

Defining Programs

This chapter describes how to define programs in the IP/TV Control Server and connecting capture cards, and includes the following sections:

- Defining an On-demand Program
- Defining a Scheduled Program
- Defining a Live-capture Program

If you have configured the servers correctly, after defining a sample scheduled or on-demand program, you will be able to watch the program in IP/TV Viewer (see Chapter 6, “Using IP/TV Viewer”).

Note Both the Archive and Broadcast Servers can serve scheduled and on-demand programs. However, the Broadcast Server can only serve on-demand programs to a minimum number of viewers.

Defining an On-demand Program

To define an on-demand program, the IP/TV Control Server must communicate with the IP/TV 3400 Series Server, which will serve the on-demand file and find all media files in the server's media root directory.

To verify communication between the IP/TV Control Server and the IP/TV 3400 Series Server that will serve the on-demand file, follow these steps:

Step 1 From your browser, access the IP/TV Control Server by entering the following URL:

```
http://controlserver/
```

where *controlserver* is the name of the Control Server on which the IP/TV Control Server is installed.

Step 2 On the IP/TV Control Server main page, click **ServerWatch**.

Step 3 Select a cluster and click **Go**.

Step 4 Confirm that the IP/TV 3400 Series Server you defined is listed and is in a managed state.

Note It takes a few seconds for the IP/TV Control Server to connect with the servers. If the server is not listed, check to make sure you have correctly set up your Archive Server to be controlled by the IP/TV Control Server (see Chapter 4, “Defining Servers and Clusters”).

To create a sample on-demand program, complete the following steps:

Step 1 From your browser, access the IP/TV Control Server by entering the following URL:

`http://controlserver/`

where *controlserver* is the name of the Control Server on which the IP/TV Control Server is installed.

Step 2 From the IP/TV Control Server main page, click **OnDemand Programs**.

The OnDemand Programs page appears.

Step 3 Click **New Program** on the task bar.

The New OnDemand Program page appears.

Step 4 Enter the following on-demand program information:

- (a) In the Program Name field, enter the name **Sample Program**.
- (b) Under Multimedia Information, click **Select media file** and select the media file `sample.avi`.
- (c) At the bottom of the page, enter your contact information.
- (d) Click **Add OnDemand Program**.

See “Managing OnDemand Programs” in Chapter 2, “Installing IP/TV Server” of the *IP/TV Content Manager User Guide* for detailed information.

Defining a Scheduled Program

To create a scheduled program, complete the following steps:

Step 1 From your browser, access the IP/TV Control Server by entering the following URL:

```
http://controlserver/
```

where *controlserver* is the name of the Control Server on which the IP/TV Control Server is installed.

Step 2 On the IP/TV Control Server main page, click **Scheduled Programs**.

The Scheduled Programs page appears.

Step 3 Click **New Program** on the task bar.

The New Scheduled Program page appears.

Step 4 Leave the Channel set to **None**.

Step 5 Select **Basic Media File Program** and click **Create Program**.

Step 6 Enter the following scheduled program information:

- (a) In the Program Name field, enter **Sample Program**.
- (b) In the Description field, enter **Sample**.
- (c) Under Schedule, select **Play Program Continuously**.
- (d) Under Multimedia Source Information, click **Select Media File**, and enter the full path to the media file: `e:\avi\sample.avi`.

Step 7 Select the IP/TV 3400 Series Server from which you want to serve.

Step 8 At the bottom of the page, enter your contact information.

Step 9 Click **Create Program**.

See “Managing Scheduled Programs” in Chapter 2, “Installing IP/TV Server” of the *IP/TV Content Manager User Guide* for detailed information.

Defining a Live-capture Program

This section contains information on defining a live-capture program, and discusses the following topics:

- Overview
- High Bit-rate Capture Settings
- Medium Bit-rate Capture Settings
- Low Bit-rate Capture Settings
- Connecting the Broadcast Server Capture Cards

Overview

When you define a live-capture program, you must set the video format, audio format, data rate, and frame rate parameters to values appropriate to the video capture card and codec (compression/decompression) used by the Broadcast Server that will multicast the program. After defining a live-capture program, connect your audio and video outputs to the appropriate capture card inputs.

See “Live-capture Program Settings” in Chapter 2, “Installing IP/TV Server” of the *IP/TV Content Manager User Guide* for detailed information.

Note A high bit-rate codec produces higher quality video. The level of quality you choose is determined by network capacity. Cisco recommends using the highest quality possible within the constraints of your network.

