



# Configure the DNCS for tru2way EAS Installation and Operation Guide

## Overview

### Introduction

The Federal Communications Commission (FCC), the National Weather Service, and local authorities send emergency alert messages (EAMs) to service providers who broadcast these messages to television subscribers. These messages include regular tests of the Emergency Alert System (EAS), as well as messages that warn of dangerous conditions such as thunderstorms, floods, tornadoes, hurricanes, and earthquakes.

The FCC requires that service providers receive and send EAMs and conduct weekly and monthly tests of the EAS. By conducting weekly and monthly tests, service providers ensure the reliability of their EAS equipment so that subscribers can receive national, state, and local warning messages about emergency situations.

This document describes the digital EAS and the new requirements for the EAS interface with tru2way™ (formerly OCAP™) host devices (set-tops).

### Purpose

After reading this document, you will be able to configure EAS components with your Cisco DNCS and DBDS in a tru2way environment.

### Site Requirements

Before performing the procedures in this document, your system must meet the following requirements:

- System Release (SR) 2.8/3.8/4.3 or later
- Tru2way (OCAP) license enabled on DNCS\*
- OpenCable MP3 audio support enabled on DNCS\*
- TSBroadcaster release 1.03.01-CD-01/software version 1.0.0.10 or later

*\*Contact the representative who handles your account for more information about this item.*

## System Impact

The procedures in this document have no impact on subscribers, so you may perform the procedures in this document at any time.

## Audience

This document is written for operators of our digital television systems that support tru2way host devices. DNCS operators, our field service engineers, and Cisco Services engineers may also find the information in this document helpful.

## Related Publications

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

- *Advanced DOCSIS Set-Top Gateway Application Guide For System Release 3.8/4.3* (part number 4022455)
- *ANSI/SCTE 18 2007, Emergency Alert Messaging for Cable* (available at [www.ansi.org](http://www.ansi.org))
- *ANSI/SCTE 65 2002, Service Information Delivered Out-of-Band for Digital Cable Television* (available at [www.ansi.org](http://www.ansi.org))
- *Configuring and Troubleshooting the Digital Emergency Alert System* (part number 4004455)
- *Data-Over-Cable Service Interface Specifications, DOCSIS Set-top Gateway (DSG) Interface Specification, CM-SP-DSG-I11-071206* (Available at [www.cablelabs.com](http://www.cablelabs.com))
- *OCAP Architecture Guide* (part number 738184)
- *OCAP Installation and Upgrade Instructions* (part number 732578)
- *OpenCable™ Specifications, OpenCable Host Device 2.0 Core Functional Requirements, OC-SP-HOST2.0-CFR-I14-070615* (Available at [www.cablelabs.com](http://www.cablelabs.com))
- *OpenCable™ Specifications, CableCARD™ Interface 2.0 Specification OC-CCIF2.0-I15-080620* (Available at [www.cablelabs.com](http://www.cablelabs.com))
- *System Release 2.8 Release Notes* (part number 4019364)
- *System Release 3.8 Release Notes* (part number 4019365)
- *System Release 4.3 Release Notes* (part number 4019358)
- *TSBROADCASTER User's Guide Cisco's OCAP Object Carousel Solution* (part number 4011043)

- *Understanding Diagnostic Screens for the Explorer DHCTs Application Guide* (part number 749244)
- *Understanding Diagnostic Screens for 8200, 85xx, and 45xx DHCTs in an Axiom tru2way Environment Application Guide* (part number 4011047)

## Document Version

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

<b>Description</b>	<b>See Topic</b>
Changed "OCAP" to "tru2way"	Throughout document
Updated for SR 2.8/3.8/4.3	Throughout document
Added information on direct AD SG in a tru2way environment	<i>Direct AD SG in a tru2way Environment</i> (on page 9)
Added information on assigning FIPS codes to bridges	<i>Assign FIPS Codes to AD SG Bridges</i> (on page 18)
Updated procedures for configuring EAS messages	<i>Configuring EAS Messages</i> (on page 20)
New feature for SR 2.8/3.8/4.3: EAS suppression of digital channels	<i>Configure EAS Suppression in a tru2way Environment</i> (on page 25)

## Overview

The TSBroadcaster provides management, scheduling, and playout facilities for tru2way and Multimedia Home Platform (MHP) applications. For EAS, the out-of-band (OOB) TSBroadcaster output uses Ethernet to connect to either a QPSK modulator or to the DNCS.

