Instructions for Configuring IPPV in an ISDP Network

Please Read

Important

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

Notices

Trademark Acknowledgments

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. A listing of Cisco's trademarks can be found at **www.cisco.com/go/trademarks**.

ROVI CORPORATION COPYRIGHT NOTICE

This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights of Rovi Corporation. Use of this copyright protection technology must be authorized by Rovi Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Rovi Corporation. Reverse engineering and disassembly are prohibited

Other third party trademarks mentioned are the property of their respective owners.

The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1009R)

Publication Disclaimer

Cisco Systems, Inc. assumes no responsibility for errors or omissions that may appear in this publication. We reserve the right to change this publication at any time without notice. This document is not to be construed as conferring by implication, estoppel, or otherwise any license or right under any copyright or patent, whether or not the use of any information in this document employs an invention claimed in any existing **or** later issued patent.

Copyright

Contents

About This Guide

Introduction

This document provides the following information:

- An overview of Impulse Pay Per View (IPPV) Phase I features.
- Procedures for configuring IPPV services on the IPTV Services Delivery System (ISDS) (manual configuration procedures are also provided in Appendices A and B).
- Procedures for operational tasks required to define events, collect purchase information, assist customers with canceling a purchase, and manage expired events.

Where appropriate, we indicate best practices and basic troubleshooting steps to aid in the deployment of IPPV to your subscribers.

Purpose

The purpose of this document is to describe the tasks the ISDS operator must follow in order to provide IPPV services.

Audience

This document was written for system operators. Field service engineers and Cisco® Services engineers may also find the information in this document helpful.

Document Version

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

Description	See Topic
Revised instructions for modifying the crontab file in Chapter 2. Users should enter the following in the crontab file: `;./dvs/dncs/ppvUpdate/ppvUpdate.pl -c 2>&1`.	See step 5 of ***Add the PPV Update Utility to the crontab File*** (on page 32).

1

Overview of IPPV Phase I

Introduction

This chapter provides an overview of the IPPV Phase I features and process. It also summarizes the ISDS configuration and operation procedures required to provide an enjoyable IPPV experience for subscribers using IPPV Phase I.

In This Chapter

IPPV Phase I Features

IPPV Phase I enables sites with ISDP 2.6 to provide an IPPV experience for subscribers.

ISDP 2.6 supports the following features for IPPV Phase I:

- Up to 1024 broadcast and IPPV events within a 60-day window

  Important: Use the following calculation to determine the average number of IPPV events available per day: subtract the number of packages defined on the ISDS from 1024 and then divide the result by 60.

  Example: If your system has 64 packages defined on the system, then you could use an average of 16 IPPV events per day, or a maximum of 960 events during a 60-day window: (1024-64)/60 = 16.

ISDP Client Release 2.6 supports the following:

- IPPV events
  - Sporting events, such as wrestling, boxing, and Ultimate Fighting Championship (UFC) events
  - Weekend movie specials
- IPPV events are purchasable through the set-top application. (No Customer Service Representative call is required.)
- Subscribers can set PPV reminders for events they want to purchase.
- Subscribers can schedule their DVRs to record IPPV events.
- IPPV events are presented in the Interactive Program Guide (IPG).
  - Program name
  - Program short and full description
  - Pricing
- Purchase history for the last 31 days is obtained through the set-top interface.

The IPPV Process

The IPPV process enables sites with ISDP 2.6 to provide an IPPV experience for subscribers. After the IPPV services are configured in the ISDS, events are defined using the PPV Update utility, which reads the event schedule from the IPG data, eliminating the need for more complex billing integration.

Once the events are created, subscribers can view the event purchase price along with the event long description and, if authorized, can initiate the purchase of the event directly from the set-top--again eliminating the need for any billing system or customer service representative interaction. When a subscriber purchases an event, the purchase is reported to the ISDS where the information about the purchase is stored.

To bill for the purchase, the billing system must initiate an IPPV purchase upload using the process described in detail in the BOSS specification. Two methods of collecting purchase information are supported in ISDP 2.6: One used to monitor purchase activity (upload purchase data without clearing), and another to upload the purchase data and then clear it from the ISDS (upload with clearing).

Should a subscriber decide to cancel a pre-purchased event or an event in progress, the IPPV client directs the subscriber to telephone the service provider to cancel the purchase. However, because an IPPV event purchase is stored on the set-top at the time of purchase, the purchase data will be forwarded to the ISDS 10 minutes before the event starts, or--if the subscriber purchases the event after it has started--up to 30 minutes after an event has started. For this reason, service providers may wish to instruct service representatives to follow their company's process for crediting the subscriber's account when requested to cancel an event purchased with IPPV Phase I. At any time, a subscriber can use the set-top to review their purchase history for the past 31 days.

Prerequisites and Billing System Requirements

To support IPPV with ISDP 2.6, the following is required:

- System Release 2.6 with the additional IPPV patch or a later system release must be installed.
- IPG data must exist for each service where IPPV events will be offered.
- An IPPV Enable package must be defined on the ISDS.

Overview of IPPV Procedures

Use the following process to prepare the ISDS for IPPV and to maintain the IPPV experience for subscribers.

Configure the ISDS for IPPV

After upgrading to ISDP 2.6, complete the following IPPV configuration procedures, detailed in Chapter 2. You should only need to complete these procedures once.

If you need to create IPPV services, the following procedures are required:

1. Create an IPPV service and enable set-tops for the service.
2. Add IPPV sources to the ISDS.
3. Encrypt the IPPV sources.
4. Define the IPPV sources.
5. Create SAM services for IPPV sources.
6. Add the IPPV SAM services to a channel map.
7. Associate IPPV channels with the IPG.
8. Create unlimited segments for IPPV services.
9. Customize the PPV Update utility configuration file.
10. Add the PPV Update utility to the crontab file.
11. Customize the Service Provider telephone number.

If using a existing, encrypted services for IPPV services, the following procedures are required:

1. Create an IPPV service and enable set-tops for the service.
2. Modify existing SAM services for IPPV.
3. Customize the PPV Update utility configuration file.
4. Add the PPV Update utility to the crontab file.
5. Customize the Service Provider telephone number.

Maintain IPPV Service for Subscribers

After you have configured the ISDS for IPPV, complete the following operating procedures, detailed in Chapter 3. You will need to perform these procedures regularly:

1. Use the PPV Update utility to create IPPV events as needed and to provide event purchase price data for the program guide.

   Note: When your system is upgraded to ISDP 2.6, the PPV Update utility and its configuration file are placed in the **/dvs/dncs/ppvUpdate** directory.

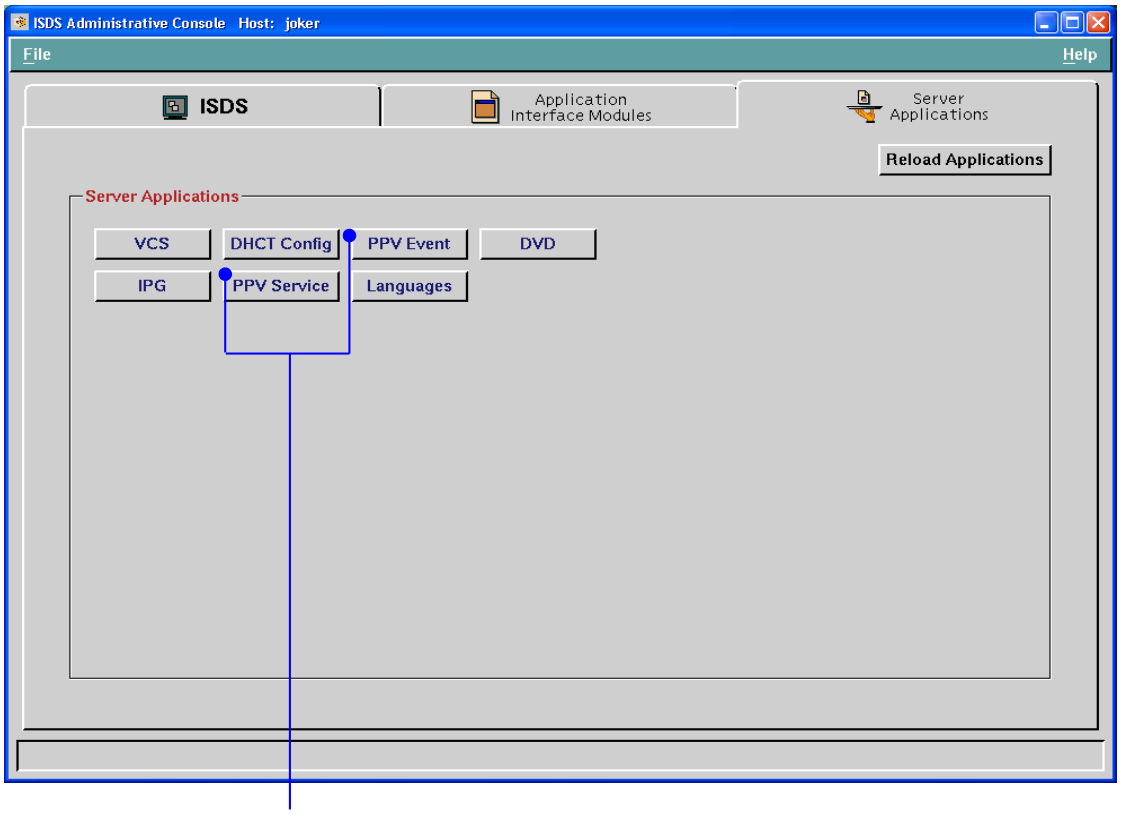
2. Poll set-tops to retrieve purchase data, store it in the ISDS database, and forward purchase data to the billing system to update subscriber accounts.
3. Use the PPV Update utility to regularly update IPPV events in the ISDS.
4. As needed, cancel a purchased event.

   Important: Because an IPPV event purchase is stored on the set-top at the time of purchase, the purchase data will be forwarded to the ISDS 10 minutes before the event starts, or--if the subscriber purchases the event after it has started--up to 30 minutes after an event has started. For this reason, service representatives may be asked to follow their company's process for crediting the subscriber's account when requested to cancel an event purchased with IPPV Phase I.

Buttons to Avoid

When configuring IPPV events with IPPV Phase I software, you will perform all configuration tasks from the ISDS Administrative Console. Because of certain Phase I conditions, it is important that you avoid using the **PPV Event** or **PPV Service** button. These buttons, which are located on the Server applications tab, are inactive in IPPV Phase I software. *Attempting to use them will cause unpredictable results.*

Instead of using the PPV Event or PPV Service buttons to provision IPPV events, follow the procedures in this document.



Do not use the **PPV Event** or **PPV Service** button. These buttons are inactive in IPPV Phase I software.

2

Configure the ISDS for IPPV Phase I

Introduction

This chapter provides procedures required to build IPPV services on the ISDS. These procedures assume that you will build IPPV services by modifying existing sources that are already on the ISDS. However, if you need to set up new sources for IPPV, refer to the procedures in the ISDS Online Help for assistance.

In This Chapter

Overview

This section provides an overview of the procedures required to configure the ISDS for IPPV Phase I. It also provides an overview of the PPV Update Utility that automates many configuration tasks.

Note: This section assumes that you will build IPPV services by modifying existing sources that are already on your ISDS. However, if you need to set up new sources for IPPV, refer to the procedures in the ISDS Online Help for assistance.

Configuration Process

The following summarizes the process of configuring the ISDS for IPPV. The process you follow depends upon whether or not you need to create new services for IPPV, or if you will only modify existing, encrypted services for IPPV.

For New Services

1. Create an IPPV service and enable set-tops for the service.
2. Add IPPV sources to the ISDS.
3. Encrypt the IPPV sources.
4. Define the IPPV sources.
5. Create SAM services for IPPV sources.
6. Add the IPPV SAM services to a channel map.
7. Associate IPPV channels with the IPG.
8. Create unlimited segments for IPPV services.
9. Customize the PPV Update utility configuration file.
10. Add the PPV Update utility to the crontab file.
11. Customize the Service Provider telephone number.

For Existing, Encrypted Services

1. Create an IPPV service and enable set-tops for the service.
2. Modify existing SAM services for IPPV.
3. Customize the PPV Update utility configuration file.
4. Add the PPV Update utility to the crontab file.
5. Customize the Service Provider telephone number.

Configure the ISDS for IPPV Phase I

This section provides procedures for configuring the ISDS for IPPV Phase I.

Enable Set-Tops for IPPV Service

This section describes how to enable IPPV service for specific set-tops in your system. Enabling set-tops for IPPV service is a three-step process:

- Create the IPPV Package using the package name provided by your billing system and record the EID assigned to the package.
- Create the _PPV SAM service with the EID (package) that will be used to enable set-tops to make IPPV purchases.
- Add the _PPV URL modifier to the existing SAM services that will be offered using IPPV.
- Authorize set-tops for the IPPV service.

Add an IPPV Enable Package to the ISDS (Optional)

Follow this procedure to add an IPPV Enable package to the ISDS.

Note: If IPPV is available to all subscribers, you can use an existing package to enable IPPV.

1 On the ISDS Administrative Console, click the **ISDS** tab.

2 Click the **System Provisioning** tab.

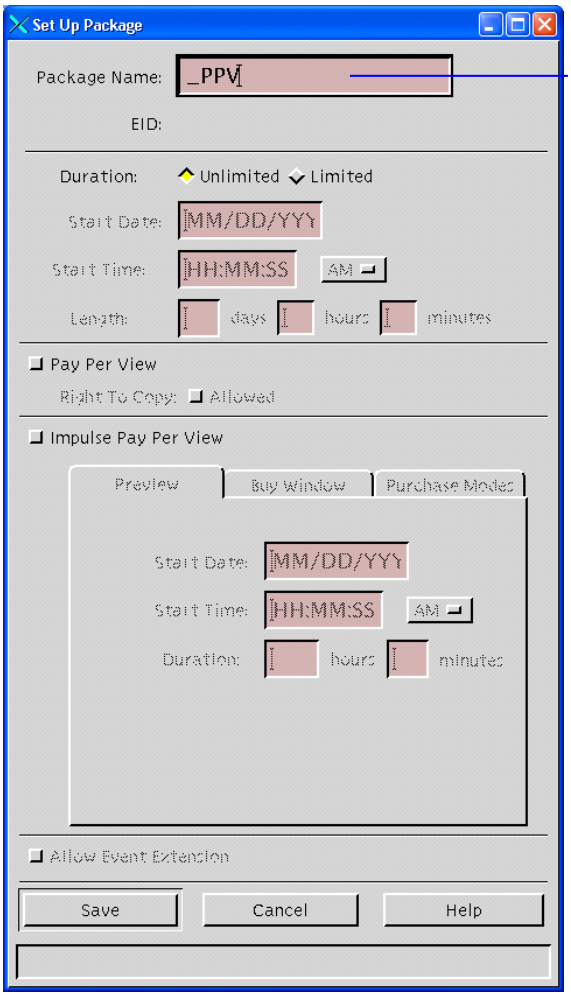
3 Click **Package**. The Package List window opens.

Note: By default, the Package List window shows only non-PPV packages (Subscription Only). To view the list of all packages, click the **Show** button and select **All Packages**.

4 Are you using an existing package?

- If **yes**, go to *Determine the EID of the IPPV Enable Package* (on page 13).
- If **no**, click **File > New**. The Set Up Package window opens. Continue with the next step.

5 In the Package Name field, enter **_PPV** as shown in the following example.



Enter the name your billing system uses to identify the IPPV package.

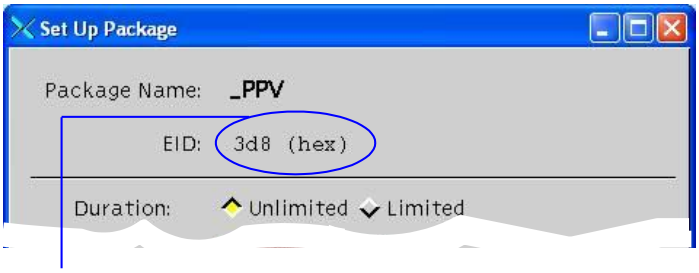
Leave the other fields with their default settings.

6 Click **Save**. The system saves the package information in the ISDS database and closes the Set Up Package window. The Package List window updates to include the new package.

7 Go to ***Determine the EID of the IPPV Enable Package*** (on page 13).

Determine the EID of the IPPV Enable Package

1 In the Package List window, double-click the package you just added to the ISDS. The Set Up Package window opens and displays information about this package. Make note of the EID that the ISDS assigned to this package. You will need this information later when you configure the IPPV SAM Service.



Make note of the EID that the ISDS assigned to this package. You will need this information later when you add the PPV SAM service to the ISDS.

2 Click **Cancel** to close the Set Up Package window.

3 In the Package List window, select **File > Close** to close the window.

4 Go to *Add a SAM _PPV Service to the ISDS* (on page 13).

Add a SAM _PPV Service to the ISDS

The Service Application Manager (SAM) is a process on the ISDS that associates a specific service with attributes that define how the service operates. The set-top uses the SAM URL to determine if a particular service is an IPPV service.

Follow this procedure to create a SAM service to support IPPV.