High Bit-rate Capture Settings

The IP/TV 3423 Server supports Full D1 MPEG2, and Half D1 MPEG2 encoding. The IP/TV 3415 Server supports Half D1 MPEG2 encoding. These systems are capable of high bit-rate encoding.

If you are setting up a live-capture program for high bit rate, follow these steps:

Step 1 From your browser, access the IP/TV Control Server by entering the following URL:

```
http://controlserver/
```

where *controlserver* is the name of the Control Server.

Step 2 From the IP/TV Control Server main page, click **Scheduled Programs**.

The Scheduled Programs page appears.

Step 3 Click **New Program** on the task bar.

Step 4 Select **Basic Live Capture Program** and click **Create Program**.

The New Scheduled Programs page appears.

Step 5 Under Schedule, select either **Play Program Continuously** or **Play Program once on**.

If you select **Play Program once on**, then set the date, time, and duration. Optionally, you can choose to never repeat the program or to repeat it at various intervals.

Step 6 If you are scheduling an IP/TV 3423 Server, select either **MPEG2 Full D1** or **MPEG2 Half D1** in the Preferred Video Format field.

If you are scheduling an IP/TV 3415 Server, select **MPEG2 Half D1** in the Preferred Video Format field.

Step 7 In the Preferred Audio Format field, select **MPEG**.

Step 8 In the Bandwidth field, enter **5000** (Kbps) for MPEG2 Full D1 or **2500** for MPEG2 Half D1.

Step 9 In the Maximum Video Frame Rate field, enter **30** (frames/sec).

Step 10 Under Audio/Video Server, select a server from the drop-down list.

Step 11 At the bottom of the page, enter your contact information.

Step 12 Click **Create Program**.

Medium Bit-rate Capture Settings

If you are setting up a live-capture program for medium bit rate, follow these steps:

Step 1 From your browser, access the IP/TV Control Server by entering the following URL:

`http://controlserver/`

where *controlserver* is the name of the Control Server.

Step 2 From the IP/TV Control Server main page, click **Scheduled Programs**.

The Scheduled Programs page appears.

Step 3 Click **New Program** on the task bar.

Step 4 Select **Basic Live Capture Program** and click **Create Program**.

The New Scheduled Program page appears.

Step 5 Under Schedule, select either **Play Program Continuously** or **Play Program once on**.

If you select **Play Program once on**, then set the date, time, and duration. Optionally, you can choose to never repeat the program or to repeat it at various intervals.

Step 6 In the Preferred Video Format field, select **MPEG**.

Step 7 In the Preferred Audio Format field, select **MPEG**.

Step 8 In the Bandwidth field, enter **1150** (Kbps).

Step 9 In the Maximum Video Frame Rate field, enter **30** (frames/sec).

Step 10 Under Audio/Video Server, select a server from the drop-down list.

Step 11 At the bottom of the page, enter your contact information.

Step 12 Click **Create Program**.

Step 13 Connect the video source to the MPEG capture card illustrated in Figure 5-1.

Low Bit-rate Capture Settings

If you are setting up a live-capture program for low bit rate, follow these steps:

Step 1 From your browser, access the IP/TV Control Server by entering the following URL:

```
http://controlserver/
```

where *controlserver* is the name of the Control Server.

Step 2 On the IP/TV Control Server main page, click **Scheduled Programs**.

The Scheduled Programs page appears.

Step 3 Click **New Program** on the task bar.

Step 4 Select **Basic Live Capture Program** and click **Create Program**.

The New Scheduled Programs page appears.

Step 5 Under Schedule, select either **Play Program Continuously** or **Play Program once on**.

If you select **Play Program once on**, then set the date, time, and duration. Optionally, you can choose to never repeat the program or to repeat it at various intervals.

Step 6 In the Preferred Video Format field, select **MPEG4**.

Step 7 In the Preferred Audio Format field, select **GSM**.

Step 8 In the Bandwidth field, enter **128** (Kbps).

Step 9 In the Maximum Video Frame Rate field, enter **15** (frames/sec).

Step 10 Under Audio/Video Server, select a server from the drop-down list.

Step 11 At the bottom of the page, enter your contact information.

Step 12 Click **Create Program**.

Note To define a low bit-rate program after you have changed the capture card resolution to medium bit rate, follow the steps in the “Medium Bit-rate Capture Settings” section, but change the capture dimensions back to the default of 160 x 120.