The TSBroadcaster provides one or more digital storage media - command and control (DSM-CC) object carousels in each Transport Stream and OOB (QPSK and/or DSD), and it allocates a maximum bandwidth for each carousel.

## Site Requirements

Before performing the procedures in this document, your system must meet the following requirements:

- System Release (SR) 2.8/3.8/4.3 or later
- Tru2way (OCAP) license enabled on DNCS\*
- OpenCable MP3 audio support enabled on DNCS\*
- TSBroadcaster release 1.03.01-CD-01/software version 1.0.0.10 or later

*\*Contact the representative who handles your account for more information about this item.*

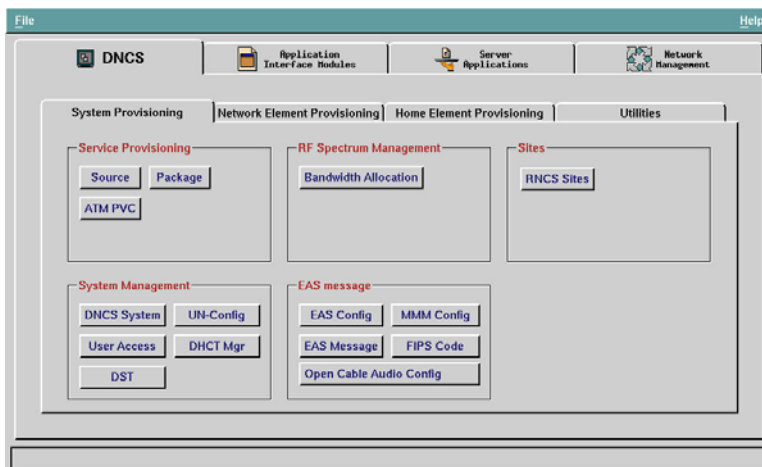
## Process

The process for configuring tru2way EAS using TSBroadcaster is as follows:

- 1 Provision the DNCS for tru2way EAS. See *Provisioning the DNCS for tru2way EAS* (on page 5) for more information.
- 2 Provision the TSB OOB output on the TSBroadcaster for EAS. See *Accessing the TSBroadcaster stream OCAPStream Window* (on page 7) for more information.
- 3 Set up ADSG bridges. See *Bridges in the DNCS* (on page 9) for more information.
- 4 Assign FIPS codes to ADSG bridges (if used). See *Assign FIPS Codes to ADSG Bridges* (on page 18) for more information.
- 5 Configure EAS messages. See *Configuring EAS Messages* (on page 20) for more information.
- 6 Configure EAS suppression (optional). See *Configure EAS Suppression in a tru2way Environment* (on page 25) for more information.

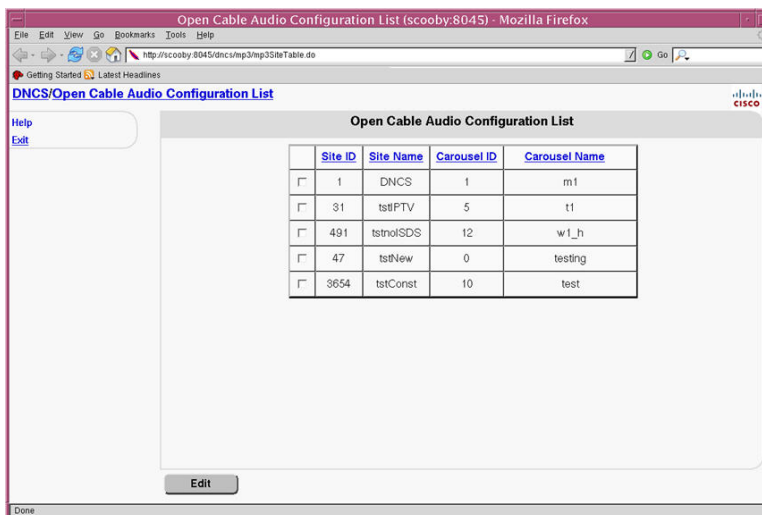
## Provisioning the DNCS for tru2way EAS

- 1 From the DNCS Administrative Console, click the **System Provisioning** tab.



