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# Enabling Graphics Over HD Content on Explorer<sup>®</sup> 3100HD<sup>™</sup> DHCTs

## Overview

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### Introduction

With the introduction of high-definition (HD) services, two conditions have surfaced that impact a subscriber who uses the Explorer<sup>®</sup> 3100HD<sup>™</sup> Digital Home Communications Terminal (DHCT). These conditions relate to the design of the 3100HD and its inability to display graphics over HD content.

The first condition impacts pay-per-view (PPV)/impulse PPV (IPPV) services and occurs when a subscriber is viewing PPV/IPPV previews on channels that broadcast HD content. If a subscriber tunes to a channel while it is being previewed, they can, under some circumstances, receive the entire event for free. This occurs when the DHCT fails to display graphics over HD content that would have informed the subscribers that the preview period had ended.

The second condition impacts broadcast HD services and occurs when subscribers access the Interactive Program Guide (IPG). If a subscriber accesses a future date in the IPG before it is updated on the Broadcast File Server (BFS), they will receive full screen HD video over the IPG.

### Purpose

This technical bulletin provides instructions to configure options in the Service Application Manager (SAM) URLs to eliminate the following conditions on the 3100HD:

- Viewing HD PPV/IPPV without purchasing programs
- Receiving full screen HD video over the IPG

## Overview, Continued

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### Scope

The contents of this technical bulletin apply to sites using the 3100HD. To make use of the information within this bulletin, these sites must upgrade their 3100HD software to Cisco Resident Application (SARA) version 1.43 or later.

For sites using other HD platforms (for example, the Explorer 3250™ set-top), a software upgrade is not necessary and the changes specified in this bulletin will not adversely impact any other HD platforms.

### Audience

This technical bulletin is intended for system operators of Cisco's Digital Broadband Delivery System (DBDS). Cisco field service engineers who help system operators manage their systems may also find the contents of this technical bulletin useful.

### Related Publications

You may find the following document useful as you implement the procedures in this technical document: *Preventing Unexpected SAM Server File Errors Operations Alert Bulletin*, part number 4004155.

### Document Version

This is the first release of this technical bulletin.

### In This Technical Bulletin

This technical bulletin contains the following topics.

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# Enable Graphics Over HD Content When Viewing HD PPV/IPPV Previews

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## Introduction

HD PPV/IPPV services are impacted when a subscriber, under some circumstances, views HD PPV/IPPV previews on channels that broadcast HD content. When this occurs, full screen HD content displays over the preview graphics, enabling the subscriber to receive the entire event for free.

To enable the display of graphics after viewing HD PPV/IPPV previews, you must use a new flag as part of the application URL for the event use service. For your convenience, we have provided the procedures needed to create a new PPV/IPPV HD service in **Creating an HD PPV/IPPV Service**, next in this section. If you have already built a PPV/IPPV service that carries HD content, go to **Checking the Data File Size**, later in this bulletin.

### Creating an HD PPV/IPPV Service

Creating an HD PPV/IPPV service involves a seven step process. To define a new HD PPV/IPPV service, you must complete the following tasks.

1. Add the service source.
2. Define parameters for the source.
3. Encrypt the content coming from the source.
4. Create a SAM entry that points to the source.
5. Create a PPV/IPPV service that uses the SAM service as its event use service.
6. If this is the first time you have created a PPV/IPPV service that will carry HD content, check the file size of the **bulk.tbl** file before continuing to task 7.
7. Change the SAM URL of the event use service to include the ;HD flag *after* the PPV/IPPV service has been created.

For information on performing the first five steps, refer to the *DNCS Administrative Console Online Help*.

The last two steps are new in the process and involve checking the bulk.tbl file size and changing the SAM URL of the event use service to include an ;HD flag *after* the PPV/IPPV service has been created. To perform these procedures, go to **Checking the Data File Size**, next in this section.

**Note:** If you have previously created PPV/IPPV services that carry HD content, go directly to **Adding the HD Flag to an HD PPV/IPPV Event Use Service**, later in this section.