1 On the ISDS Administrative Console, click the **Application Interface Modules** tab.

2 Click **SAM Service**. The SAM Service List window opens.

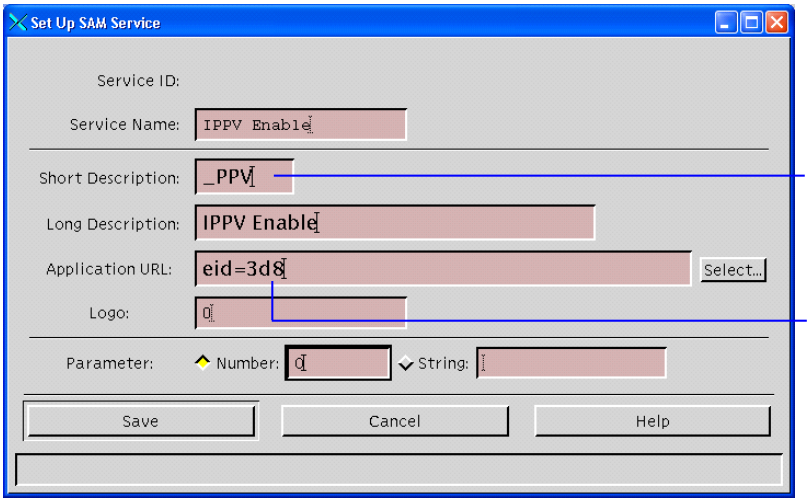
3 Click **File > New**. The Set Up SAM Service window opens.

4 Complete the fields in the Set Up SAM Service window as described in the following table:

Field	Description
Service Name	Enter a name for the service, such as **IPPV Enable**.
Short Description	Enter **_PPV**.
Long Description	Enter **IPPV Enable**.
Application URL	Enter **eid=#** replacing the **#** symbol with the EID of the IPPV package that you added in the previous procedure. **Example:** eid=3d8
Logo	Enter **0** (zero).

Field	Description
Parameter	Enter **0** (zero).

When you have finished, the Set Up SAM Service window should appear similar to the following example.



5 Click **Save** to save the service information in the ISDS database and close the Set Up SAM Service window.

6 Now that you have set up a package for IPPV service, authorize set-tops for this service. Go to *Authorize Set-Tops for IPPV Service* (on page 14).

Authorize Set-Tops for IPPV Service

Deployed set-tops should be authorized for IPPV service through the billing system or using the ISDS Administrative Console. This section describes how to use the ISDS Administrative Console to authorize a test set-top for the IPPV service package.

Complete the following procedure to use the ISDS Administrative Console to authorize a set-top for the IPPV service package.

1 On the ISDS Administrative Console, click the **ISDS** tab.

2 Click the **Home Element Provisioning** tab.

3 Click **DHCT**. The DHCT Provisioning window opens.

4 Click in the By MAC Address, By IP Address, or By Serial Number field and type the appropriate value for the set-top you want to authorize for IPPV service.

Note: By default, the Open and By MAC Address options are selected when you open the DHCT Provisioning window.

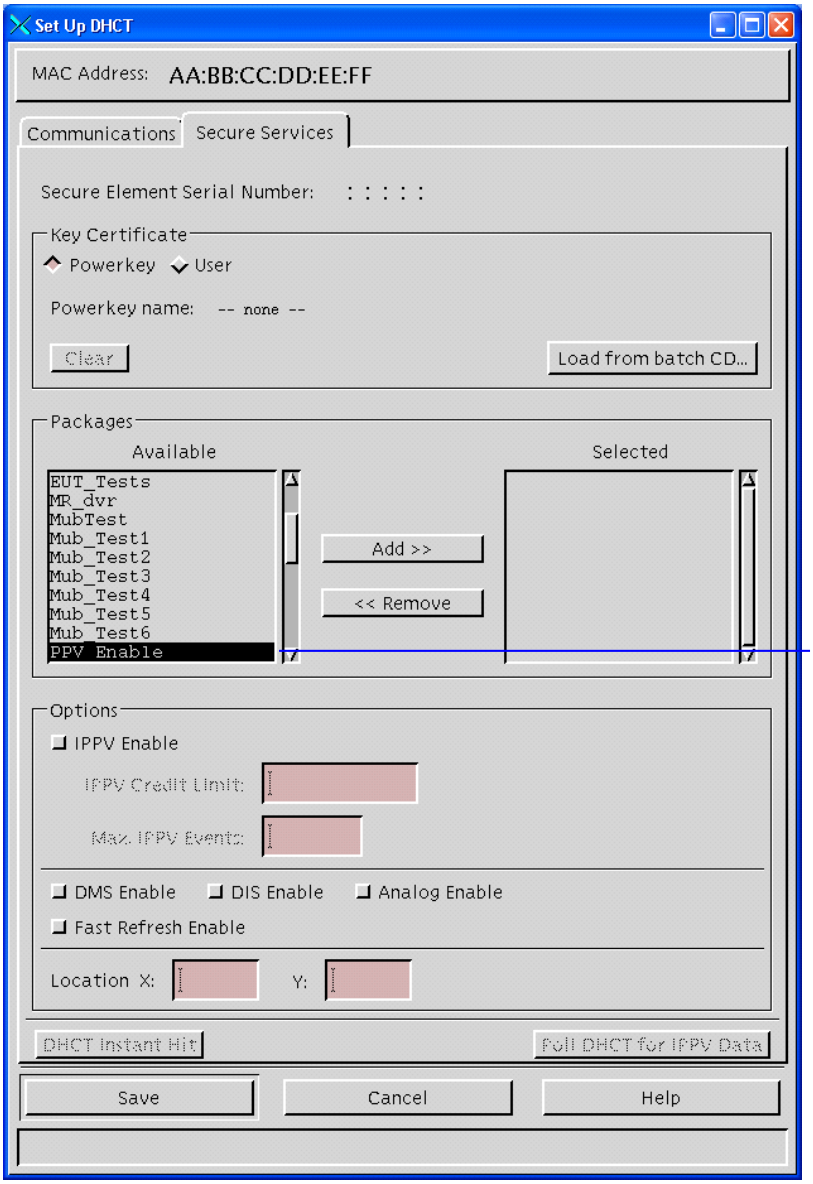
Tip: When entering IP addresses, type a period to move from octet to octet. Do not press the Tab key to move from octet to octet; pressing the Tab key moves the cursor to the next field on the window.

5 Click **Continue.** The Set Up DHCT window opens with the Communications tab in the forefront.

6 Verify that the Admin Status field is set to either In Service One Way or In Service Two Way.

7 Click the **Secure Services** tab.

8 Scroll through the Available field in the Packages area of the window and click to select the **PPV Enable** package.



Select the **PPV Enable** package.

9 Click **Add**. The PPV Enable package moves into the Selected field.

10 In the Options area, verify that **PPV Enable** and **DMS Enable** are selected.

11 Click **Save**. The system updates the database with the information you entered for this set-top.

12 Click **Close** to close the Set Up DHCT window and return to the DHCT Provisioning window.

13 Click **Cancel** to close the DHCT Provisioning window and return to the DNCS Administrative Console.

14 To authorize another set-top for the PPV Enable package, repeat this procedure from step 4.

15 Go to *Add Sources for IPPV Services to the ISDS* (on page 16).

Add Sources for IPPV Services to the ISDS

Follow this procedure to create sources for IPPV services.

1 On the ISDS Administrative Console, click the **ISDS** tab.

2 Click the **System Provisioning** tab.

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

4 Click **File > New**. The Set Up Source window opens.

5 Complete the fields in the Set Up Source window as described in the following table:

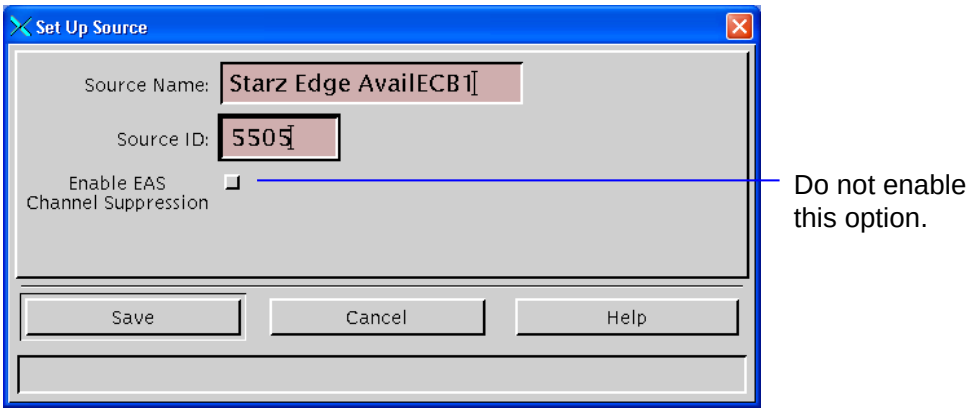
Field	Description
Source Name	The name of the source you are adding. You can use up to 20 alphanumeric characters. **Note:** We recommend that you use a naming scheme that indicates the source type (analog or digital), the channel number the service will use, and the service name. For example, a source name of **D02 InDemand** indicates that this is a digital source (**D**) providing content on channel 2 (**02**) for the InDemand service.
Source ID	The number you will use to identify this source. Typically, the source ID is 1000 plus the number of the channel offering the service. For example, the source ID for a service appearing on channel 2 would be **1002**. You can use up to 5 numeric characters. **Notes:** ■ 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 service sources. ■ Record the source ID. You will need it as you continue to set up the service. ■ You cannot edit the Source ID field. To change the source ID of an existing source, you must delete the source and add it again.

Field	Description
Enable EAS Channel Suppression	Make certain that this option is disabled. For more information on this option, see *Suppress EAS Information on Digital Channels* in the ISDS Online Help.

WARNING:

Use this feature at your own risk. It is imperative that service providers use this feature carefully so as not to suppress EAS messages on services that do not already provide EAS information. We do not take responsibility for the incorrect use of this feature.

When you have finished, the Set Up Source window should appear similar to the following example.



6 Click **Save**. The system saves the source information in the ISDS database and closes the Set Up Source window. The Source List window updates to include the new source.

7 To add another source to the ISDS, repeat this procedure from step 4.

8 You are ready to encrypt the source to prevent it from theft as it is sent through your network to subscribers' homes. Go to ***Encrypt the IPPV Sources*** (on page 18).

Encrypt the IPPV Sources

Follow this procedure to encrypt the IPPV source and prevent it from theft as it is sent through your network to subscribers' homes.

1. In the Source List window, select the source that you just added in the previous procedure.
2. Click **File > Security Modes**. The Security Mode List window opens for the service source you selected.
3. Click **File > New**. The Set Up Security Mode window opens.
4. Complete the fields on the window as described in the following table:

Field	Description
Security Mode	Select the **Encrypted** option to distribute the service as an encrypted service.
Date/Time	Allows you to define when subscribers can start viewing content from this source: ■ **Now** - The service is available for viewing immediately ■ **Custom** - Set a specific date and time for service availability in the Effective Date and Effective Time fields
Effective Date	The month, day, and year you want subscribers to be able to start viewing content from this source. You must enter two digits for the month and day, and four digits for the year. **Example:** Enter July 4, 2010, as 07042010. The system enters the slashes for you and displays 07/04/2010. This option is only activated if you select the Custom option in Date/Time.
Effective Time	The hour, minute, and second you want subscribers to be able to start seeing content from this source. You must enter two digits for each value. **Example:** Enter eight o'clock as 080000. The system enters the colons for you and displays 08:00:00. **Note:** Make sure the time you enter is at least 15 minutes into the future. This option is only activated if you select the Custom option in Date/Time.
AM/PM	Establishes which portion of the day you want the system to begin encrypting this service. Select either **AM** or **PM** from the list.

When you are finished, the Set Up Security Mode window should appear similar to the following example:

5 Click **Save**. The system saves the encryption information in the ISDS database and closes the Set Up Security Mode window. The Security Mode List window updates to include the new encryption information.

6 To encrypt another IPPV source, repeat this procedure from step 3.

7 You are ready to define the source that you just encrypted. Go to ***Define the IPPV Sources*** (on page 19).

Define the IPPV Sources

After you add an encrypted source to the ISDS database, define parameters for the source to identify the network resources that the source will use. You need to define one IPPV service for each IPPV channel that you will offer to subscribers.

Important: If you are sending the same source through more than one QAM, MQAM, or GQAM modulator, you must define the source for each modulator. For example, if you are sending the same content source through six QAM modulators, you must define the source six times - once for each modulator.

1 On the ISDS Administrative Console, click the **ISDS** tab.

2 Click the **System Provisioning** tab.

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

4 Select the source you need to define as an IPPV Service source and then click **File >Source Definition**. The Source Definition List window opens for the source you selected.

5 Click **File > New Digital**. The Digital Source Set Up window opens.

6 Complete the fields on the window as described in the following table:

Field	Description
Digital Source Set Up	
Source Name	Name of the source you are adding the session to.
Session ID	**Left Session ID field** - The session MAC address. Enter 12 zeros (the system enters the colons for you). **Right Session ID field** - The source ID you used when you added the source to the ISDS. Your final entry will look similar to the following example: 
High Definition	If this session provides high-definition video and audio, click the High Definition box.
Date/Time	Allows you to define when subscribers can start viewing content from this source. If left unselected, subscribers can start viewing content immediately (as soon as the source is saved in the ISDS).
Effective Date	The month, day, and year you want subscribers to be able to start viewing content from this source. You must enter two digits for the month and day, and four digits for the year. **Example:** For July 4, 2010, enter 07042010. The system enters the slashes for you and displays 07/04/2010. This option is only activated if you select the Select effective date and time option.
Effective Time	The hour, minute, second, and half-day (AM or PM) you want subscribers to be able to start seeing content from this source. You must enter two digits for each value. **Example:** For eight o'clock, enter 080000. The system enters the colons for you and displays 08:00:00. This option is only activated if you select the Select effective date and time option.
Session Set Up	
Device	Click the **Device** arrow and select the device that will carry the source.
Wrap-Up	
Scrambling Mode	Click the **Scrambling Mode** arrow and select the conditional access system that will be used to encrypt the session.

7 Click **Save**. The system saves the source definition in the ISDS database, and starts the session you built for it. The Source Definition List window updates to include the new source information.

8 Do you need to define another source for IPPV service?

Note: You need to define one IPPV service for each IPPV channel that you will offer to subscribers.

- If **yes**, repeat this procedure from step 4 to define another IPPV service.
- If **no**, from the Source List window, click **File > Close** to close the window.

9 You are ready to create a watchTV/IPPV SAM service from the source. Go to ***Create a SAM Service for IPPV Sources*** (on page 21).

Create a SAM Service for IPPV Sources

Once you have an encrypted source and session, follow this procedure to create a SAM service from the source. A SAM service associates the source's content with data that defines application characteristics for the content. For IPPV Phase I, you will assign watchtv and IPPV applications to the source to create a unique SAM service from the source.

1 On the ISDS Administrative Console, click the **Application Interface Modules** tab.

2 Click **SAM Service**. The SAM Service List window opens.

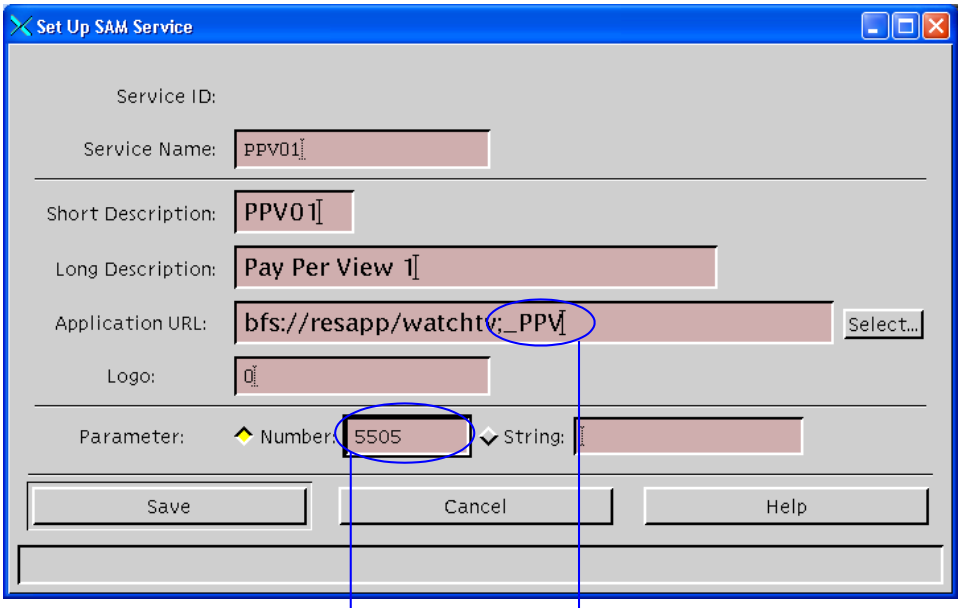
3 Click **File > New**. The Set Up SAM Service window opens.

4 Complete the fields on the window as described in the following table:

Field	Description
Service Name	The name you want to use to identify this IPPV service (for example, PPV01). You can use up to 20 alphanumeric characters.
Short Description	A brief description of this service. This description will appear on the IPG and on the channel banner on the subscriber's television screen. You can use up to 5 alphanumeric characters. **Example:** For example, you might enter PPV01.
Long Description	A detailed description of this service. This information is for your benefit only. Subscribers will not see this information You can use up to 32 alphanumeric characters.

Field	Description
Application URL	Path on the BFS where the software file resides. Enter **;_PPV** to the end of the bfs://resapp/watchtv URL that is prepopulated in this field. Your final entry should look similar to the following example: **bfs://resapp/watchtv;_PPV**.
Logo	The number for the logo associated with this service, if required.
Parameter	The **source ID** that you assigned when you added the source to the ISDS.