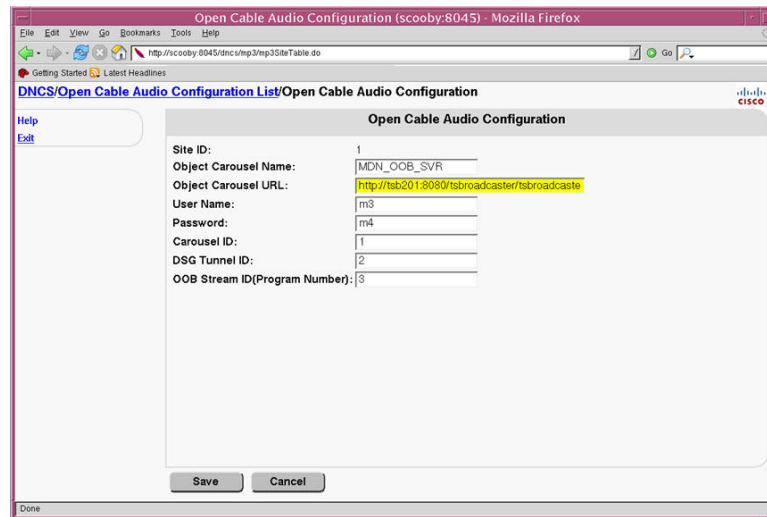
- 2 In the EAS message section, click **Open Cable Audio Config** to open the Open Cable Audio Configuration List window.

**Note:** If the **Open Cable Audio Config** button is not displayed, the tru2way feature is not enabled on the DNCS. Contact Cisco Services to enable this feature.



## Provisioning the DNCS for tru2way EAS

- 3 Select the DNCS Site ID and then click **Edit** to open the Open Cable Audio Configuration window.



- 4 In steps 5e and 7, you need to reference your TSBroadcaster settings data for the Carousel ID and bit rate values. See *Accessing the TSBroadcaster stream OCAPStream Window* (on page 7) for instructions on how to access this data.
- 5 Enter the following information in the Open Cable Audio Configuration window:
  - a In the **Object Carousel Name** field, type **MDN\_OOB\_SVR**.
  - b In the **Object Carousel URL** field, type the TSBroadcaster IP address in the format `http://xx.xx.xx.xx:8080/tsbroadcaster/tsbroadcaster`.  
**Note:** `xx.xx.xx.xx` is the IP address of the tsbroadcaster.
  - c In the **User Name** field, type **demo**.
  - d In the **Password** field, type **demo**.
  - e In the **Carousel ID** field, type the carousel ID of the MDN\_OOB\_SVR carousel.
  - f In the **DSG Tunnel ID** field, type the DSG Tunnel ID. Check with your network administrator for this ID number.
  - g In the **OOB Stream ID (Program Number)** field, type **99**.
- 6 Click **Save** to save your configuration changes and close the Open Cable Audio Configuration window.
- 7 Check the bit rate for the MDN\_OOB\_SVR carousel. The bit rate should be 60000.  
**Note:** If your bits per second rate is *not* 60000, refer to the "Edit a Carousel" section of Chapter 3 in the *TSBroadcaster User's Guide Cisco's OCAP Object Carousel Solution* (part number 4011043) for instructions on how to increase your bits per second to 60000.
- 8 After provisioning the DNCS for OCAP EAS, you must stop and then restart ("bounce"), the MMM Server. Refer to *Configuring and Troubleshooting the Digital Emergency Alert System* (part number 4004455) for instructions.