## Enable Graphics Over HD Content When Viewing HD PPV/IPPV Previews, Continued

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### Checking the Data File Size

Adding and modifying HD PPV/IPPV services without checking the size of the **bulk.tbl** file could put your DNCS at serious risk for being unable to generate SAM files. System operators should always perform the following procedures *before* modifying an existing URL.

1. Place the cursor on any open area on the DNCS desktop, and then click the middle mouse button.

**Result:** A menu appears with a list of options.

2. Click the left mouse button and select **xterm**.

**Result:** An xterm window opens.

3. Type **cd /dvs/dvsFiles/SAM** and then press **Enter**.

**Result:** The /dvs/dvsFiles/SAM directory becomes the working directory.

4. Type the **ls -l** command and then press **Enter**.

**Note:** The character in the above command is the letter “l,” not the number 1.

#### Results:

- The data file size result appears and is similar to the following output:

```
total 90
drwxr-xr-x  2 dncs  dncs    512  Apr  7 11:00 0
-rw-r--r--  1 dncs  dncs   40004  Apr 19 15:52 bulk.tbl
-rw-r--r--  1 dncs  dncs    253  Apr 19 15:50 sam1
-rw-r--r--  1 dncs  dncs   2758  Apr 19 15:52 service.tbl
```

- The **bulk.tbl** number (in bold and italics) indicates the data file size

5. Was the data file size number for the bulk.tbl file 60,000 or greater?
  - If **yes**, your system is at risk for having SAM server file errors. Contact Cisco Services and request the System Application URL Cleanup Procedure.
  - If **no**, you have completed this procedure. Go to step 6.

6. Type **exit** and press **Enter**.

**Result:** The xterm window closes.

7. Go to **Adding the HD Flag to an HD PPV/IPPV Event Use Service**, next in this section.

# Enable Graphics Over HD Content When Viewing HD PPV/IPPV Previews, Continued

## Adding the HD Flag to an HD PPV/IPPV Event Use Service

The SAM URL for new or existing HD PPV/IPPV event use services must now include an ;HD flag. Adding the flag enables the graphics to display after the preview has ended; therefore, preventing customers from viewing HD PPV/IPPV channels without actually purchasing the programs.

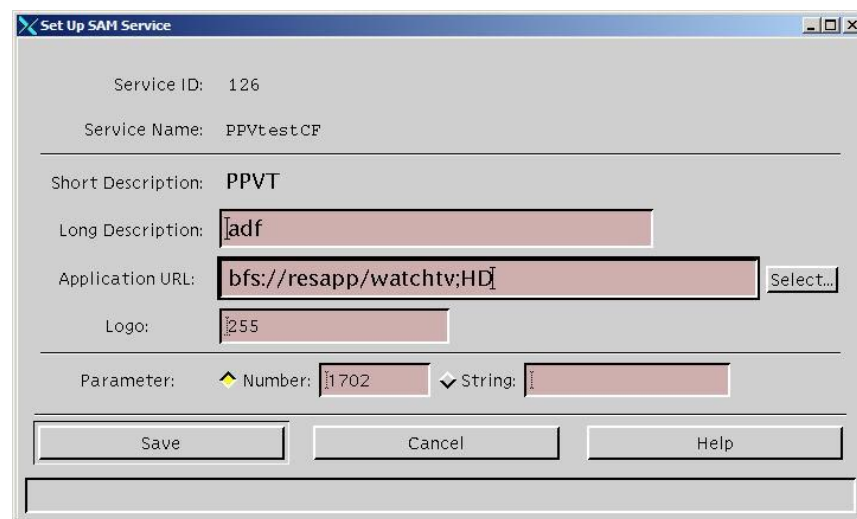
Follow these instructions to add the ;HD flag to SAM URLs for HD PPV/IPPV event use services.

1. On the DNCS Administrative Console, click the **Application Interface Modules** tab.
2. Click **SAM Service**.

**Result:** The SAM Service List window opens.

3. Double-click the event use SAM service that you want to reconfigure to include the ;HD parameter.

**Result:** The Set Up SAM Service window opens.



The screenshot shows the 'Set Up SAM Service' window. It has a title bar with a close button. The fields are as follows:

- Service ID: 126
- Service Name: PPVtestCF
- Short Description: PPVT
- Long Description: [adf]
- Application URL: [bfs://resapp/watchtv;HD] with a 'Select...' button to its right.
- Logo: [255]
- Parameter: A dropdown menu showing 'Number: 1702' and 'String: '.