- Step 13** Connect the video source to the MPEG4/H.261 capture card illustrated in Figure 5-1.
- Step 14** Start IP/TV Server on the Broadcast Server.
- Step 15** On the Program Listings window, double-click the medium bit rate program.
- Step 16** On the Capture Program Details window, click the red **Stop** button.
- Step 17** Click **Configure**.
- Step 18** In the Flashware Capture Device Configuration window, select **Video Format** in the Type drop-down list.
- Step 19** Click **Configure**.
- Step 20** In the Video Capture Format Settings window, select **320 x 240** in the Standard drop-down list.
- Step 21** Click **OK**.
- Step 22** Click **Close**.
- Step 23** In the Capture Program Details window, click the green **Play** button.
The live capture session begins, at a resolution of 320 x 240.

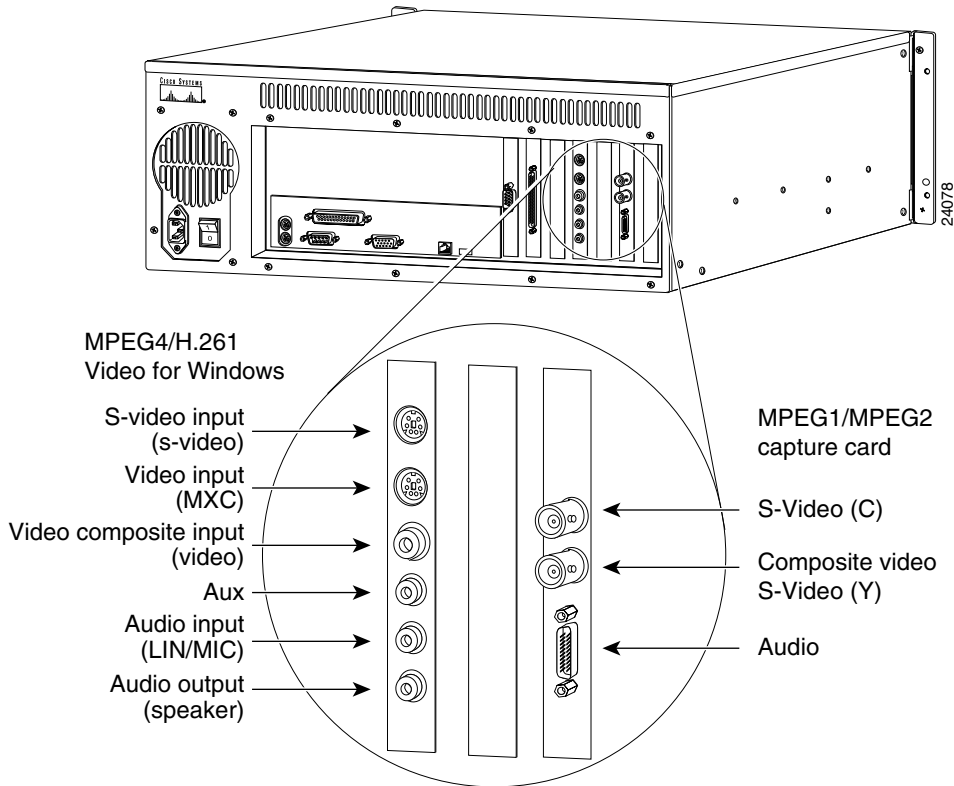
Connecting the Broadcast Server Capture Cards

After you define a live-capture program for high, medium, or low bit rate, connect the audio and video outputs of your device to the inputs of the appropriate capture card (see Figure 5-1).

- If you have defined a high bit rate (MPEG2, MPEG2 Half D1, or MPEG1) program, connect your video source to the MPEG1/MPEG2 capture card. This capture card provides the highest video quality and consumes 500 kbps to 1.5 Mbps of bandwidth.
- If you have defined any other type of program, connect your video source to the MPEG4/H.261 capture card. This capture card can be configured for either medium or low bit rate, and consumes 56 kbps to 768 kbps of bandwidth.

Figure 5-1 shows the audio and video inputs for the MPEG1/MPEG2 and MPEG4/H.261 capture cards.

Figure 5-1 Capture Card Audio and Video Inputs



To connect a capture card, complete the following steps:

- Step 1** Connect your audio output to the audio input.
- Step 2** Connect your video output to the video input appropriate for your device.
- Step 3** Set the capture card settings for high, medium, or low bit rate.

See “Capture Device Configuration Options” in Chapter 6, “Administering IP/TV Server” of the *IP/TV Administration and Configuration Guide* for detailed information.