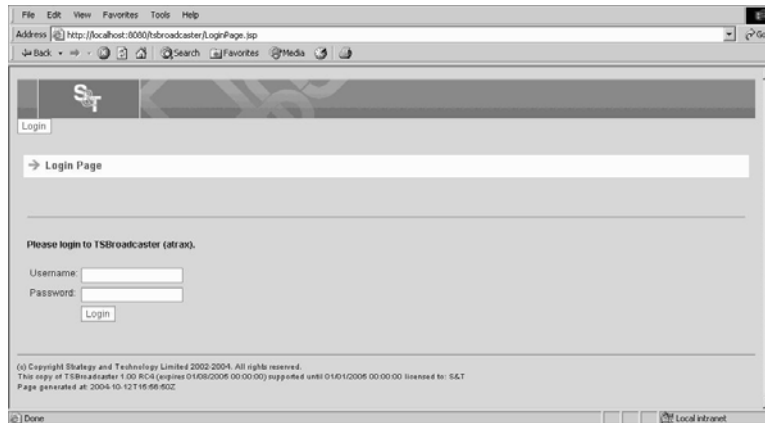
## Accessing the TSBroadcaster stream OCAPStream Window

- 1 Launch a Java-enabled Internet browser.
- 2 Type the following URL into the browser address bar:

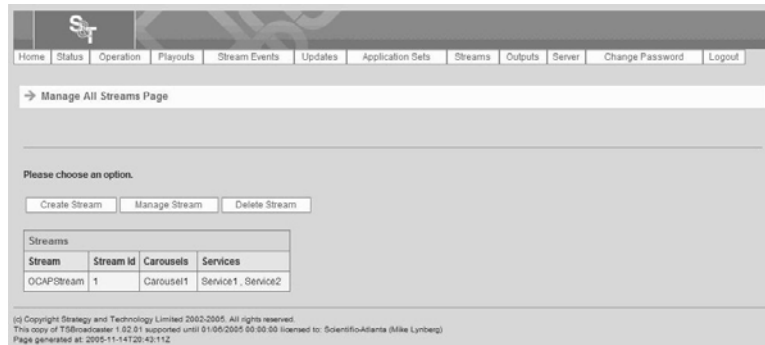
`http://address:8080/tsbroadcaster`

For the *address*, use the IP address of the TSBroadcaster server.

**Result:** The TSBroadcaster will redirect you to the Login Page.



- 3 Did the Login Page appear?
  - If **yes**, go to step 4.
  - If **no** or you cannot make a connection at all, refer to Chapter 11 of the *TSBroadcaster User's Guide Cisco's OCAP Object Carousel Solution* (part number 4011043).
- 4 At the **Username** field, type your user name.
- 5 At the **Password** field, type your password; then, click **Login**.
- 6 Click the **Streams** tab to open the Manage All Streams Page.



## Accessing the TSBroadcaster stream OCAPStream Window

- 7 Click **Manage Stream** to open the Manage Stream Select Page.

- 8 Select **OCAPStream** from the drop-down list and click **Select** to open the Manage OCAP Stream Page.
- 9 Refer to the Manage TSBroadcaster stream OCAPStream data for the TSBroadcaster values needed for *Provisioning the DNCS for tru2way EAS* (on page 5).

### Example:

Stream Id	Build Type	Modulation	Carrier Frequency
121	OOB XAIT	SCTE Mode 2 (256 QAM)	573000000

Name	Id	PID	Assoc. Tag	bits/sec	Out Of Band
MDN_IB_GUIDE0	10	266	10	2000000	
MDN_IB_GUIDE1	11	267	11	2000000	
MDN_IB_GUIDE2	12	268	12	2000000	
MDN_IB_OD	7	263	7	1000000	
MDN_IB_ROOT	2	258	2	2000000	
MDN_OOB_SVR	6	262	6	60000	Yes
SYSTEM	40	140	40	50000	
TWC_APPS_CAROUSEL	130	130	130	2500000	
TWC_MONITOR_CAROUSEL_1	110	110	110	1500000	
TWC_ODN_CAROUSEL_1	120	120	120	2000000	



## Direct AD SG in a tru2way Environment

Direct AD SG allows DSG broadcast data to be transmitted from the DNCS directly to host devices, eliminating processing by the CableCARD module. Messages are transmitted to the hosts through broadcast tunnels. These tunnels are defined by the DCD rules in the CMTS.