At the bottom, there are three buttons: 'Save', 'Cancel', and 'Help'.

4. To add the ;HD parameter, update the current entry that appears in the **Application URL** field to resemble the following: **bfs://resapp/watchtv;HD**

**Note:** If you previously created a URL with the ;HD flag, click **Select** to choose it from the list of predefined URLs.

## Enable Graphics Over HD Content When Viewing HD PPV/IPPV Previews, Continued

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5. Click **Save**.

### Results:

- The system saves the service information in the DNCS database and closes the Set Up SAM Service window.
  - The SAM Service List window updates to include the new service with its system-assigned service ID and application URL flag.
6. Repeat steps 1 through 5 for every HD PPV/IPPV service that you want to reconfigure to include the ;HD flag.

### Notes:

- Based on the DNCS software version you are using, allow up to 10 minutes for the change to the SAM URL to be implemented.
- Only 3100HDs will be affected by the ;HD change. Other DHCTs in your system will not be affected.

## Adding the ;HD Flag to a New PPV/IPPV Service Using a Previously Modified Event Use Service

The PPV service setup interface will only display services with the `bfs://resapp/watchtv` URL. If you are creating a new PPV/IPPV service that will use a previously modified event use service, you must perform the following steps.

1. Switch the URL for the event use service back to **`bfs://resapp/watchtv`**.
2. Build the new service.
3. Switch the SAM service URL to the **`bfs://resapp/watchtv ;HD`** parameter.

# Enabling Graphics Over HD Content When Accessing Future Dates in the IPG

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## Introduction

Broadcast HD services are impacted when a subscriber accesses a future date in the IPG. When this is done, full screen HD video is seen instead of the requested IPG data. The end result is that the customer has to press the guide button again to see the IPG data.

To avoid this abnormal behavior, you must modify the URL for your broadcast HD services. For your convenience, we have provided the procedures needed to create a new broadcast HD service in **Creating a Broadcast HD Event Use Service**, next in this section. If you have already built your broadcast HD service(s), go to **Checking the Data File Size**, later in this section.

### Creating a Broadcast HD Event Use Service

Creating a broadcast HD service involves a five step process. You must complete the following tasks when defining a new broadcast HD service.

1. Add the service name.
2. Define parameters for the source.
3. Encrypt the content coming from the source.
4. Check the file size of the **bulk.tbl** file.
5. Create the new SAM service that points to the HD source.

**Note:** The application URL must include the ;HD flag.

For information on performing the first three steps, refer to the *DNCS Administrative Console Online Help*.

The last two steps are new in the process and involve checking the bulk.tbl file size and changing the SAM URL of the event use service to include an ;HD flag *after* the broadcast HD service has been created. To perform these steps, go to **Checking the Data File Size**, next in this section.

# Enabling Graphics Over HD Content When Accessing Future Dates in the IPG, Continued

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## Checking the Data File Size

Adding and modifying broadcast HD services without checking the size of the **bulk.tbl** file could put your DNCS at serious risk for being unable to generate SAM files. System operators should always perform the following procedures *before* modifying an existing URL.

1. Place the cursor on any open area on the DNCS desktop, and then click the middle mouse button.

**Result:** A menu appears with a list of options.

2. Click the left mouse button and select **xterm**.

**Result:** An xterm window opens.

3. Type **cd /dvs/dvsFiles/SAM** and then press **Enter**.

**Result:** The /dvs/dvsFiles/SAM directory becomes the working directory.

4. Type the **ls -l** command and then press **Enter**.

**Note:** The character in the above command is the letter “l,” not the number 1.

### Results:

- The data file size result appears similar to the following output:

```
total 90
drwxr-xr-x  2 dncs  dncs    512  Apr  7 11:00 0
-rw-r--r--  1 dncs  dncs   40004  Apr 19 15:52 bulk.tbl
-rw-r--r--  1 dncs  dncs    253  Apr 19 15:50 sam1
-rw-r--r--  1 dncs  dncs   2758  Apr 19 15:52 service.tbl
```

- The number (in bold and italics) indicates the size of the **bulk.tbl** file.

