidelines. If the software version listed in the SAM Application URL is correct, contact Cisco Services.
- 3 Try to purchase and view an xOD event on that channel. Were you able to purchase and view the event successfully?
 - If **yes**, repeat steps 1 and 2 for each xOD service. After verifying that each xOD service functions correctly, you have completely and successfully upgraded the xOD client software.
 - If **no**, contact Cisco Services.

C

Rollback Procedures for xOD 1.6

Introduction

This appendix explains how to roll back xOD 1.6 after it has been installed.

In This Appendix

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- Roll Back ASI Server 1.6.0..... 156

Roll Back xOD Client 1.6.0

Introduction

This section contains procedures to “roll back” xOD client 3.7.0 to xOD client 3.6.0. If you need to roll back both the client and the server, you should roll back the client first.

Note: While you are rolling back the software, any DHCTs that had xOD Client 1.6.0 installed may display a text message on a black background. After the SAM and BFS have updated, the subscriber must change channels to clear the message.

Rolling Back xOD Client 1.6.0

Follow these steps to roll back the xOD Client:

- 1 On the DNCS Administrative Console, click the **Application Interface Modules** tab.
- 2 Click **SAM Service**. The SAM Service List window opens.
- 3 Click to highlight the xOD service you need to update, then click **File** and select **Open**. The Set Up SAM Service window opens for that service.
- 4 Click in the **Application URL** field and replace the **version=** value with the old xOD client version number in the exact format as you recorded it when you upgraded to xOD client 1.6.0. In the following example, the xOD client version number is **3605**.
Example: `bfs://xod/CPU/saixod.ptv;TunerInit=false;EID=2;level2=false;SEL=_MODQ;version=3605;arg=HOD,TIG,REQ1|3,SUB2`
Important: The format for the xOD client version number must match the version number exactly as recorded when you upgraded to xOD client 1.6.0.
- 5 Click **Save** to save the new information, close the **Set Up SAM Service** window, and return to the **SAM Service List** window.
- 6 Repeat steps 3 through 5 for each xOD service. When finished, go to step 7.
- 7 Click **File** and select **Close** to close the SAM Service List window and return to the DNCS Administrative Console.
- 8 From an xterm window on the DNCS, log in to the ASI server as the **root** user.
- 9 Type `cd /backups` and press **Enter**. The backups directory becomes the current directory.
- 10 Type `mkdir images` and press **Enter**. The system creates a new subdirectory called images in the /backups directory.

- 11 Type **cd /export/home/prasara/<DNCS.1.xod>/app_saixodff/images** and press **Enter**.

Note: The value in **<DNCS.1.xod>** is the name of the virtual DNCS directory. Each ASI server will have one or more directories that are named with a similar format, but the name will vary slightly depending on the configuration of your ASI server. For example, if your DNCS name is xod3, then your virtual directory will probably be named DNCS.3.xod3.

- 12 Type **cp *.tif /backups/images** and press **Enter**. The system copies all of the TIFF files to the /backups/images directory.
- 13 Type **cd /export/home/prasara/<DNCS.1.xod>** and press **Enter**.
- 14 Type **pwd** and press **Enter** to confirm that you are in the /export/home/prasara/<DNCS.1.xod> directory.



CAUTION:

You must confirm that you are in the correct directory before you proceed. You may delete important files from the ASI server if you are not in the correct directory.

- 15 Type **rm -rf *** and press **Enter**. The DNCS deletes all of the files and directories in /export/home/prasara/<DNCS.1.xod>.
- 16 If your site uses multiple virtual DNCS directories, repeat steps 11 through 15 for each DNCS directory.
- 17 Use the procedures in *xOD 1.5 Installation Guide* (part number 4000140), to re-install the xOD Client 3.6.0.
- 18 Type **cd /backups/images** and press **Enter**.
- 19 Type **cp */export/home/prasara/<DNCS.1.xod>/app_saixodff/images** and press **Enter**. The system copies all of the files from the /backups/images directory to the /export/home/prasara/<DNCS.1.xod>/app_saixodff/images directory.
- 20 From the Explorer bar on the left side of the Prasara Application Tools website, click the option **Publish** listed under **Offers**. The system publishes content files to the BFS. The xOD Client 3.6.0 should be installed and working normally.

Roll Back ASI Server 1.6.0

Contacting Cisco Services

In order to roll back ASI Server 1.6.0 to 1.5.0, you must have the help of a database administrator (DBA). You should not attempt to roll back ASI Server 1.6.0 by yourself. Contact S Cisco Services to roll back ASI Server 1.6.0 to 1.5.0.

Important: You should not begin to roll back the ASI server until you have rolled back the xOD client.



Cisco Systems, Inc.
5030 Sugarloaf Parkway, Box 465447
Lawrenceville, GA 30042

678 277-1120
800 722-2009
www.cisco.com

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