When you are finished, the Set Up SAM Service window should appear similar to the following example:

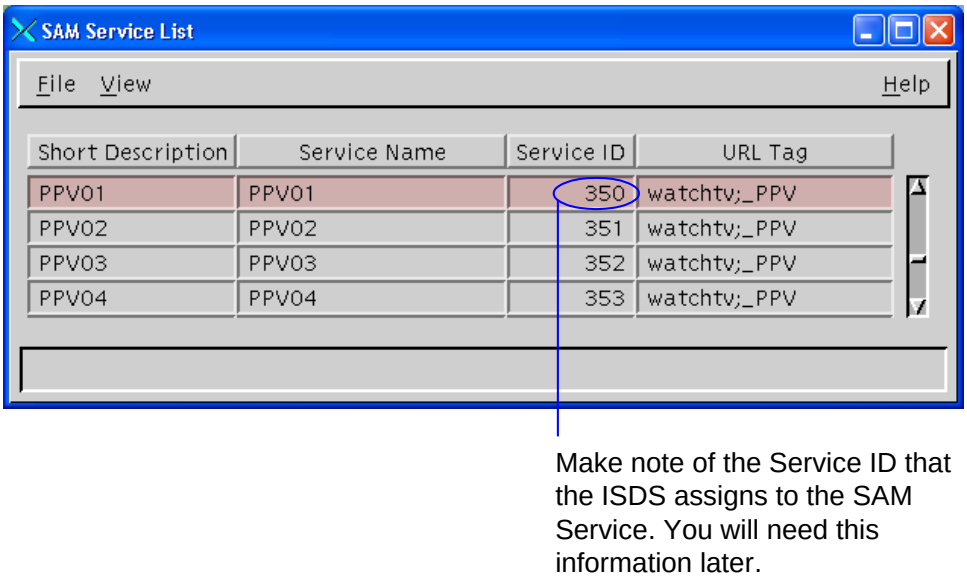


Enter the Source ID that you assigned the source when you added it to the ISDS.

Make certain to add **;_PPV** to the end of the URL so that your final entry is similar to this example: **bfs://resapp/watchtv;_PPV.**

5 Click **Save**. The system saves the service information in the ISDS database and closes the Add SAM Service window. The SAM Service List window updates to include the new service with its Service ID.

6 Find this SAM service in the SAM Service List and record the Service ID that the system assigned to this SAM service. You will need it when you associate the SAM service with the IPG.



7 Do you need to add another SAM service to the ISDS?

Note: You need one SAM service for every channel that allows subscribers to purchase IPPV events.

- If **yes**, repeat this procedure from step 3.
- If **no**, click **File > Close** to close the SAM Service List window.

8 Your next task is to add each SAM service that you created to the Channel Maps that. Go to *Add the IPPV SAM Services to a Channel Map* (on page 23).

Add the IPPV SAM Services to a Channel Map

Follow this procedure to add the SAM IPPV services that you have created to the channel maps that will use it.

1 On the ISDS Administrative Console, click the **Application Interface Modules** tab.

2 Click **Channel Maps**. The Display Channel Map List window opens.

3 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.

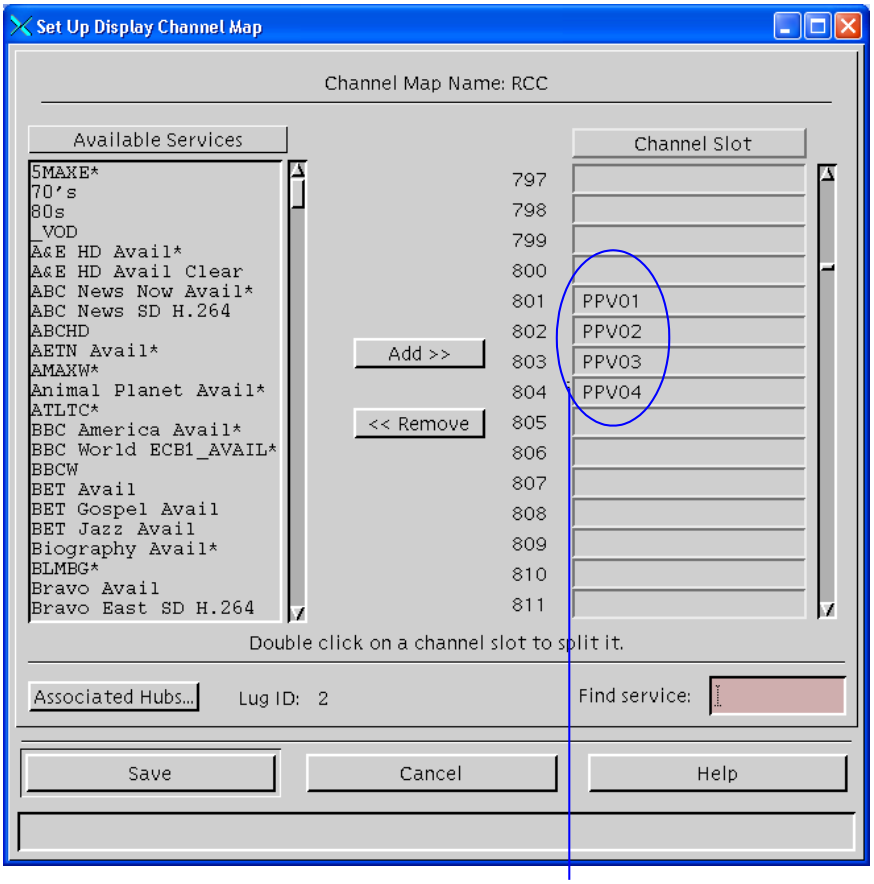
4 Click **File > Open**. The Set Up Display Channel Map window opens for the channel map you selected.

5 Scroll through the Available Services field until you see the service you want to add, and then click to select that service.

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

7 Click **Add**. The service name moves from the Available Services field to the Channel Slot field.

8 Repeat this procedure from step 5 to add another service to this channel map. When you are finished, the Display Channel Map window should appear similar to the following example:



Move each SAM/PPV service to the Channel Slot list, as shown here.

9 Go to ***Associate IPPV Channels with the IPG*** (on page 25).

Associate IPPV Channels with the IPG

After you have added IPPV channels to the channel map, follow this procedure to associate the IPPV channels with the IPG so that the IPG collector includes these channels on its next update. You can have the IPG collector apply the changes within 20 minutes or at its next scheduled update.

1 From the ISDS Administrative Console, click the **Server Applications** tab.

2 Click **IPG**. The IPG Servers list opens.

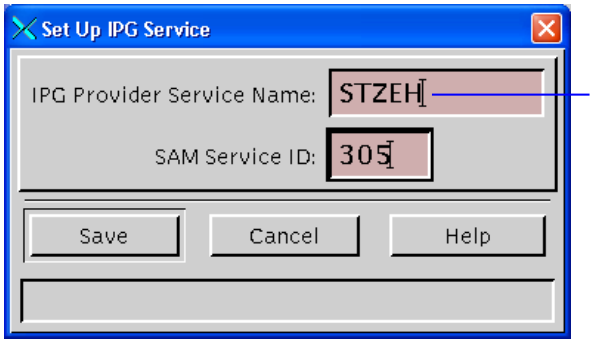
3 Click **File > Services**. The IPG Service List opens.

4 Click **File > New**. The Set Up IPG Service window opens.

5 Complete the fields on the window as described in the following table:

Field	Description
IPG Service Provider Name	The name that identifies this IPPV service as provided to you by your IPG service provider. You can use up to 12 alphanumeric characters.
SAM Service ID	The SAM Service ID of this IPPV service. (This is the ID number assigned by the ISDS when the SAM service was created.)

When you are finished; the Set Up IPG Service window should appear similar to the following:



6 Click **Save**.

7 Repeat this procedure from step 2 for any other channels you want to add to the IPG Collector.

8 Click **File > Close**. A message appears that asks if you want to update the server.

9 Choose one of the following options:

- Click **yes** if you want the IPG Collector to run immediately (actually in about 20 minutes).
- Click **no** if you want to wait for a maintenance window or have the update process run at the normal time the IPG Collector runs.

10 Your next task is to define an unlimited segment for each IPPV service. Go to *Define an Unlimited Segment for Each IPPV Service* (on page 26).

Define an Unlimited Segment for Each IPPV Service

After you encrypt a secure service, you must set up an unlimited segment for that source. Setting up an unlimited segment for a source instructs the system to continuously send content from that source. In the case of Phase I IPPV, the unlimited segment provides a service that subscribers can tune to any time in order to purchase individual IPPV events.

Important: If you are using Macrovision content protection and you are setting up two unlimited segments from the same content, make sure that all of the segments use the same level of Macrovision. Otherwise, content protection may not work as expected for these segments.

Follow this procedure to create one unlimited segment for every IPPV channel.

1 On the ISDS Administrative Console, click the **ISDS** tab.

2 Click the **System Provisioning** tab.

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

4 Select the source you want to use for the unlimited segment.

5 Click **File > Segments**. The Segment List (by Source) window opens for the source you selected.

6 Click **File >New**. The Set Up Segment window opens.

7 Complete the fields on the window as described in the following table:

Field	Description
Segment Name	The name that identifies this segment. You can use up to 20 alphanumeric characters.
Duration	The duration of this segment. Since this is an unlimited segment, select **Unlimited**.

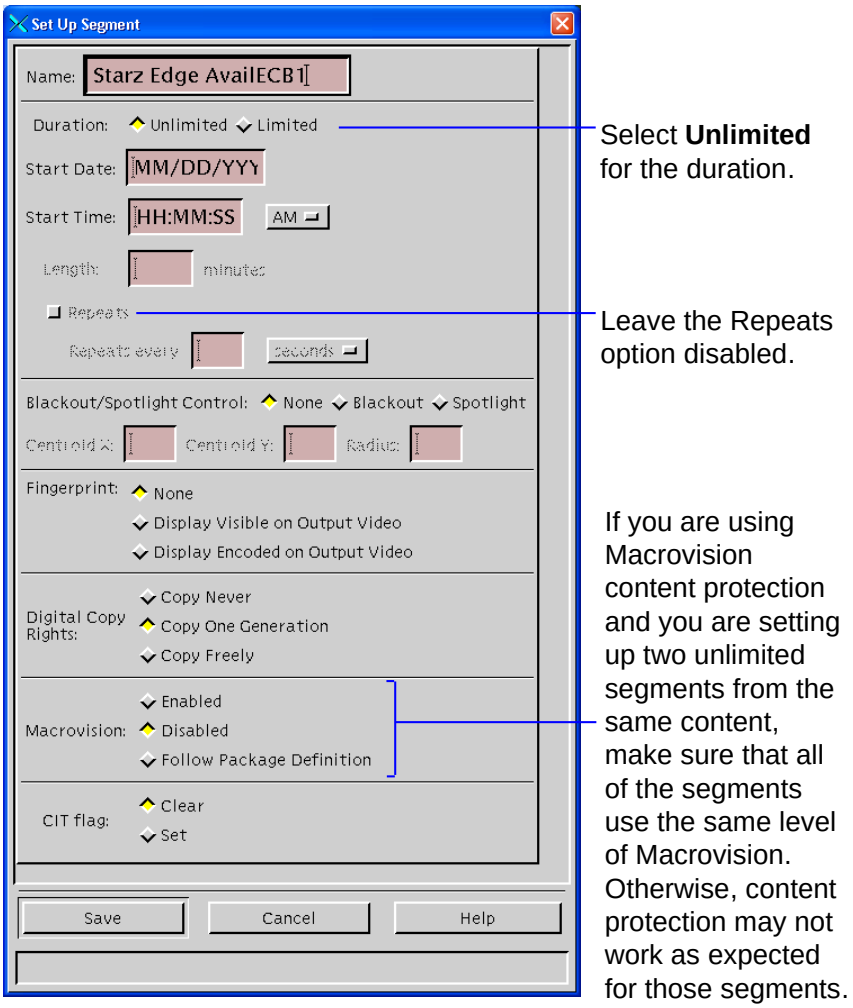
Do not complete the **Start Date** and **Start Time** fields. The ISDS automatically selects the current date as the start date, with the start time several minutes in the future.

Repeats	Leave this option unselected. (Do not enable the Repeats option for IPPV Phase I.)
Blackout/Spotlight Control	Not currently supported. Select **None**.

Field	Description
Fingerprint	Not currently supported. Select **None**.
Digital Copy Rights	The content protection for 1394 ports that receive this segment, appropriate for your system: ■ **Copy Never** - Prevents subscribers from making a copy of any program or event associated with this segment. The FCC does not permit a segment to be marked "Copy Never" unless that segment is being used for PPV. ■ **Copy One Generation** - Allows subscribers to make a single copy of any program or event associated with this segment. ■ **Copy Freely** - Allows subscribers to make as many copies as they like of any program or event associated with this segment.
Macrovision	Sets the content protection of IPPV/PPV or VOD on analog composite output ports that receive this segment, appropriate for your system: **Important:** If you are using Macrovision content protection and you are setting up two unlimited segments from the same content, make sure that all of the segments use the same level of Macrovision. Otherwise, content protection may not work as expected for these segments. ■ **Enabled** - Use the Macrovision content protection process to prevent subscribers from copying all events that this segment processes. **Note:** If you select Enabled, an informational window should open that describes the licensing restrictions of the Macrovision protection process. ■ Did the informational window open? – If **yes**, click **OK**. – If **no**, contact Cisco Services. ■ **Disabled** - Do not use Macrovision content protection. ■ **Follow Package Definition** - Not currently supported

Field	Description
CIT (constrained image trigger) flag	Sets content protection on YPbPr (component) high-definition analog output ports that receive this segment, appropriate for your system: ■ **Clear** - Allows high-definition analog outputs to display video at full HD resolution. ■ **Set** - Causes high-definition analog outputs to reduce the effective image resolution to less than 520,000 pixels. **Note:** Setting the CIT flag may not change the actual resolution displayed on a high-definition analog output. Instead, some DHCT vendors may choose to apply bandwidth filtering to reduce the image resolution.

When you are finished, the Set Up Segment window should appear similar to the following example:



8 Click **Save**. The system saves the segment information in the ISDS database and closes the Set Up Segment window. The Segment List (by Source) window updates to include the new segment information. If you scroll through the list horizontally, you will see a yellow band that indicates when the segment is scheduled to start and its duration.

9 Do you need to set up another unlimited segment for another IPPV source?

Note: You need one unlimited segment for every IPPV channel that you will offer to subscribers.

- If **yes**, repeat this procedure from step 4.
- If **no**, click **File > Close** to close the Segment List (by Source) window.

10 Your next task is to create limited segments for the IPPV Service. Keep the Source List window open and go to ***Customize the PPV Update Utility Configuration File*** (on page 29).

Customize the PPV Update Utility Configuration File

When your system is upgraded to ISDP 2.6, the PPV Update utility and its configuration file are placed in the **/dvs/dncs/ppvUpdate** directory.

Prior to using the PPV Update utility, open the **ppvUpdate.cfg** file using the text editor of your choice and modify two key lines in the file, as described in the following table:

Line	Description
`excludedDays=`	Indicates the days PPV processing is to be excluded from the program guide. Possible values are Mon,Tue,Wed,Thu,Fri,Sat,Sun. **Example:** To exclude Monday and Wednesday from IPPV processing change this line to `excludedDays=Mon,Wed.` If no days are to be excluded, do not modify the line. **Important:** Follow these format requirements: ■ Begin each value with an uppercase letter. ■ Separate each value with a comma. ■ Use no spaces between values.
`defaultPrice=0.00`	Indicates the default purchase price that you want the PPV Update utility to use for IPPV events. We recommend that you enter your system's most common price for the default price. Later, you will have an opportunity to customize the price of events that do not use the default price. **Example:** To use a default price of $4.99 for IPPV events, change this line to `defaultPrice=4.99`.

Note: For more information about the PPV Update Utility, see ***Overview of the PPV Update Utility*** (on page 36).

Example of ppvUpdate.cfg Contents

The following example shows the contents of the **ppvUpdate.cfg** file.

```
######################################################################
# ppvUpdate.pl Configuration File
######################################################################


######################################################################
# Days to Exclude from PPV Services - Capital Case weekday
identifiers.
# Valid Values = Mon,Tue,Wed,Thu,Fri,Sat,Sun
# If no days are excluded excludedDays=
######################################################################
excludedDays=


######################################################################
# This is the default price that will be utilized during the
export process.
# If the majority of the PPV events will have a similar price,
update this value
# to reduce the amount of edits needed prior to an import.
######################################################################
defaultPrice=0.00
```

Customize ppvUpdate.cfg

After you have configured the ISDS for IPPV, follow this procedure to customize the PPV Update utility configuration file.

1 Open an xterm window on the ISDS.

2 Type **cd /dvs/dncs/ppvUpdate** and press **Enter**.

3 Use the text editor of your choice to open the file ppvUpdate.cfg.

4 Modify the line excludedDays= to indicate the days IPPV processing is to be excluded from program guide. Possible values for this setting are Mon,Tue,Wed,Thu,Fri,Sat,Sun.

Important: Follow these format requirements:

- Begin each value with an uppercase letter.
- Separate each value with a comma.
- Use no spaces between values.

Examples: To exclude Monday and Wednesday from IPPV processing you would modify the line as shown here excludedDays=Mon,Wed. Or, to ensure that IPPV is processed all days, do not change the line, leave it as excludedDays=.

5 Modify the line `defaultPrice=0.00` to indicate the IPPV event default purchase price that you want the PPV Update utility to use. We recommend that you enter your system's most common price for the default price. Later, you will have an opportunity to customize the price of events that do not use the default price.

Example: To use a default purchase price of $4.99, modify the line as shown here: `defaultPrice=4.99`.

6 Save and close the file. Go to ***Add the PPV Update Utility to the crontab File*** (on page 32).

Add the PPV Update Utility to the crontab File

You can run the PPV Update utility in Cleanup mode from the command line of an xterm window on the ISDS. In addition, an entry for the PPV Update utility can be placed in the crontab file of the ISDS, commonly referred to as the "cron" file. When run from cron, the utility executes automatically at a pre-defined interval without user intervention.