5. Was the data file size number for the bulk.tbl file 60,000 or greater?
  - If **yes**, your system is at risk for having SAM server file errors. Contact Cisco Services to request the Application URL Cleanup Procedure.
  - If **no**, you have completed this procedure. Go to step 6.

6. Type **exit** and press **Enter**.

**Result:** The xterm window closes.

7. Go to **Adding the ;HD Flag to an Existing Broadcast HD Service**, next in this section.



# Enabling Graphics Over HD Content When Accessing Future Dates in the IPG, Continued

## Adding the ;HD Flag to an Existing Broadcast HD Service

To enable the 3100HD to overlay graphics when accessing future dates in the IPG, add the ;HD flag to each SAM URL for new or existing broadcast HD channel event use services. To modify a service, perform the following procedures.

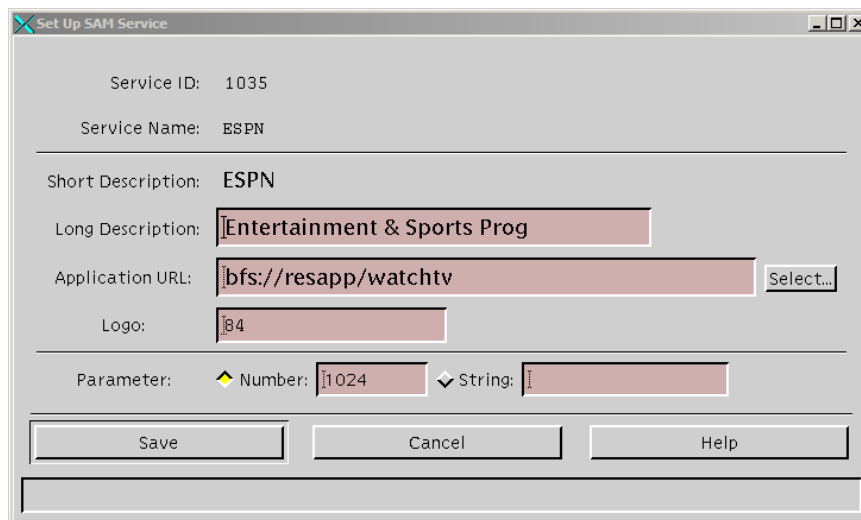
**Note:** To modify a service, follow the defined process described in the *DNCS Administrative Console Online Help*; however, you will substitute the bfs://watchtv;HD URL in place of the bfs://watchtv URL (normally used for non-HD broadcast services).

1. Click **SAM Service**.

**Result:** The SAM Service List window opens.

2. Double-click the service that you want to reconfigure for the ;HD parameter (for example, ESPN).

**Result:** The Set Up SAM Service window opens.



The screenshot shows a window titled "Set Up SAM Service". It contains the following fields and values:

- Service ID: 1035
- Service Name: ESPN
- Short Description: ESPN
- Long Description: Entertainment & Sports Prog
- Application URL: bfs://resapp/watchtv (with a "Select..." button to its right)
- Logo: 84
- Parameter: Number: 1024, String: (empty)

At the bottom, there are three buttons: "Save", "Cancel", and "Help".

3. To add the ;HD parameter, update the entry that appears in the **Application URL** field to resemble the following: **bfs://resapp/watchtv;HD**

**Note:** If you previously created a URL with the ;HD flag, click **Select** to choose it from the list of predefined URLs.

## Enabling Graphics Over HD Content When Accessing Future Dates in the IPG, Continued

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4. Click **Save**.

**Results:**

- The system saves the service information in the DNCS database and closes the Set Up SAM Service window.
  - The SAM Service List window updates to include the new service with its system-assigned service ID and application URL flag.
5. Repeat steps 1 through 4 to include the ;HD flag for each broadcast HD service.

## For Information

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### If You Have Questions

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



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