Indirect AD SG does not use broadcast tunnels. Instead, all of the broadcast data is transmitted over a single tunnel to the CableCARD module and then to the host.

For more information on direct AD SG, refer to *Advanced DOCSIS Set-Top Gateway Application Guide For System Release 3.8/4.3* (part number 4022455)

For tru2way (and other third-party navigators), data is sent OOB from TSBroadcaster over a CMTS bridge directly to host devices. For details about third-party applications and message requirements, refer to the following documents:

- *TSBroadcaster User's Guide Cisco's OCAP Object Carousel Solution* (part number 4011043)
- *Configuring Hidden Channels for System Release 3.8/4.3 User Guide* (part number 4022454)

## Bridges in the DNCS

Bridges in the DNCS are virtual connections from the DNCS to a group of DHCTs. These bridges can use either QPSK or DSG tunnels.

Each hub in your network must have at least one of the following bridges defined:

- **Advanced DSG** – This definition provides support for Indirect AD SG and legacy AD SG DHCTs, and contains all SA OOB flows (including CA). This bridge generates SA tunnel traffic, but includes no support for Application or Broadcast tunnels. This selection is also backward compatible with B DSG. This bridge is also known as the CA tunnel (DCD Rules defined CA/Well-Known MAC Address [WKMA]).
- **Advanced DSG with BT** – This definition provides support for Direct AD SG including Broadcast Tunnel (BT) headers (as referenced within the CableLabs® DSG specification). This bridge provides support for SCTE 65 (SI)/SCTE 18 (EAS) and CD-CVT2.0 (DCD Rules Broadcast ID 2, 3, and 5).  
**Important:** BT Headers are required to support SI and EAS messages as defined within the ANSI SCTE 65/SCTE 18 specification and CVT2 messages as defined in the CableLabs OC-OC-CDL2.0 specification.
- **Basic DSG** – This definition provides support for B DSG clients and updates the BRF file. The client operates in B DSG mode as specified in the CableLabs DSG specification (using the WKMA Tunnel).

## Configure ADSG for EAS and SI Messages

To configure ADSG in a tru2way environment for EAS and SI messages, you must follow these steps:

- 1 Set up a QPSK to support direct ADSG (to signal the CableCARD Communication Mode [CCCM]).
- 2 Set up a CMTS bridge for indirect ADSG (Advanced DSG bridge definition) to carry normal data (BFS, CA, Passthru messages, UN-Config messages, and non-SCTE56 SI data).
- 3 Set up a CMTS bridge for direct ADSG (Advanced DSG with BT Headers bridge definition) to carry SCTE18 data (EAS data). Set up one CMTS bridge for each geographic area corresponding to the FIPS codes defined in this hub (if applicable; see *Assign FIPS Codes to ADSG Bridges* (on page 18) for more information).
- 4 (Optional) Set up a CMTS bridge for direct ADSG (Advanced DSG with BT Headers bridge definition) to carry SCTE56 data (SI data).

### Setting Up an OOB Bridge (QPSK) for Direct ADSG Support

Complete the following steps to provision an OOB bridge for direct ADSG.