Important: Our engineers recommend that system operators elect to run the PPV Update utility in Cleanup mode automatically through the crontab file to free EIDs on a regular basis. Do not attempt to edit the crontab file on the ISDS unless you are a skilled user of the UNIX vi text editor and are familiar with how cron entries are structured.

Follow these instructions to edit the crontab file for automatic cleanup of EIDs.

1. Open an xterm window on the ISDS.
2. Type **export EDITOR=vi** and press **Enter**.
3. Type **crontab -e** and press **Enter**. The crontab file opens for editing using the UNIX vi text editor.
4. Locate the entry for the ipgCollector. It will appear similar to the following example:

   ```
   00 05 * * * . /dvs/appserv/bin/appservSetup > /dev/null 2>&1;
   /dvs/appserv/bin/ipgCollector 1 >/dvs/appserv/tmp/ipgCollector.1.cron.log
   2>&1
   ```

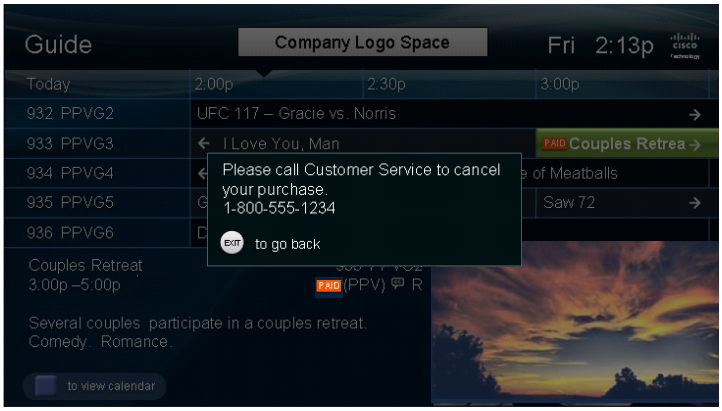
   Important: Normally there is a single entry for the ipgCollector. However, if there is more than one ipgCollector entry, modify the entry with the latest run time. The run times are shown as minute and then hour. In the above example, the ipgCollector runs at 5:00 am (indicated by the 00 05 at the beginning of the line).
5. In the crontab file, add the following text to the IPG collector entry:

   ```
   ;./dvs/dncs/ppvUpdate/ppvUpdate.pl -c 2>&1
   ```

   Example: `00 05 * * * . /dvs/appserv/bin/appservSetup > /dev/null 2>&1; /dvs/appserv/bin/ipgCollector 1 >/dvs/appserv/tmp/ipgCollector.1.cron.log 2>&1`**;./dvs/dncs/ppvUpdate/ppvUpdate.pl –c 2>&1**
6. Save the crontab file and close the UNIX vi editor.
7. Type **crontab -l** and then press **Enter** to verify that the entry was added successfully.

Customize the Service Provider Telephone Number

You can use the Downloadable Configuration File feature to customize Galio (the web browser on the platform) and RTN (Reference TV Navigator UI) configuration variables. The following variable defines the number that the RTN displays for any up-sell opportunities or, as shown in the following example, for canceling a purchase in IPPV Phase I:
com_antplc_tvlib.tvlib_config_global_operator_contact_number: (800) 555 5555



For assistance setting up a downloadable configuration file that contains your customized value for contact telephone number variable, see **Downloadable Configuration Files** in the Appendix of the *ISDP System Release 2.6 Release Notes* (part number 4021187).

3

Maintain IPPV Service

Introduction

This chapter provides procedures for the operational tasks that are required to define events, collect purchase information, assist customers with canceling a purchase, and manage expired events. Where appropriate, we indicate best practices and basic troubleshooting steps to aid in the deployment of IPPV to your subscribers.

In This Chapter

Overview of the PPV Update Utility

This section describes the PPV Update utility, which you should use to perform the following tasks:

- Create IPPV events
- Update IPPV events on the ISDS
- Remove expired segments and packages from the ISDS and then update the IPG with existing IPPV events

After you have customized the configuration file, you are ready to use the PPV Update utility.

PPV Update Utility Options

To execute the PPV Update utility, use this command format: **ppvUpdate.pl <option>**.

The PPV Update utility can be executed with any of the following options:

- Use option **-e** to export IPPV events to data files named *.export files and stored in the current working directory.
- Use option **-i** to import IPPV events from the *.export files into the ISDS.
- Use option **-c** to clean up all expired events and update the IPG with event information.

The -e Option

Executing **ppvUpdate.pl - e** creates a single text file for each IPPV SAM service. It also logs all transactions in the local directory to **ppvUpdate.pl.log**.

Each file is named **servicename_sourceid.export**, where **servicename** indicates the name given to the IPG service name and **sourceid** indicates the source ID used by the SAM IPPV service, for example, **VC04_816.export** and **VC05_817.export**.

Each PPV export file uses the format `Default Purchase Price|Event Name|Event Start Date and Time| Event Start Date and Time in Integer (Epoch) Format` to list IPPV events and default prices for the IPPV Service, similar to the following example:

```
0.00|Couples Retreat|Sat Mar 27 12:30:00 2010|1269707400
0.00|Couples Retreat|Sat Mar 27 10:30:00 2010|1269700200
0.00|District 9|Sun Mar 28 16:30:00 2010|1269808200
0.00|District 9|Sun Mar 28 18:30:00 2010|1269815400
```

To configure IPPV events for IPPV Phase I, you will need to modify the contents of each PPV export file by replacing the default price with the actual price and by deleting any events that you do not intend to offer for purchase.

Important: When editing PPV export files, it's important that you make only these changes and do not change the format of the file. Otherwise, purchase prices may not display as expected in the program guide.

The -i Option

Executing **ppvUpdate.pl -i** imports the modified PPV export files, and performs the following tasks:

- Creates segments and packages for each IPPV SAM Service.

  Note: If there is an existing segment for the event and time-slot, the PPV Update utility will not update the event in order to prevent duplication.

- Uses the modified PPV export file to update the program guide long description fields with purchase price and EID data.

  Note: If an IPPV event already contains purchase price and EID data in the long description field, the PPV Update utility will not update the program guide with this data to prevent duplication.

- Rebuilds program guide Broadcast File System (BFS) links.

- Logs all transactions in the local directory to **ppvUpdate.pl.log**.

The -c Option

Executing **ppvUpdate.pl -c** provides the following features:

- Removes any expired segments and packages from the ISDS.

- Updates custom IPG data after the ipgCollector has been executed.

  Note: Running the ipgCollector removes purchase price and EID data from the long description of IPPV events.

- Logs all transactions in the local directory to **ppvUpdate.pl.log**.

You can execute **ppvUpdate.pl -c** at anytime to correct program guide data for IPPV events without causing a service impact.

By modifying the cron process as described later in this chapter, the cron process will automatically execute **ppvUpdate.pl -c** each day to clean up all expired segments and packages for IPPV services.

Regularly Update IPPV Events in the ISDS

After IPPV events are created using the PPV Update utility, you will need to perform the following tasks regularly to update IPPV events in the ISDS:

- **Weekly**: The PPV Update script should be run for import and export once per week. This will keep the system completely updated for IPPV events.
- **Nightly**: The PPV Update script should be run for cleanup every night in cron after the collector has finished. This will remove expired segments and packages and update the IPG for existing IPPV events.

Update IPPV Events in the ISDS (Weekly)

Follow the procedures in this section to update IPPV events in the ISDS as demanded by your schedule.

Create IPPV Events

After you have configured the ISDS for IPPV, follow this procedure to use the PPV Update utility to create IPPV events.

Note: For more information about the PPV Update Utility, see ***Overview of the PPV Update Utility*** (on page 36).

1. Open an xterm window on the ISDS.
2. Type **cd/dvs/dncs/ppvUpdate** and press **Enter**.
3. Type **./ppvUpdate.pl -e** and press **Enter**. The utility creates a single text file for each IPPV SAM service that is defined on the system and places the files in the /dvs/dncs/ppvUpdate directory.

   Note: Each file is given an .export extension and is named with the IPG service name and source ID for the IPPV service (**servicename_sourceid.export**) , similar to the following examples: **VC04_816.export** and **VC05_817.export**.
4. Customize the contents of each file as needed by your system. Go to ***Modify IPPV Events*** (on page 39).

Modify IPPV Events

After you have used the PPV Update utility to create IPPV events, customize the events for your system as described in the following procedure.

1 Use the UNIX text editor of your choice to open a **/dvs/dncs/ppvUpdate/<servicename_sourceid>.export** file. The file opens and displays a list of events with default purchase prices, similar to the following example.

Note: In the following example, the PPV Utility default price of 0.00 is shown. However, if you customized the default purchase price by modifying the defaultPrice variable (in step 5), then the figure you entered for this value appears instead of 0.00.

```
0.00|Couples Retreat|Sat Mar 27 12:30:00 2010|1269707400
0.00|Couples Retreat|Sat Mar 27 10:30:00 2010|1269700200
0.00|District 9|Sun Mar 28 16:30:00 2010|1269808200
0.00|District 9|Sun Mar 28 18:30:00 2010|1269815400
```

2 Edit the file by making the following changes:

Important: Do not make any other changes to the file than those described here. The file must maintain the format `Default Purchase Price|Event Name|Event Date and Start Time|Event Date and Start Time in Integer (Epoch) Format`. Otherwise, purchase prices may not display as expected in the program guide.

- For each event that you want subscribers to be able to purchase, change the default price to the actual event price.
- Delete any events that you do not intend to offer for purchase.

3 Check the file carefully to ensure the following changes have been made:

- All programs show the accurate purchase price for the program. The event price listed here is displayed in the program guide to subscribers.
- No other changes have been made to the file. For example, modifying the event name will prevent the program guide from showing any purchase data for this event.

4 Save the file and close the text editor.

5 Repeat this process from step 1 to edit another PPV file with purchase price data.

Update the ISDS with IPPV Events

After modifying the *.export files that contain IPPV events, follow this procedure to update the program guide with IPPV event and purchase price data.

1 After all *.export files have been updated and saved, type **./ppvUpdate.pl -i** and press **Enter**. The PPV Update utility processes the events in each file. When it has completed processing all files, the utility stops and restarts the IPG service to update the broadcast file system (BFS) with modified program data.

Note: To prevent duplication, the utility does not make modifications to existing IPPV events that have already been processed with cost and EID.

2 When the message **Processing Completed Successfully!** appears, type **exit** and press **Enter** to close the xterm window.

3 To verify that you have successfully set up IPPV services for IPPV Phase I, use a set-top with the ISDP 2.6 client to tune to the program guide and select a program that you defined as an IPPV event. View the long description for the program and confirm that the purchase price is displayed in the long description.

Note: Setting up IPPV services for IPPV Phase I results in the following information being displayed to the subscriber when the subscriber selects the IPPV event from the IPG. For information on the behavior of the IPPV client in IPPV Phase I, go to Chapter 4, ***Use the IPPV Client*** (on page 47).

Remove Expired Segments and Packages (Nightly)

During installation, Cisco installers configure the PPV Update script to run the Cleanup feature nightly in cron. As a result, you should not need to perform any procedures; the system does this automatically. However, in the event that you need to run the Cleanup feature manually due to the automated process failing to run properly, follow this procedure:

Note: You can use this procedure at anytime to correct IPG data for IPPV without causing a service impact.

1. Open an xterm window on the ISDS, type **cd /dvs/dncs/ppvUpdate** and press **Enter**.
2. Type **./ppvUpdate.pl -c** and press **Enter**. The utility frees EIDs so that they can be used by future IPPV events.
3. When the message **Processing Completed Successfully!** appears, type **exit** and press **Enter** to close the xterm window.

Retrieve Purchase Data from Set-Tops

This section describes how to retrieve purchase data from set-tops, store the data in the ISDS database, and forward purchase data on to the billing system so that subscriber accounts can be updated with this information. This section describes two common methods used to retrieve purchase data:

- **Purchase data collection with clear:** Using this method, ISDS operators purge reported purchase transactions from the ISDS database and archive the purchase record file in the **purchaseReportArchive directory**. Subsequent purchase records will not contain purchase transactions that were reported in previous purchase records.
- **Purchase data collection without clear:** Using this method, ISDS operators do not purge reported purchase transactions from the ISDS database and subsequent purchase records contain purchase transactions that were reported in previous purchase records.

Frequency of Data Retrieval

At a minimum, you must collect purchase data every 60 days.

Beyond the minimum 60-day recommendation, the frequency of purchase data collection depends on your event schedule. If you schedule IPPV events daily, then you should collect purchase data daily. However, if you schedule special events, you should collect purchase data after the special event has completed.

Purchase Data Collection with Clear

As described in the following summary, the most common method for retrieving purchase data clears reported purchase transactions from the ISDS database and archives the purchase record file in the **/dvs/ftp/purchaseReportArchive directory**. As a result, subsequent purchase records will not contain purchase transactions that were reported in previous purchase records.

1. The billing system sends an InitializeIppvUpload request, specifying a filename of a purchase record file, to the ISDS.

   Recommended Filename Naming Convention:

   `YYYYMMDD_HHMM_IppvPurchaseRecord`

   Important: The filename must not include the string -temp. All -temp files will be periodically wiped from the directory by ISDS maintenance routines.

2. As a result, the ISDS copies current purchase records from the ISDS database and writes them to the file located in the /dvs/ftp/purchaseReport directory.

   Note: This is an xml file that can be viewed with a web browser, such as Firefox on the ISDP. A successful InitializeIppvUpload response will include the full path and filename of the created file.

3 The billing system then uses ftp get to copy the purchase record file from the ISDS.

4 Lastly, the billing system sends an IppvUploadComplete request to the ISDS. As a result, the ISDS purges the reported purchase transactions from the ISDS database and archives the purchase record file in the **/dvs/ftp/purchaseReportArchive** directory. Note that subsequent purchase records will not contain purchase transactions that were reported in previous purchase records.

Purchase Data Collection without Clear

Another method for retrieving purchase data does not purge reported purchase transactions from the ISDS database. As a result, subsequent purchase records contain purchase transactions that were reported in previous purchase records. Some service providers find this method helpful in monitoring IPPV transactions to determine the popularity of pay-per-view events.

In this scenario, which is described in the following procedure, purchase transactions that are stored in the ISDS database are not modified or deleted. Therefore, the transactions are reported in the next purchase record.

1 The market data collection system sends an InitializeIppvUpload request that specifies a filename of a purchase record file to the ISDS.

2 As a result, the ISDS copies current purchase records from the ISDS database and writes them to the file located in /dvs/ftp/purchaseReport. This is an xml file that can be viewed with a web browser such as Firefox on the ISDP. A successful InitializeIppvUpload response will include the full path and filename of the created file.

   Recommended Filename Naming Convention:

   `YYYYMMDD_HHMM_IppvPurchaseRecord-temp`

   Important: All files must be unique and include the string -temp in the name. The ISDS will periodically delete all files that include the -temp in the filename from the directory as part of a regular maintenance routine.

3 The market data collection system will then use ftp get to copy the temporary purchase record file from the ISDS.

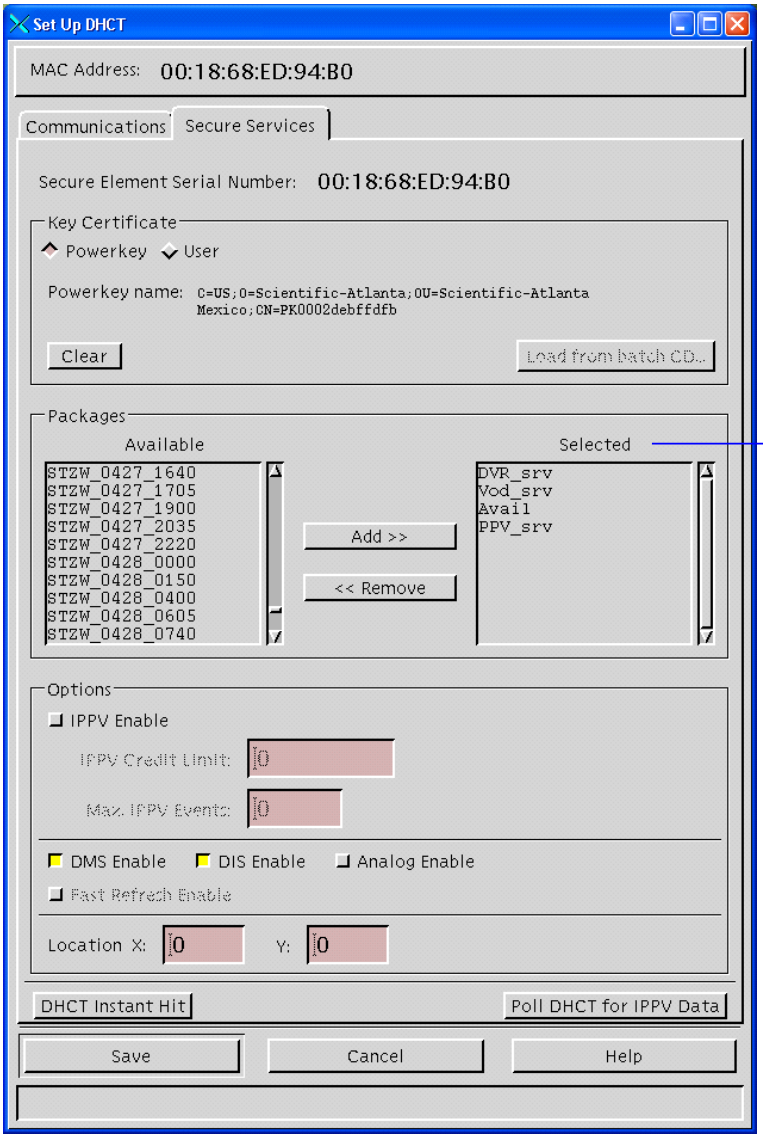
Cancel a Purchased Event

Should a subscriber cancel a pre-purchased event or an event in progress, the IPPV client directs the subscriber to telephone the service provider to cancel the purchase. When this occurs, follow this procedure to cancel the event and prevent it from being displayed on the subscriber's set top.