- 1 From the DNCS Administrative Console, click the **Network Element Provisioning** tab.
- 2 Click **QPSK/CMTS**. The QPSK/CMTS List window opens.
- 3 Select **File > New > QPSK**. The Set Up QPSK Modulator window opens.
- 4 Complete the fields in the Basic Parameters window by referring to your DNCS online help. Then, go to step 5 for information about defining the appropriate CableCard Comm. Mode (CCCM) value.
- 5 From the ADSG Options area, select one of the following **CableCard Comm. Mode** types:
  - **Direct ADSG:** The CableCARD module has its own IP address.
  - **Direct ADSG with Socket:** The CableCARD module uses the IP address of the host.
- 6 Click **Save**. The system saves the parameters for this QPSK bridge in the DNCS database and closes the Set Up QPSK Modulator window. The QPSK List window updates to include the new QPSK bridge.

### Setting Up a CMTS Bridge Definition for AD SG

Complete the following steps to set up a CMTS bridge definition for AD SG.

- 1 From the DNCS Administrative Console, click the **Network Element Provisioning** tab.
- 2 Click **QPSK/CMTS**. The QPSK/CMTS List window opens.
- 3 Click the **File > New > CMTS**. The Set Up CMTS Bridge window opens.

- 4 For the **Bridge Definition**, select **Advanced DSG**.
- 5 In the **Hub Name** field, click the arrow and select the hub to which the CMTS bridge is connected.
- 6 In the **Bridge Name** field, type a name to describe the bridge.
- 7 From the **IP Flow Scheme** field, we recommend that you select **SFM (Single-Flow Multicast)**.

- 8 In the **Comment** field, type any information you need for your reference.

**Note:** Information in the comments field does not affect the configuration of the bridge; this field is for your reference only.

- 9 In the **IP Address** field, enter an IP address for this bridge that is unique and is within the range of IP addresses reserved for multicasting (225.0.0.0 to 239.255.255.255).

- 10 From the **DCM** field, select **DOCSIS**.

- 11 From the **CableCard Comm Mode** field, select the CCCM type you defined when you set up the QPSK in *Setting Up an OOB Bridge (QPSK) for Direct AD SG Support* (on page 10):

- **Indirect AD SG** - The CableCARD module has its own IP address.
- **Indirect AD SG with Socket** - The CableCARD module uses the IP address of the host.

**Important:** This setting must match the setting in the QPSK.

- 12 Is your system configured to support third-party sources?
  - If **yes**, go to step 13.
  - If **no**, go to step 16.
- 13 In the **SRM IP** field, type the IP address of your Session Resource Manager (SRM).

**Note:** Refer to your network map to obtain the IP address of the SRM.
- 14 If your SRM requires using a port other than the default, specify the required port in the **Port** field.
- 15 If this bridge will act as a staging bridge, select the **Staging Bridge** option.

**Note:** Staging bridges are a subset of the CMTS/QPSK population. This subset receives all staging message traffic instead of every CMTS/QPSK in the network receiving staging message traffic, reducing network traffic.
- 16 Click **Save**. The Set Up CMTS Bridge window closes and the QPSK/CMTS List window updates to include the new bridge.

### Setting Up a CMTS Bridge Definition for AD SG With BT Headers

Complete the following steps to set up a CMTS bridge definition for AD SG with BT Headers.

- 1 From the DNCS Administrative Console, click the **Network Element Provisioning** tab.
- 2 Click **QPSK/CMTS**. The QPSK/CMTS List window opens.
- 3 Click the **File > New > CMTS**. The Set Up CMTS Bridge window opens.

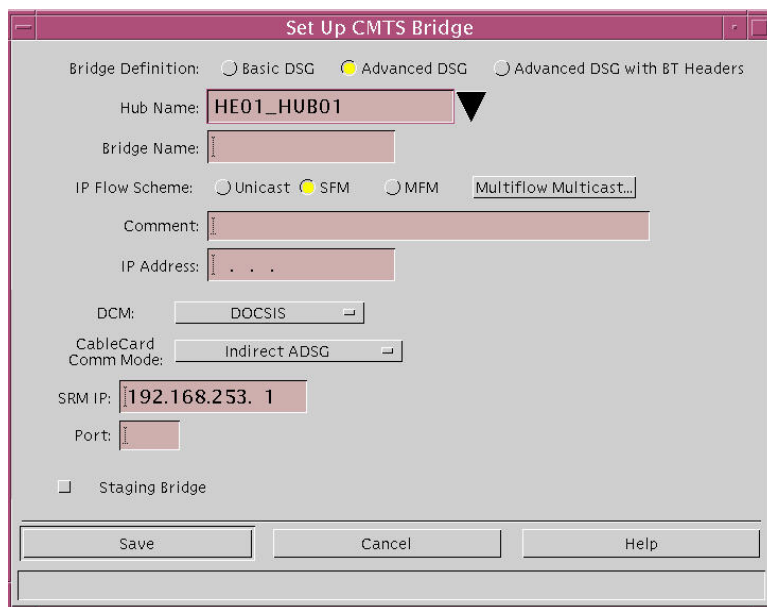
- 4 For the **Bridge Definition**, select **Advanced DSG with BT Headers**.
- 5 In the **Hub Name** field, click the arrow and select the hub to which the CMTS bridge is connected.
- 6 In the **Bridge Name** field, type a name to describe the bridge.
- 7 From the **IP Flow Scheme** field, we recommend that you select **SFM (Single-Flow Multicast)**.
- 8 In the **Comment** field, type any information you need for your reference.  
**Note:** Information in the comments field does not affect the configuration of the bridge; this field is for your reference only.
- 9 In the **IP Address** field, enter an IP address for this bridge that is unique and is within the range of IP addresses reserved for multicasting (225.0.0.0 to 239.255.255.255).
- 10 In the **Port** field, type the UDP port value that matches the CMTS DCD rule.
- 11 If you want this bridge to broadcast System Information, select the **Send SI** option.
- 12 If you want this bridge to broadcast EAS messages, select the **Send EAS** option.

- 13 Does this bridge support Enhanced Channel Maps?
  - If **yes**, go to step 14.
  - If **no**, go to step 15.
- 14 If you want this bridge to be able to access additional channel maps, select the additional hub associated with the channel map in the **Available Hubs** list and click **Add**. The hub moves into the **Selected Hubs** list.
- 15 Click **Save**. The Set Up CMTS Bridge window closes and the QPSK/CMTS List window updates to include the new bridge.

### Setting Up a CMTS Bridge Definition for SCTE18 Data

Complete the following steps to set up a CMTS bridge definition for ADSG with BT Headers.

- 1 From the DNCS Administrative Console, click the **Network Element Provisioning** tab.
- 2 Click **QPSK/CMTS**. The QPSK/CMTS List window opens.



- 3 Click the **File > New > CMTS**. The Set Up CMTS Bridge window opens.

- 4 For the **Bridge Definition**, select **Advanced DSG with BT Headers**. The screen updates to display different fields.

- 5 In the **Hub Name** field, click the arrow and select the hub to which the CMTS bridge is connected.
- 6 In the **Bridge Name** field, type a name to describe the bridge.
- 7 From the **IP Flow Scheme** field, we recommend that you select **SFM** (Single-Flow Multicast).
- 8 In the **Comment** field, type any information you need for your reference.  
**Note:** Information in the comments field does not affect the configuration of the bridge; this field is for your reference only.
- 9 In the **IP Address** field, enter an IP address for this bridge that is unique and is within the range of IP addresses reserved for multicasting (225.0.0.0 to 239.255.255.255).
- 10 In the **Port** field, type the UDP port value that matches the CMTS DCD rule.
- 11 Select the **Send EAS** option.
- 12 Click **Save**. The Set Up CMTS Bridge window closes and the QPSK/CMTS List window updates to include the new bridge.

### Setting Up a CMTS Bridge Definition for SCTE65 Data (optional)

Complete the following steps to set up a CMTS bridge definition for ADSG with BT Headers to carry SCTE65 Data.

- 1 From the DNCS Administrative Console, click the **Network Element Provisioning** tab.
- 2 Click **QPSK/CMTS**. The QPSK/CMTS List window opens.
- 3 Click the **File > New > CMTS**. The Set Up CMTS Bridge window opens.