Note: Because the event purchase is stored on the ISDS at the time of purchase, the purchase data will be forwarded to the ISDS 10 minutes before the event starts, or--if the subscriber purchases the event after it has started--up to 30 minutes after an event has started. For this reason, you may be asked to follow the process your company has established to ensure that the subscriber's account is credited.

1. Obtain the name of the Event that the subscriber would like to cancel.
2. Obtain the MAC Address of the set-top from the subscriber.
3. On the ISDS Administrative Console, select the **ISDS** tab.
4. Select the **Home Element Provisioning** tab.
5. Select **DHCT**. The DHCT Provisioning window opens.
6. Enter the MAC address provided to you by the subscriber in the **By MAC Address** field and click **Continue**. The Set Up DHCT window opens.
7. Select the **Secure Services** tab. The Secure Services tab moves to the forefront.
8. In the **Selected** list, select the package for the event that the subscriber wants to cancel.

Note: IPPV event packages follow a unique naming convention (**SAM Service Name_mmdd_hhmm**, where **mmdd** = month and day the event begins, and **hhmm** = hour and minute event begins in 24 hour time format). You can identify IPPV events by this naming convention.



Select the package for the event to be canceled.

9 Click **Remove**. The package moves to the Available list.

10 Click **Save**. The message Update Completed appears in the Status area at the bottom of the window and the ISDS stops the event from displaying on the subscriber's set-top.

11 To close the Set Up DHCT window, select **Close**.

12 Follow the process your company has established to ensure that the subscriber's account is credited, otherwise, the subscriber's account will be charged for this event.

4

Use the IPPV Client

Introduction

This chapter describes how subscribers can use the IPPV client to purchase and manage IPPV events.

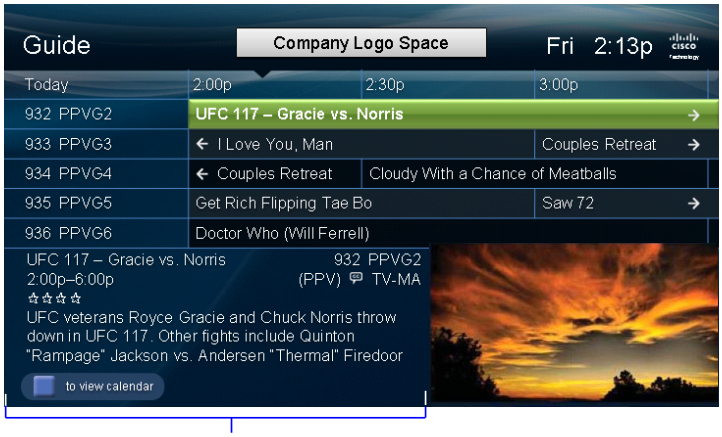
In This Chapter

View Information About IPPV Events

Subscribers can easily find out more information about an IPPV event whether they are browsing through the program guide or tuned to an IPPV channel.

Program Guide

When browsing through the program guide, subscribers can easily find more information about IPPV events shown in the guide.



Whenever an event is selected in the program guide, information about the event is shown in the lower left portion of the guide, called the Information area.

IPPV Channel

Subscribers can find out information about an IPPV event they are watching by pressing **Info** on the remote to display the Information banner.

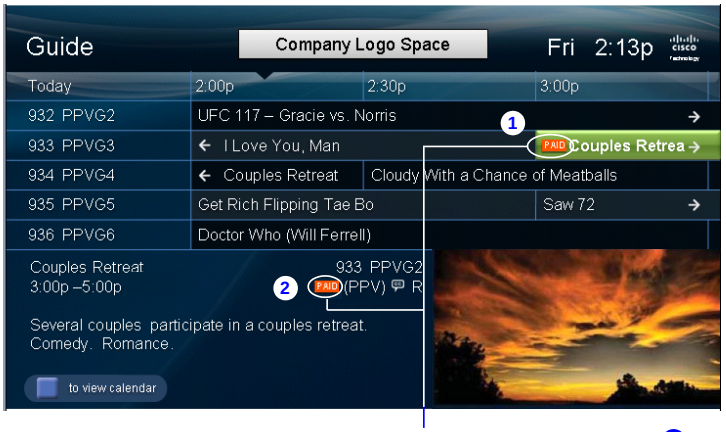
Pressing **OK,** tuning to a PPV event, or pressing a directional arrow causes a banner to display with information about the event.

Easily Identify Purchased Events

The IPPV client uses the PAID flag (PAID) to indicate that an event has been successfully purchased. This flag is displayed where subscribers are likely to browse IPPV events.

Program Guide

When browsing through the program guide, the PAID flag is used in two places as indicated in the following example:



The PAID flag appears both in the event title (1) and in the Information area (2) to indicate that the PPV event was successfully purchased.

PPV Channel

When tuned to an IPPV channel, the PAID flag is shown in the Information banner as indicated in the following example.

The PAID flag indicates that this PPV event has been purchased.

Purchase IPPV Events

This section describes how subscribers can purchase an IPPV event in two situations: for an event in progress and for a future event.

Purchase an IPPV Event In Progress

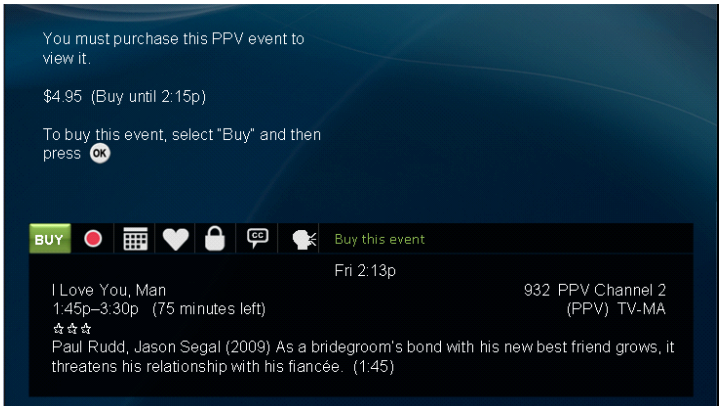
After an IPPV event has begun, subscribers can purchase the event within the first 30 minutes. After 30 minutes, the event can no longer be purchased.

Use the remote control for the following procedure.

1 Press **Guide** to display the program guide.

2 Press ▲▼◀▶ to navigate through the listings and select the event you wish to purchase.

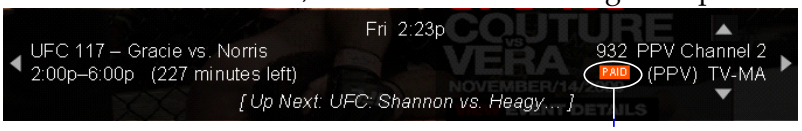
3 When the event is highlighted, press **OK** to display the purchase screen, similar to the following example.



4 Press **OK** to select BUY and purchase the event.

Note: If you have configured a Purchase PIN for IPPV/PPV and VOD purchases, you will be asked to confirm the purchase by entering a 4-digit PIN.

5 You are notified that your purchase is being processed. When the purchase is complete, the event is displayed and the Information Banner appears briefly at the bottom of the event, similar to the following example:



The PAID flag indicates that the PPV event was successfully purchased.

Purchase a Future PPV Event

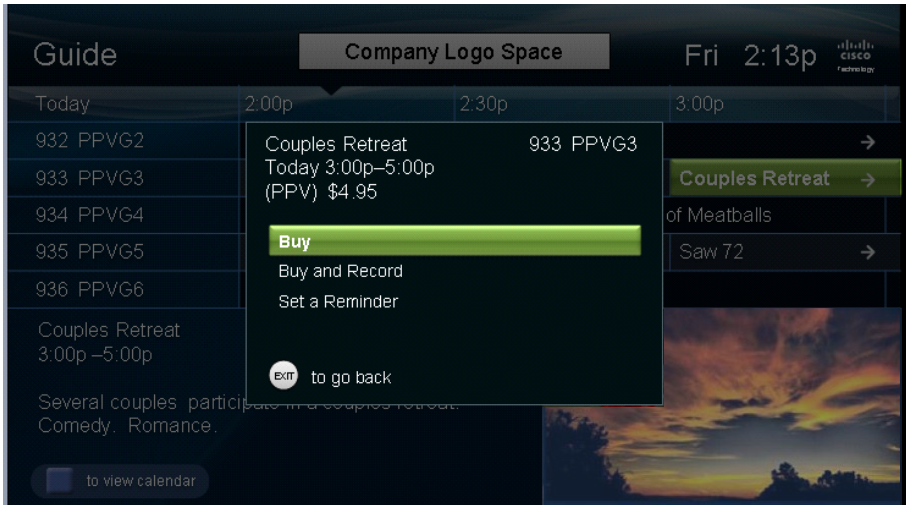
After a PPV event has begun, subscribers can purchase the event within the first 30 minutes. After 30 minutes, the event can no longer be purchased.

Use the remote control for the following procedure.

1 Press **Guide** to display the program guide.

2 Press ▲▼◀▶ to navigate through the listings and select the event you wish to purchase.

3 When the event is highlighted, press **OK** to display the purchase screen, similar to the following example



4 Press **OK** to select BUY and purchase the event.

Note: If you have configured a Purchase PIN for PPV and VOD purchases, you will be asked to confirm the purchase by entering a 4-digit PIN.

Record a Purchased Event

After an event has been purchased, subscribers have the option to record the event.

Use the remote control for the following procedure.

1. Press **Guide** to display the program guide.
2. Press ▲▼◀▶ to navigate through the listings and select the purchased event to record.
3. When the event is highlighted, press **OK** to display more information about this event. The Event Options window opens, similar to the following example.

4. Press **OK** to select Record. The Event Options window closes and the event is updated in the program guide with the Record icon.

The Record icon (●) indicates that this event will be recorded.

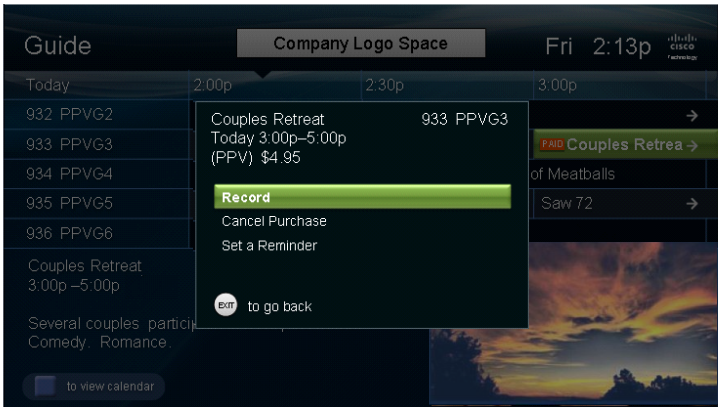
Cancel a Purchase

To cancel a purchased event, subscribers must call their service provider for assistance.

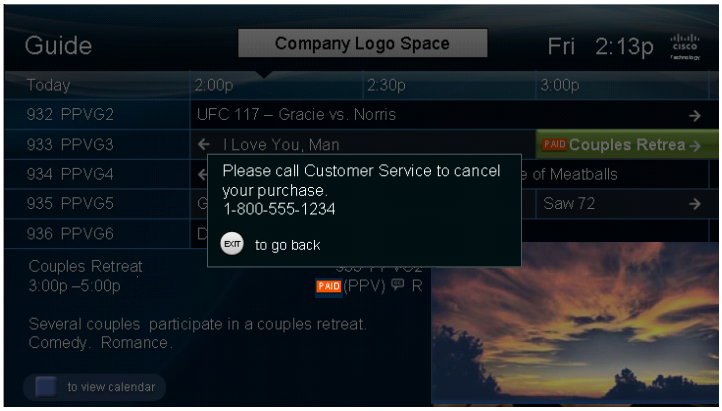
1 Press **Guide** to display the program guide.

2 Press ▲▼◀▶ to navigate through the listings and select the purchased event to record.

3 When the event is highlighted, press **OK** to display more information about this event. The Event Options window opens, similar to the following example.



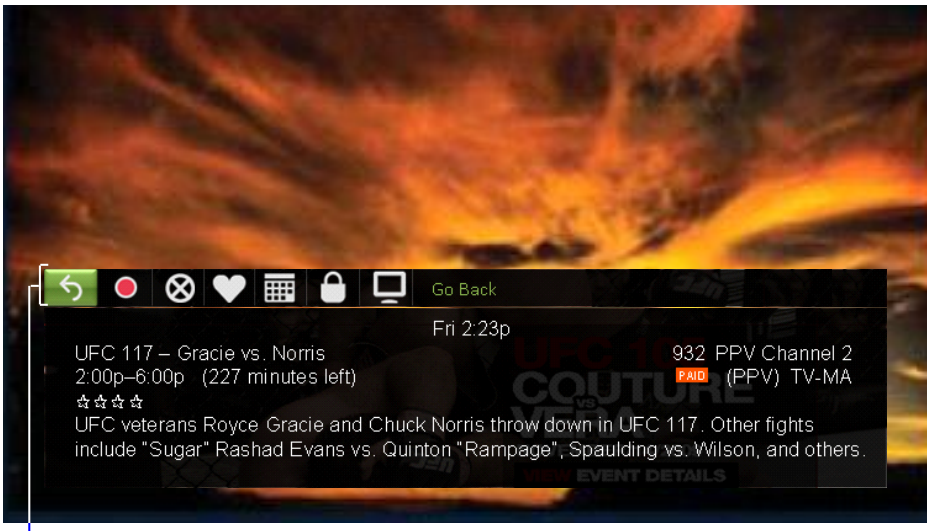
4 Press ▼ to navigate to **Cancel Purchase**, and then select **OK**. A message window appears, similar to the following example, prompting the subscriber to call to cancel the event.



Manage an Event with the Action Toolbar

The Action Toolbar provides a quick and easy way for subscribers to manage an event they are watching.

1 When watching a PPV event, press **Info** twice to display the Action Toolbar, similar to the following example.



Pressing **Info** twice when viewing a PPV event displays the Action Toolbar.

2 Press ◀ or ▶ to navigate through the Action Toolbar and select an item.

3 Press **OK** to select the item.

- Close Action Toolbar
- Record/Stop Recording and Save
- Cancel the PPV event (Displays only the first 30 minutes of a PPV event.)
- Save as/Unset Favorite
- Search
- Add to/Remove from Blocked List
- Video output (toggle between Normal, Stretch, Zoom)

4 To close the Action Toolbar, press **EXIT**.

View Purchase History

This section describes how subscribers can use the Purchase History window to view information about upcoming, current, and past purchases.

View Purchase History Information (Upcoming Events)

This section describes how subscribers can use the remote to view information about upcoming and currently playing events that they have purchased.

1 Press **MENU** to display the program guide.

2 Press ▼ to move down the menu options and select **PPV Purchases**. The IPPV client highlights the PPV Purchases option.

3 Press **OK**.

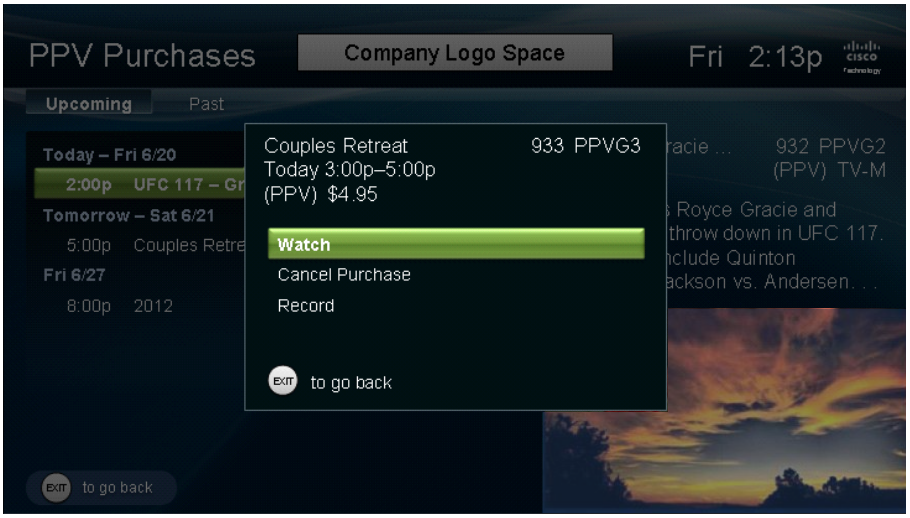
Note: If you have configured a Purchase PIN for IPPV/PPV and VOD purchases, you will be asked to confirm access to purchase information by entering a 4-digit PIN.

4 The PPV Purchases window appears, similar to the following example. This window lists purchases in order by event show time.

5 To select a purchase in the list, press ▲ or ▼ until the purchase is highlighted, and then press **OK**. An informational window opens, similar to the following example.

Notes:

- The **Watch** option is shown only if the event is currently playing.
- The **Record** option is shown only if the event has not already been set to record.



6 To close the window, press **Exit** on the remote control.

View Purchase History Information (Past Events)

This section describes how subscribers can use the remote to view information about events they have purchased that have already been shown.

1 Press **MENU** to display the program guide.

2 Press ▼ to move down the menu options and select **PPV Purchases**. The IPPV client highlights the PPV Purchases option.

3 Press **OK**.

Note: If you have configured a Purchase PIN for IPPV/PPV and VOD purchases, you will be asked to confirm access to purchase information by entering a 4-digit PIN.

4 The PPV Purchases window appears, with Upcoming purchases preselected.

5 Press ▶ to select **Past** purchases. The PPV Past Purchases window appears, similar to the following example. This window lists purchases in order from the most recent to the least recent purchase.

Note: Program descriptions may not appear for past events.

6 To close the window, press **Exit** on the remote control.

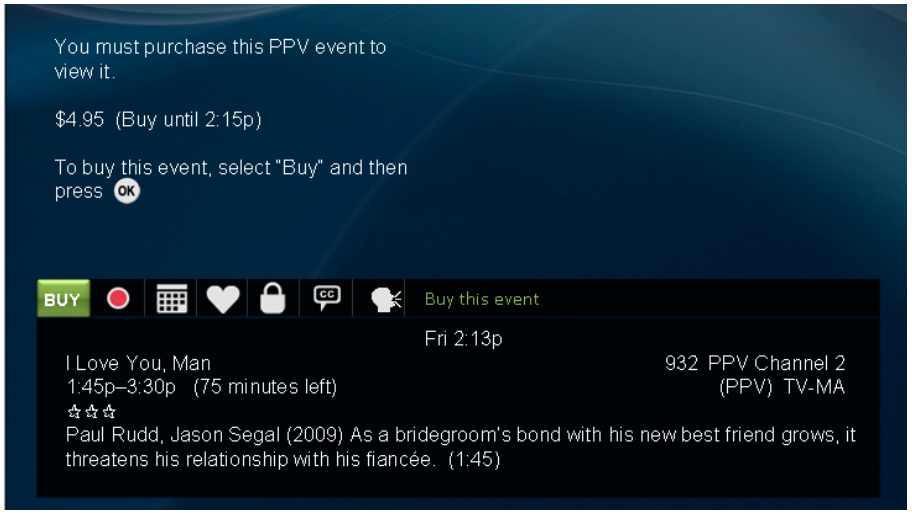
Troubleshoot IPPV Purchases

This section describes how the IPPV client informs subscribers of a purchase problem, should one occur.

Subscriber Tunes to IPPV Channel While Event Is in Progress

Should a subscriber directly tune to an IPPV channel when an event has recently started, the IPPV client displays a window, similar the following example, that prompts the subscriber to purchase the event in order to view it.

The IPPV client displays this window for the first 30 minutes of an IPPV event. After 30 minutes, the event can no longer be purchased and the IPPV client displays another window to inform subscribers that the event can no longer be purchased. For more information, see ***Purchase Window Has Expired and Subscriber Attempts Purchase*** (on page 59).

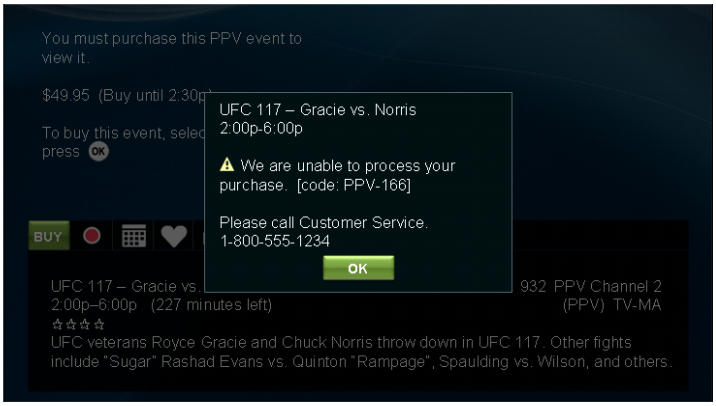


Purchase Window Has Expired and Subscriber Attempts Purchase

After an IPPV event has begun, subscribers can purchase the event within the first 30 minutes. After 30 minutes, the event can no longer be purchased. Should a subscriber attempt to purchase an event after the first 30 minutes has passed, the IPPV client displays an informational screen, similar to the following example:

Purchase Problem Barker

In other situations, the IPPV client displays a window similar to the following example:



Subscribers can close this window by pressing **OK**, **EXIT**, or **MENU** from the remote control.

5

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

Manually Configure the ISDS for IPPV Phase I

Introduction

This appendix describes how to manually configure the ISDS for IPPV Phase I.

Should a Cisco Services technician direct you to use the manual configuration process instead of the process described in Chapter 2, use follow the instructions in this appendix.

In This Appendix

Create Limited Segments for Each IPPV Event

After you add unlimited IPPV segments to the ISDS, set up limited segments (IPPV events). The process for setting up a limited segment is very similar to the process for setting up an unlimited segment. However, when creating limited segments, you must define the start and stop time of the event. A limited segment is equivalent to an IPPV event, which is available to authorized subscribers only for the duration of the segment.

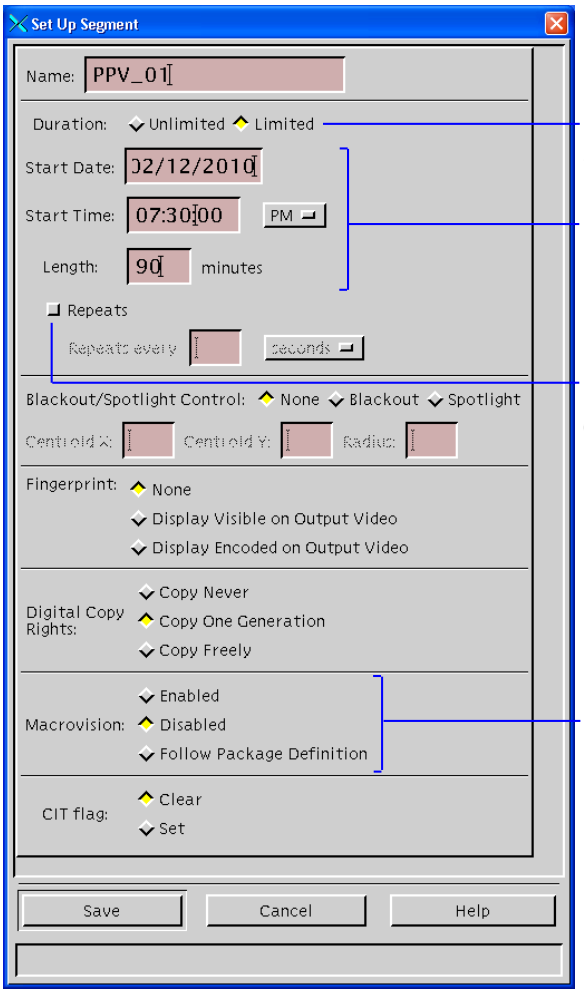
Important: The Macrovision setting for a limited segment (IPPV event) must match the setting given to the unlimited segment. Otherwise, content protection may not work as expected for these segments.

1. In the Source List window, select the source you want to use for this limited segment (IPPV event).
2. Click **File > Segments**. The Segment List (by Source) window opens for the source you selected.
3. Click **File >New**. The Set Up Segment window opens.
4. Complete the fields on the window as described in the following table:

Field	Description
Segment Name	The name that identifies this segment. You can use up to 20 alphanumeric characters. **Example:** PPV01
Duration	The duration of this segment. Select **Limited**.
Start Date	The day that the event is to start.
Start Time	The time that the event is to start.
Length	The length of the event in minutes.
Repeats	Leave this option unselected. (Do not enable the Repeats option for IPPV Phase I.)
Blackout/Spotlight Control	Not currently supported. Select **None**.
Fingerprint	Not currently supported. Select **None**.

Field	Description
Digital Copy Rights	The content protection for 1394 ports that receive this segment, appropriate for your system: ■ **Copy Never** - Prevents subscribers from making a copy of any program or event associated with this segment. The FCC does not permit a segment to be marked "Copy Never" unless that segment is being used for PPV. ■ **Copy One Generation** - Allows subscribers to make a single copy of any program or event associated with this segment. ■ **Copy Freely** - Allows subscribers to make as many copies as they like of any program or event associated with this segment.
Macrovision	Sets the content protection of IPPV/PPV or VOD on analog composite output ports that receive this segment, appropriate for your system: **Important:** The Macrovision setting for a limited segment (IPPV event) must match the setting given to the unlimited segment (IPPV service). Otherwise, content protection may not work as expected for these segments. ■ **Enabled** - Use the Macrovision content protection process to prevent subscribers from copying all events that this segment processes. **Note:** If you select Enabled, an informational window should open that describes the licensing restrictions of the Macrovision protection process. ■ Did the informational window open? – If **yes**, click **OK**. – If no, contact Cisco Services. ■ **Disabled** - Do not use Macrovision content protection. ■ **Follow Package Definition** - Not currently supported.
CIT (constrained image trigger) flag	Sets content protection on YPbPr (component) high-definition analog output ports that receive this segment, appropriate for your system: ■ **Clear** - Allows high-definition analog outputs to display video at full HD resolution. ■ **Set** - Causes high-definition analog outputs to reduce the effective image resolution to less than 520,000 pixels. **Note:** Setting the CIT flag may not change the actual resolution displayed on a high-definition analog output. Instead, some DHCT vendors may choose to apply bandwidth filtering to reduce the image resolution.

When you are finished, the Set Up Segment window should appear similar to the following example:



Select **Limited** for the duration.

The Start Time and Length must match the start time and duration of the PPV event exactly.

Leave the Repeats option disabled.

The Macrovision setting for a limited segment (PPV event) must match the setting given to the unlimited segment. Otherwise, content protection may not work as expected for these segments.

5 Click **Save**. The system saves the segment information in the ISDS database and closes the Set Up Segment window. The Segment List (by Source) window updates to include the new segment information. If you scroll through the list horizontally, you will see a yellow band that indicates when the segment is scheduled to start and its duration.

6 Set up additional limited segments according to the source you will use for the segment.

Note: You need one limited segment for every IPPV event that you will offer to subscribers.

- To set up another limited segment for *this IPPV service*, repeat this procedure from step 3.

  Important: When creating other segments from the same source, make certain that all segments have the same levels of Macrovision CCI (if used); otherwise, the content protection may not work as expected for these segments.

- To set up another limited segment for *another IPPV service*, close the Segment List (by Source) window by selecting **File > Close**, and then repeat this procedure from step 1.

7 Click **File > Close** to close the Source List window and return to the ISDS Administrative Console.

8 Your next task is to add IPPV packages to the ISDS. Go to ***Create IPPV Packages*** (on page 68).

Create IPPV Packages

After you create limited segments for each IPPV event, add individual IPPV packages to the ISDS. Each IPPV event that you create requires its own package in order for the event to be purchased by a subscriber. A package is required because the ISDS assigns each package a unique broadcast EID. By later associating an IPPV event with an IPPV package, you ensure that an event can be viewed only when a subscriber purchases the IPPV package. Subscribers who purchase the IPPV package receive information that allows them access to this EID.

1. On the ISDS Administrative Console, click the **ISDS** tab.
2. Click the **System Provisioning** tab.
3. Click **Package**. The Package List window opens.

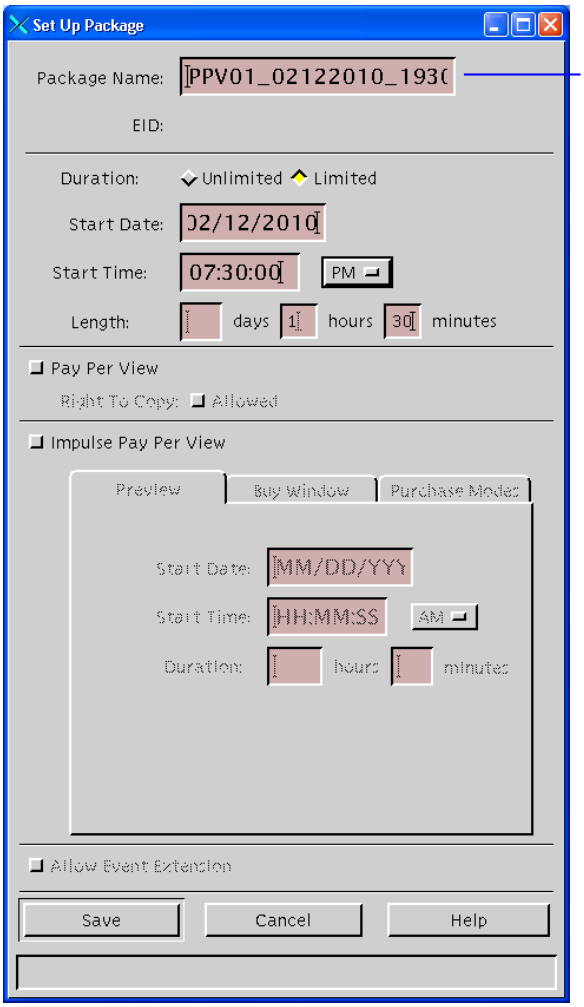
   Note: By default, the Package List window shows only non-PPV packages (Subscription Only). To view the list of all packages, click the **Show** button and select **All Packages**.
4. Click **File > New**. The Set Up Package window opens.
5. Complete the fields on the Set Up Package window as described in the following table:

Field	Description
Package Name	The name that identifies this package. Use the following convention for the package name: **XXXXX_yyyymmdd_hhmm** where **XXXXX** = five characters of your choice, **yyyymmdd** = date of event, and **hhmm** = start time of event using 24-hour time. For example, **PPV01_20100129_1330** indicates that IPPV event PPV01 will be available January 29, 2010 at 1:30 PM. **Important:** Because you must delete IPPV events after they expire, we recommend that you use the package naming convention described above. This naming convention makes it easy for you to identify the date and time that an IPPV event has expired.
Duration	Defines how the package is offered to subscribers: unlimited (available any time) or limited (available only for the time specified in the Set Up Package window.) Select **Unlimited**.

Do not complete the **Start Date**, **Start Time**, or **Length** fields. These are not needed for packages with an unlimited duration.

Pay Per View	Not supported at this time.
Allow Event Extension	Not supported at this time.
Impulse Pay Per View	Not supported at this time.

When you are finished, the Set Up Package window should appear similar to the following example:

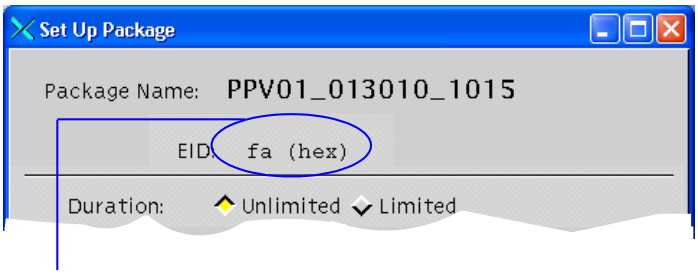


Use the following convention for the package name: PPV#_DATE_StartTime; where PPV# indicates the number of the PPV event; DATE indicates the date that the event starts in the format YYYYMMDD, and StartTime indicates the time that the event starts in 24-hour time, following the format HHMMSS. For example: **PPV01_02122010_193000.**

Leave the other fields with their default settings.

6 Click **Save**. The system saves the package information in the ISDS database and closes the Set Up Package window. The Package List window updates to include the new package.

7 In the Package List window, double-click the package you just added to the ISDS. The Set Up Package window opens and displays information about this package.



Make note of the EID that the ISDS assigned to this package. You will need this information later when you configure the IPG.

8 Make note of the EID for this IPPV package. You will need this information later when you configure the IPG for IPPV events.

9 Do you need to add another IPPV package to the ISDS?

Note: You need one IPPV package for every IPPV event you created earlier.

- If **yes**, repeat this procedure from step 4.
- If **no,** your next task is to add each IPPV event to its own package. Go to ***Add Each Limited Segment (IPPV Event) to its Own Package*** (on page 71).

Add Each Limited Segment (IPPV Event) to Its Own Package

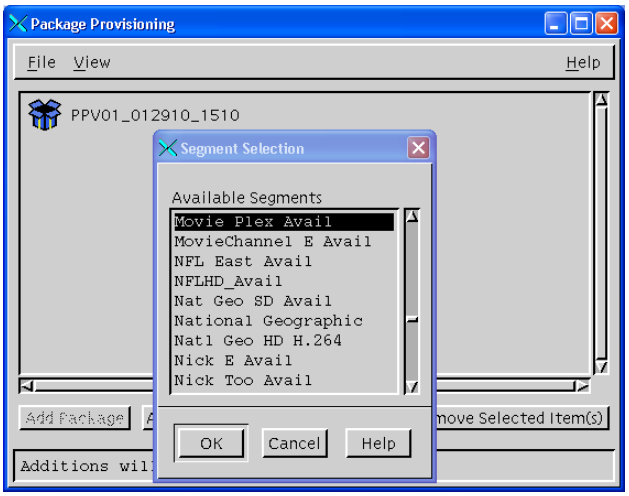
After you have set up limited segments (IPPV events), add each IPPV event to its own package. Associating an IPPV event with an IPPV package ensure that an event can be viewed only when a subscriber purchases the IPPV package. Subscribers who purchase the IPPV package receive EID information that allows them access to the EID for this package.

1 From the Package List window, select one of the IPPV packages you created earlier.

2 Click **File > Provision**. The Package Provisioning window opens for the package you selected.

3 Click **Add Segment**. The Segment Selection window opens showing all of the service segments that have been defined on your system.

Important: Although there is an option to add packages to a package, do not select this option. This version of the ISDS does not support packages within packages.



4 Click to select the limited segment (IPPV event) to add to this IPPV package.

5 Click **Save** to close the Segment Selection window. The Package Provisioning window updates to include the service segment(s) you selected for the package.

6 Click **File > Close** to close the Package Provisioning window and return to the Package List window.

7 Do you need to add another limited segment (IPPV event) to another IPPV package?

- If **yes**, repeat this procedure from step 1.
- If **no**, click **File > Close** to close the Package List window and return to the ISDS Administrative Console.

8 Your next step is to configure the IPG so that it presents the purchase price of each IPPV event to subscribers. Go to ***Configure the IPG for IPPV Phase I*** (on page 73).

Configure the IPG for IPPV Phase I

After you have set up IPPV events in the ISDS, follow the procedure in this section to configure the IPG for IPPV Phase I. To complete this procedure, you will perform the following tasks:

- **Add pricing information to the IPG** - Add the purchase price of each event to the long description field in the IPG table. This is required so that the purchase price of each IPPV event is shown to subscribers.
- **Add EID information to the IPG** - Add EID information to the program data long description field in the IPG. This is required to allow subscribers to successfully purchase IPPV events.

Before You Begin

Before you begin, make sure you have the following information at hand:

- The Package EIDs for each IPPV event that you provisioned earlier
- The date and time that the IPPV events are to be presented to subscribers (from your Program Guide service provider)
- Pricing information for each event (from your PPV service provider)

Add Purchase Price and EID Data to the IPG

Follow this procedure to configure the IPG with purchase price and EID information.

1. On the ISDS Administrative Console, click the **Server Applications** tab.
2. Click **IPG**. The IPG Serve List window opens.
3. Select the server whose program data you need to update with IPPV event prices, and click **File > Program Data**. The Program Data List window opens.
4. Follow these instructions to select the data you want to display.
   - To select program data in a specific language, click the **Language arrow** (▲) and select the language you want to display from the list that opens.
   - To select program data for a particular date, click the **Reverse** (▼) or **Advance** (▲) arrow until the date you want appears.
5. Click the box for **Show only mapped services** and then click **Get Data from Database**. The message "Loading program data from database. Please wait . . ." appears at the bottom of the Program Data List window. Wait for program data to load.

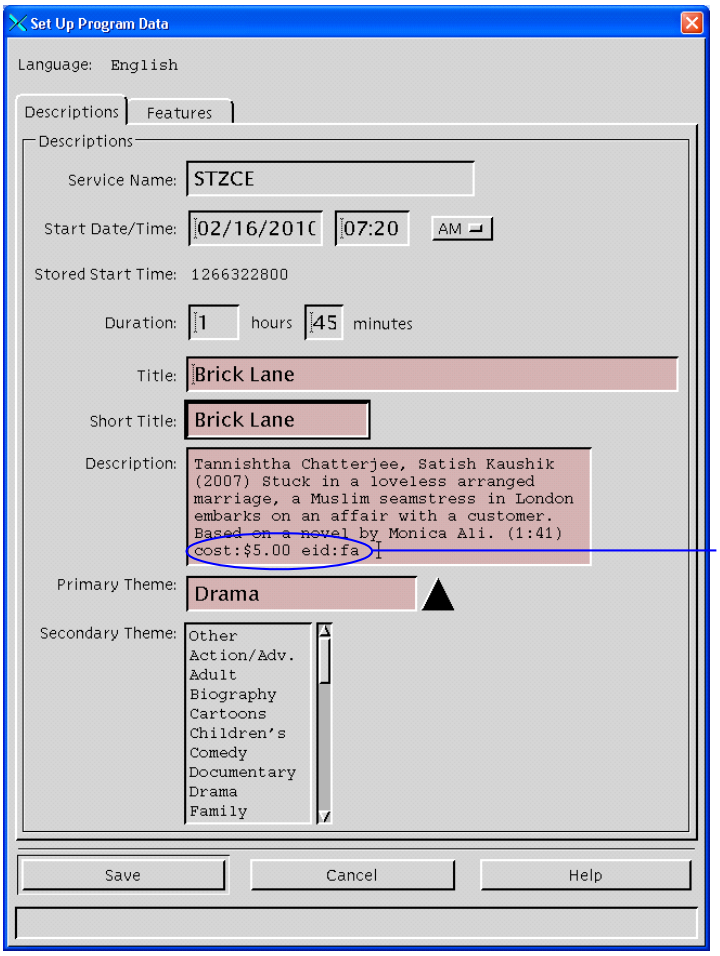
   Note: It takes about 10 minutes for the program data to load.

6 Browse the IPPV channel for the first IPPV event you want to update with purchase price and EID information.

7 Double-click the IPPV event. The Set Up Program Data window opens.

8 Click in the Description field and add the following information to the field: **cost:<cost of event> eid:<EID>**. When you are finished, the Description field should appear similar to the following example.

Important: Make certain to enter this information using the format specified. Using uppercase letters or extra spaces may cause IPPV event purchases to fail or incorrect pricing information to display for subscribers. (You cannot cut and paste in this field.)



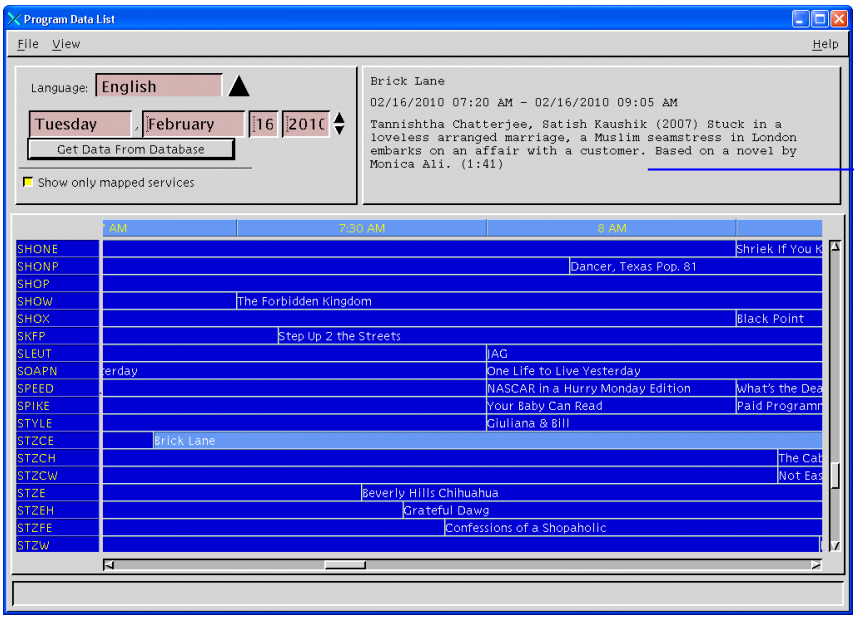
Add cost and EID information to the end of the Description field. When adding this information, make certain to follow this format exactly: **cost:<cost of event> eid:<EID>**. Using uppercase letters or spaces where none are indicated may cause PPV event purchases to fail.

9 Click **Save**. A Question window opens to let you know that overlapping program data will be overwritten.

10 Click **Yes**. A message appears at the bottom of the Set Up Program Data window letting you know that the program data has been saved. The updated description appears in the Description area of the Program Data List window.

11 In the Program Data List window, view the Description area for each IPPV event that you have modified to ensure that you have entered the information correctly.

Important: Check the Description area to confirm that you entered information correctly. Using uppercase letters or extra spaces may cause IPPV event purchases to fail or incorrect pricing information to display for subscribers.



The Description area should update and display the information you entered.

12 Do you need to update another IPPV event with price and EID data?

- If **yes**, repeat this procedure from step 6
- If **no**, click **File > Close**. A Question window opens and prompts you to select whether or not you want to send an update to the server.

13 Do you want the IPG server to update immediately (within the next 20 minutes)?

- Click **Yes**. The IPG server is updated with your changes within the next 20 minutes. The Question window and the Program Data List window close.
- Click **No**. The IPG server is updated with your changes on its next regularly scheduled update. The Question window and the Program Data List window close.

14 You have successfully configured the ISDS for IPPV Phase I. To close the IPG Server List window, click **File > Close**.

Note: Setting up IPPV in this manner results in the following information being displayed to the subscriber when the subscriber selects the IPPV event from the IPG. For information on the behavior of the IPPV client in IPPV Phase I, go to Chapter 4, ***Use the IPPV Client*** (on page 47).

B

Routine Manual Tasks Required to Support IPPV Phase I

Introduction

This appendix provides procedures for completing manual tasks that must be completed regularly to preserve the IPPV experience for subscribers. Operators need to perform these procedures only if they are not using the IPPV Update utility.

In This Appendix

Overview of Routine Tasks

This section provides an overview of the routine asks required to preserve the PPV experience for subscribers.

Before You Begin

Before you perform routine tasks, gather the following information about each PPV event. You may need to contact your Program Guide service provider and PPV Event provider to obtain this information.

- Date PPV events are available for purchase
- Event start and stop times
- Event price

Frequency

For ease, operators may decide to wait for a convenient time, such as a maintenance window, to complete these tasks at once instead of performing them individually as each PPV event expires. When developing a schedule for these tasks, also consider that you should set up no more than 84 PPV events per week.

Process Overview

Preserving the PPV experience requires that operators complete the following procedures, which are provided in greater detail later in this chapter:

1. Delete packages for expired PPV events.

   Operators must delete all packages associated with expired PPV events to conserve broadcast and PPV EIDs.

   Important: Set up no more than 84 PPV events per week.
2. Create limited segments (PPV events) to replace the events that you have just deleted.
3. Create packages for the new segments that you have created.
4. Add each limited segment to a PPV package.
5. Update the IPG with EID and event pricing information for the new PPV events.

Delete Packages Associated with Expired IPPV Events

This section describes how to delete packages for PPV events that have expired. Deleting expired PPV packages helps to remove their EIDs from the ISDS more quickly so that the EIDs can be reused. (The ISDS flushes package EIDs 60 days after the package is deleted from the ISDS.)

Use this procedure to delete PPV packages associated with expired PPV events:

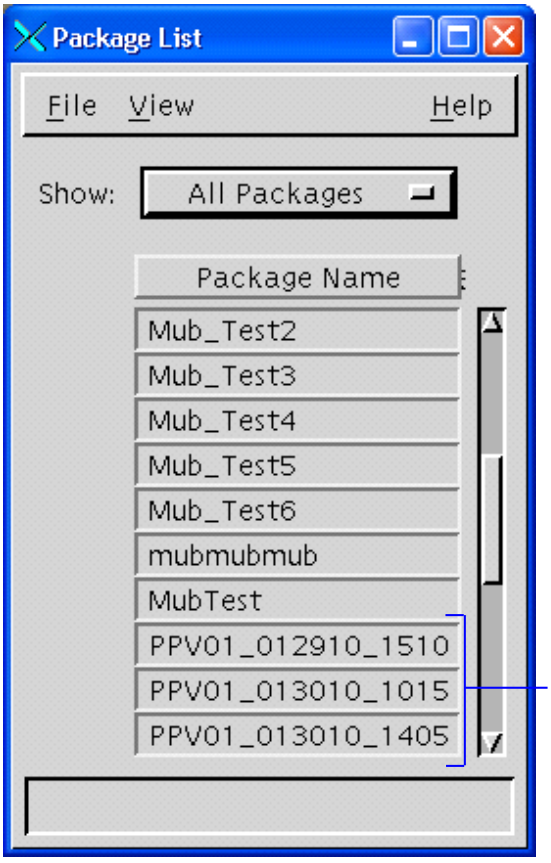
1. On the ISDS Administrative Console, click the **ISDS** tab.
2. Click the **System Provisioning** tab.
3. Click **Package**. The Package List window opens.
4. Click the **Show > All Packages**. The Package List window updates and shows all packages for the ISDS. (By default, the Package List window shows only non-PPV (Subscription Only) packages.)

   Tip: The list should appear in alphabetical order by package name. If the list is not sorted alphabetically, click the **Package Name** button to sort the list alphabetically by package name. Sorting alphabetically groups the PPV events together so they are easier for you to find.

5 Find the packages whose PPV events have expired. If you followed the package naming convention described in ***Create IPPV Packages*** (on page 68), the package name indicates the approximate expiration date of the PPV event associated with the package.

Example: A package with the title **PPV01_012910_1530** indicates that the PPV event began on January 29, 2010 at 3:30 PM. Because PPV events typically last no more than 3 hours, we can estimate that the event will expire at 6:30 PM on January 29, 2010.

Important: Allow a minimum 24-hour buffer by waiting at least 24 hours after an event start time to delete the event's package. For example, you can safely delete this package any time after 3:30 PM on January 30, 2010



6 Select an expired package and click **File > Delete**. The message "This package will be removed from all DHCTs to which it has been assigned. Continue?" appears.

7 Click **Yes**. The message closes, and the package you selected is removed from the Package List window.

8 Do you need to delete another PPV package?

- If **yes**, repeat this procedure from step 5.
- If **no**, click **File > Close** to close the Package List window.

9 Now that you have removed all expired PPV packages from the ISDS, create new packages and limited segments to replace these PPV events. Go to ***Create Limited Segments for Each New IPPV Event*** (on page 82).

Create Limited Segments for Each New IPPV Event

After deleting PPV packages associated with expired PPV events, follow this procedure to create new limited segments.

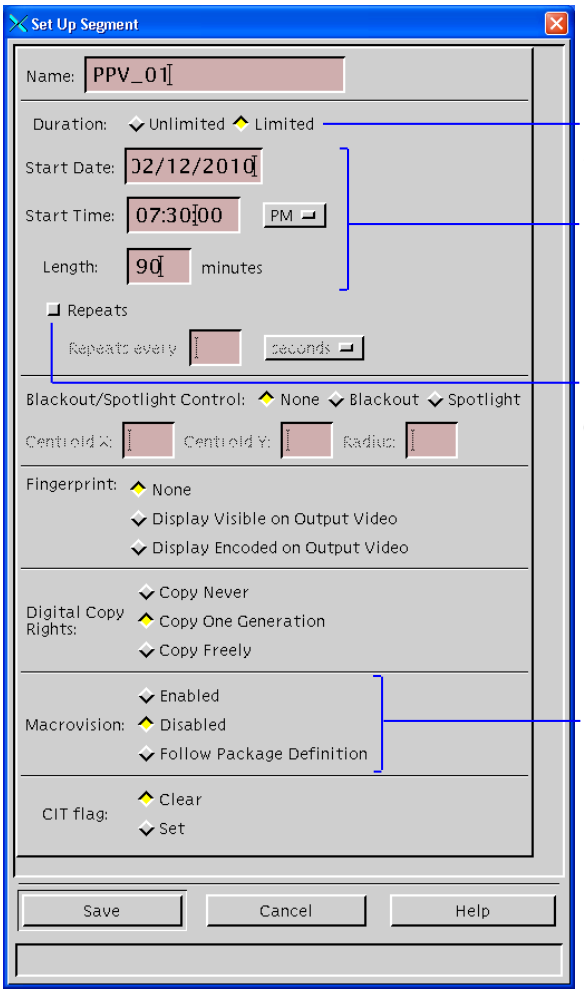
Important: When creating new events, keep in mind that PPV events should not exceed 84 per week.

1. In the Source List window, select the source you want to use for this limited segment (IPPV event).
2. Click **File > Segments**. The Segment List (by Source) window opens for the source you selected.
3. Click **File >New**. The Set Up Segment window opens.
4. Complete the fields on the window as described in the following table:

Field	Description
Segment Name	The name that identifies this segment. You can use up to 20 alphanumeric characters. **Example:** PPV01
Duration	The duration of this segment. Select **Limited**.
Start Date	The day that the event is to start.
Start Time	The time that the event is to start.
Length	The length of the event in minutes.
Repeats	Leave this option unselected. (Do not enable the Repeats option for IPPV Phase I.)
Blackout/Spotlight Control	Not currently supported. Select **None**.
Fingerprint	Not currently supported. Select **None**.

Field	Description
Digital Copy Rights	The content protection for 1394 ports that receive this segment, appropriate for your system: ■ **Copy Never** - Prevents subscribers from making a copy of any program or event associated with this segment. The FCC does not permit a segment to be marked "Copy Never" unless that segment is being used for PPV. ■ **Copy One Generation** - Allows subscribers to make a single copy of any program or event associated with this segment. ■ **Copy Freely** - Allows subscribers to make as many copies as they like of any program or event associated with this segment.
Macrovision	Sets the content protection of IPPV/PPV or VOD on analog composite output ports that receive this segment, appropriate for your system: **Important:** The Macrovision setting for a limited segment (IPPV event) must match the setting given to the unlimited segment (IPPV service). Otherwise, content protection may not work as expected for these segments. ■ **Enabled** - Use the Macrovision content protection process to prevent subscribers from copying all events that this segment processes. **Note:** If you select Enabled, an informational window should open that describes the licensing restrictions of the Macrovision protection process. ■ Did the informational window open? – If **yes**, click **OK**. – If no, contact Cisco Services. ■ **Disabled** - Do not use Macrovision content protection. ■ **Follow Package Definition** - Not currently supported.
CIT (constrained image trigger) flag	Sets content protection on YPbPr (component) high-definition analog output ports that receive this segment, appropriate for your system: ■ **Clear** - Allows high-definition analog outputs to display video at full HD resolution. ■ **Set** - Causes high-definition analog outputs to reduce the effective image resolution to less than 520,000 pixels. **Note:** Setting the CIT flag may not change the actual resolution displayed on a high-definition analog output. Instead, some DHCT vendors may choose to apply bandwidth filtering to reduce the image resolution.

When you are finished, the Set Up Segment window should appear similar to the following example:



Select **Limited** for the duration.

The Start Time and Length must match the start time and duration of the PPV event exactly.

Leave the Repeats option disabled.

The Macrovision setting for a limited segment (PPV event) must match the setting given to the unlimited segment. Otherwise, content protection may not work as expected for these segments.

5 Click **Save**. The system saves the segment information in the ISDS database and closes the Set Up Segment window. The Segment List (by Source) window updates to include the new segment information. If you scroll through the list horizontally, you will see a yellow band that indicates when the segment is scheduled to start and its duration.

6 Set up additional limited segments according to the source you will use for the segment.

Note: You need one limited segment for every IPPV event that you will offer to subscribers.

- To set up another limited segment for *this IPPV service*, repeat this procedure from step 3.

  Important: When creating other segments from the same source, make certain that all segments have the same levels of Macrovision CCI (if used); otherwise, the content protection may not work as expected for these segments.

- To set up another limited segment for *another IPPV service*, close the Segment List (by Source) window by selecting **File > Close**, and then repeat this procedure from step 1.

7 Click **File > Close** to close the Source List window and return to the ISDS Administrative Console.

8 Your next task is to add individual packages for each PPV event to the ISDS. Go to ***Create New IPPV Packages*** (on page 86).

Create New IPPV Packages

Use the following procedure to create one PPV package for each limited segment that you created.

1 On the ISDS Administrative Console, click the **ISDS** tab.

2 Click the **System Provisioning** tab.

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

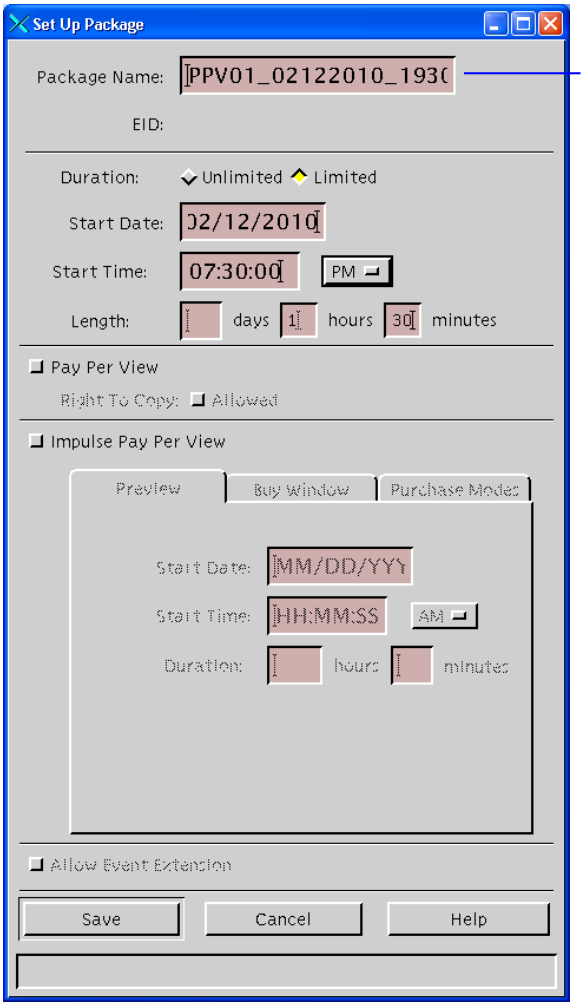
Note: By default, the Package List window shows only non-PPV packages (Subscription Only). To view the list of all packages, click the **Show** button and select **All Packages**.

4 Click **File > New**. The Set Up Package window opens.

5 Complete the fields on the Set Up Package window as described in the following table:

Field	Description
Package Name	The name that identifies this package. Use the following convention for the package name: **XXXXX_yyyymmdd_hhmm** where **XXXXX** = five characters of your choice, **yyyymmdd** = date of event, and **hhmm** = start time of event using 24-hour time. For example, **PPV01_20100129_1330** indicates that IPPV event PPV01 will be available January 29, 2010 at 1:30 PM. **Important:** Because you must delete IPPV events after they expire, we recommend that you use the package naming convention described above. This naming convention makes it easy for you to identify the date and time that an IPPV event has expired.
Duration	Defines how the package is offered to subscribers: unlimited (available any time) or limited (available only for the time specified in the Set Up Package window.) Select **Unlimited**. Do not complete the **Start Date**, **Start Time**, or **Length** fields. These are not needed for packages with an unlimited duration.
Pay Per View	Not supported at this time.
Allow Event Extension	Not supported at this time.
Impulse Pay Per View	Not supported at this time.

When you are finished, the Set Up Package window should appear similar to the following example:

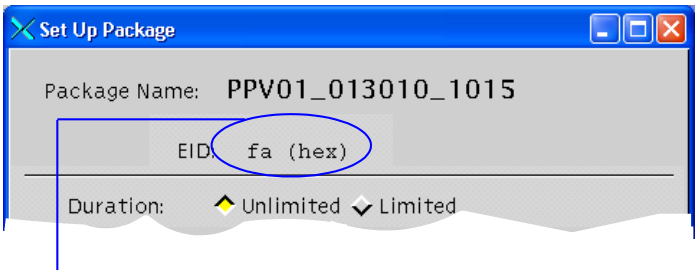


Use the following convention for the package name: PPV#_DATE_StartTime; where PPV# indicates the number of the PPV event; DATE indicates the date that the event starts in the format YYYYMMDD, and StartTime indicates the time that the event starts in 24-hour time, following the format HHMMSS. For example: **PPV01_02122010_193000.**

Leave the other fields with their default settings.

6 Click **Save**. The system saves the package information in the ISDS database and closes the Set Up Package window. The Package List window updates to include the new package.

7 In the Package List window, double-click the package you just added to the ISDS. The Set Up Package window opens and displays information about this package.



Make note of the EID that the ISDS assigned to this package. You will need this information later when you configure the IPG.

8 Make note of the EID for this IPPV package. You will need this information later when you configure the IPG for IPPV events.

9 Do you need to add another IPPV package to the ISDS?

Note: You need one IPPV package for every IPPV event you created earlier.

- If **yes**, repeat this procedure from step 4.
- If **no,** your next task is to add each limited segment to its own package. Go to *Add Each Limited Segment (IPPV Event) to Its Own Package* (on page 89).

Add Each Limited Segment (IPPV Event) to Its Own Package

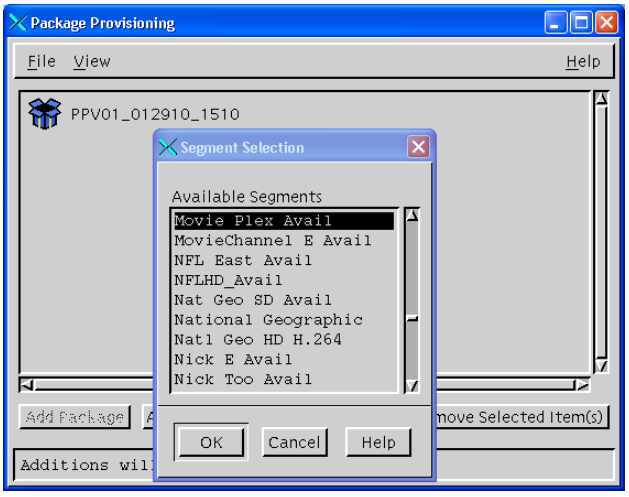
Follow this procedure to add each PPV event to its own package and provide each event with a unique broadcast EID. Subscribers who purchase the PPV package receive EID information that allows them access to the EID for this package.

1 From the Package List window, select one of the IPPV packages you created earlier.

2 Click **File > Provision**. The Package Provisioning window opens for the package you selected.

3 Click **Add Segment**. The Segment Selection window opens showing all of the service segments that have been defined on your system.

Important: Although there is an option to add packages to a package, do not select this option. This version of the ISDS does not support packages within packages.



4 Click to select the limited segment (IPPV event) to add to this IPPV package.

5 Click **Save** to close the Segment Selection window. The Package Provisioning window updates to include the service segment(s) you selected for the package.

6 Click **File > Close** to close the Package Provisioning window and return to the Package List window.

7 Do you need to add another limited segment (IPPV event) to another IPPV package?

- If **yes**, repeat this procedure from step 1.
- If **no**, click **File > Close** to close the Package List window and return to the ISDS Administrative Console.

8 Your next step is to configure the IPG so that it presents the purchase price of each PPV event to subscribers. Go to ***Update the IPG with Event Price and EID Data*** (on page 91).

Update the IPG with Event Price and EID Data

This section describes how to update the long description field of each event in the IPG with the following information:

- PPV event pricing information
- PPV event EID

Before You Begin

Before you begin, make sure you have the following information at hand:

- The Package EIDs for each IPPV event that you provisioned earlier
- The date and time that the IPPV events are to be presented to subscribers (from your Program Guide service provider)
- Pricing information for each event (from your PPV service provider)

Update the IPG

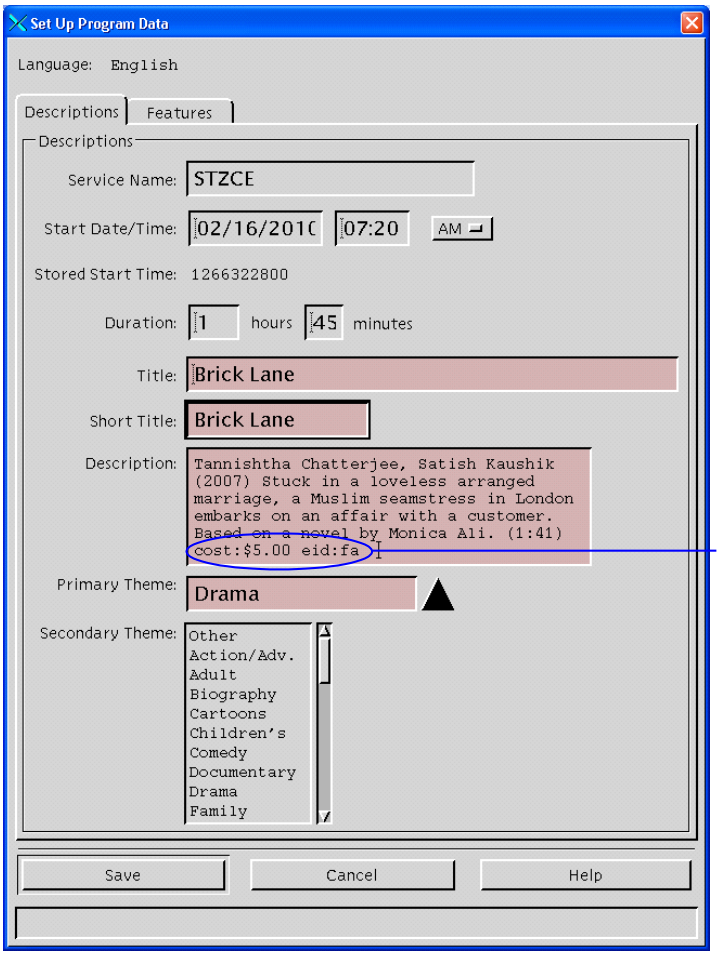
Follow this procedure to configure the IPG with purchase price and EID information.

1. On the ISDS Administrative Console, click the **Server Applications** tab.
2. Click **IPG**. The IPG Serve List window opens.
3. Select the server whose program data you need to update with IPPV event prices, and click **File > Program Data**. The Program Data List window opens.
4. Follow these instructions to select the data you want to display.
   - To select program data in a specific language, click the **Language arrow** (▲) and select the language you want to display from the list that opens.
   - To select program data for a particular date, click the **Reverse** (▼) or **Advance** (▲) arrow until the date you want appears.
5. Click the box for **Show only mapped services** and then click **Get Data from Database**. The message "Loading program data from database. Please wait . . ." appears at the bottom of the Program Data List window. Wait for program data to load.

   Note: It takes about 10 minutes for the program data to load.
6. Browse the IPPV channel for the first IPPV event you want to update with purchase price and EID information.
7. Double-click the IPPV event. The Set Up Program Data window opens.

8 Click in the Description field and add the following information to the field: **cost:<cost of event> eid:<EID>**. When you are finished, the Description field should appear similar to the following example.

Important: Make certain to enter this information using the format specified. Using uppercase letters or extra spaces may cause IPPV event purchases to fail or incorrect pricing information to display for subscribers. (You cannot cut and paste in this field.)



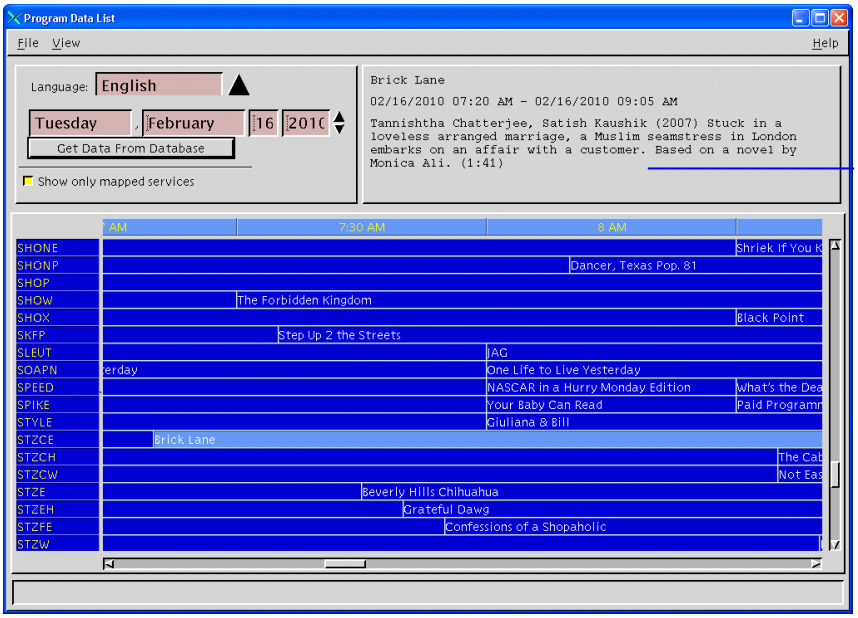
Add cost and EID information to the end of the Description field. When adding this information, make certain to follow this format exactly: **cost:<cost of event> eid:<EID>**. Using uppercase letters or spaces where none are indicated may cause PPV event purchases to fail.

9 Click **Save**. A Question window opens to let you know that overlapping program data will be overwritten.

10 Click **Yes**. A message appears at the bottom of the Set Up Program Data window letting you know that the program data has been saved. The updated description appears in the Description area of the Program Data List window.

11 In the Program Data List window, view the Description area for each IPPV event that you have modified to ensure that you have entered the information correctly.

Important: Check the Description area to confirm that you entered information correctly. Using uppercase letters or extra spaces may cause IPPV event purchases to fail or incorrect pricing information to display for subscribers.



The Description area should update and display the information you entered.

12 Do you need to update another IPPV event with price and EID data?

- If **yes**, repeat this procedure from step 6
- If **no**, click **File > Close**. A Question window opens and prompts you to select whether or not you want to send an update to the server.

13 Do you want the IPG server to update immediately (within the next 20 minutes)?

- Click **Yes**. The IPG server is updated with your changes within the next 20 minutes. The Question window and the Program Data List window close.
- Click **No**. The IPG server is updated with your changes on its next regularly scheduled update. The Question window and the Program Data List window close.

14 You have successfully configured the ISDS for IPPV Phase I. To close the IPG Server List window, click **File > Close**.

Note: Setting up IPPV in this manner results in the following information being displayed to the subscriber when the subscriber selects the IPPV event from the IPG. For information on the behavior of the IPPV client in IPPV Phase I, go to Chapter 4, ***Use the IPPV Client*** (on page 47).

C

Enable the PPV Purchase Server Web Service (for Cisco Technicians)

Introduction

This appendix describes how Cisco technicians will enable the PPV Purchase Server web service for IPPV Phase I.

Important:

- The information in this appendix is intended for experienced system administrators with the assistance of a network administrator and planner.
- The instructions in this appendix must be completed before attempting to complete any other procedures in this document.

In This Appendix

Enable the PPV Purchase Server Web Listener

When enabling the PPV Purchase Server web service, it is necessary to separate the handling of web transactions for the set-tops from all other web traffic. This separation provides several benefits, including the ability to tune the web server based on the set-top population size and protection against denial of service of WebUI and billing interfaces.

Follow the instructions in this section to enable the PPV Purchase Server web listener.

1 Plan for network traffic separation by taking the following information into consideration:

The set-top population communicates with the IP address of the network interface dncsatm. The configuration file /etc/apache2/httpd-stb/httpd.conf is set to listen for network traffic on dncsatm TCP port 80. At this point, determine all of the other interfaces that you wish to use for web traffic. This should account for the WebUIs, billing interfaces, etc.

2 As root, execute the following command:

/etc/apache2/httpd-stb/cfg config

3 Manually edit the configuration file **/etc/apache2/httpd.conf** to check for correctness.

Notes:

- All lines inserted or modified by cfg will be stamped with **cfg** in the line.
- **Listen** lines are at about line 262.
- **Allow from** lines are at about line 1237.

4 Modify **/etc/apache2/httpd-stb/httpd.conf** is indicated in the following instructions:

- Add **Allow from** directives to allow connections into this httpd instance from your set-tops (about line 952, after **Allow from dncsatm**).
- Add as many **Allow from** directives as are necessary to encompass all set-tops for your site.
- You may also add **Deny from** directives as appropriate. Defaults can be found in /etc/apache2/httpd-stb/httpd.

  Example: Your set-tops are at 10.20.0.0/255.255.192.0 and 192.168.41.0/24

  Allow from 10.20.0.0/255.255.192.0

  -or- 10.20.0.0/18

  Allow from 192.168.41.0/24

  -or- 192.168.41.0/255.255.255.0

For more information, see the following Apache HTTP Server Project web pages:

- http://httpd.apache.org/docs/2.2/mod/mod_authz_host.html#allow
- http://httpd.apache.org/docs/2.2/mod/mod_authz_host.html#deny
- http://httpd.apache.org/docs/2.2/mod/mod_authz_host.html#order

5 Restart the default apache2 instance and configure the new service by executing the following command as root:

/etc/apache2/httpd-stb/cfg enable

6 Check the status of the newly configured service by executing the following command as root:

/etc/apache2/httpd-stb/cfg check

Note: This is a basic check and is not complete until the service is checked on your set-tops.

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

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

July 2012 Printed in USA

Part Number 4034758 Rev D