The 'Set Up CMTS Bridge' window is shown with the following configuration:

- Bridge Definition: ☐ Basic DSG ☒ Advanced DSG ☐ Advanced DSG with BT Headers
- Hub Name: HE01\_HUB01
- Bridge Name: (empty)
- IP Flow Scheme: ☐ Unicast ☒ SFM ☐ MFM [Multiflow Multicast...](#)
- Comment: (empty)
- IP Address: . . .
- DCM: DOCSIS
- CableCard Comm Mode: Indirect ADSG
- SRM IP: 192.168.253. 1
- Port: (empty)
- ☐ Staging Bridge

Buttons at the bottom: Save, Cancel, Help.

- 4 For the **Bridge Definition**, select **Advanced DSG with BT Headers**. The screen updates to display different fields.

The 'Set Up CMTS Bridge' window is shown with the following updated configuration:

- Bridge Definition: ☐ Basic DSG ☐ Advanced DSG ☒ Advanced DSG with BT Headers
- Hub Name: HE01\_HUB01
- Bridge Name: test
- IP Flow Scheme: ☐ Unicast ☒ SFM ☐ MFM [Multiflow Multicast...](#)
- Comment: Comments for your reference
- IP Address: 225. 0. 0.0
- Port: (empty)
- ☒ Send SI ☐ Send EAS
- Additional Channel Maps Visible to this Bridge:
  - Available Hubs: HE01\_HUB1, TEST1, TEST2, VIRT01, H23456789012345
  - Selected Hubs: HE01\_HUB02
  - Buttons: Add >>, << Remove

Buttons at the bottom: Save, Cancel, Help.



- 5 In the **Hub Name** field, click the arrow and select the hub to which the CMTS bridge is connected.
- 6 In the **Bridge Name** field, type a name to describe the bridge.
- 7 From the **IP Flow Scheme** field, we recommend that you select **SFM** (Single-Flow Multicast).
- 8 In the **Comment** field, type any information you need for your reference.  
**Note:** Information in the comments field does not affect the configuration of the bridge; this field is for your reference only.
- 9 In the **IP Address** field, enter an IP address for this bridge that is unique and is within the range of IP addresses reserved for multicasting (225.0.0.0 to 239.255.255.255).
- 10 In the **Port** field, type the UDP port value that matches the CMTS DCD rule.
- 11 Select the **Send SI** option.
- 12 Click **Save**. The Set Up CMTS Bridge window closes and the QPSK/CMTS List window updates to include the new bridge.

## Assign FIPS Codes to AD SG Bridges

FIPS filtering, through its integration with the DNCS, filters and sends EAS messages only to targeted states, counties, or subdivisions.

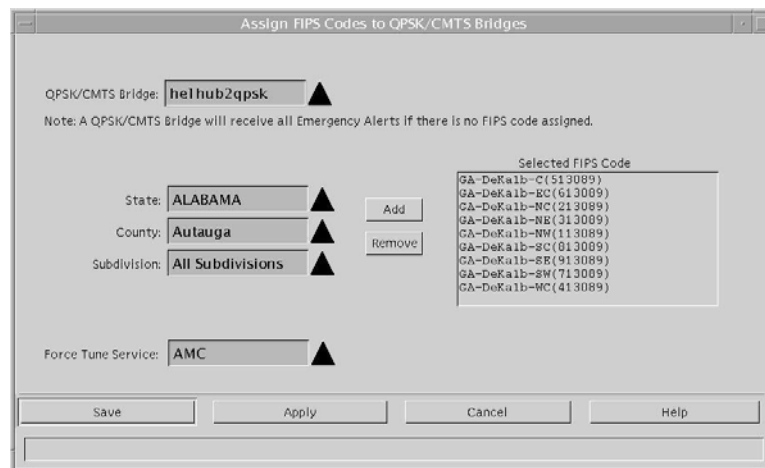
**Note:** FIPS filtering is a separate software product. For more information on purchasing this software product, contact the person who handles your account.

### Configuring FIPS Filtering

If you have purchased the EAS filtering software product, you need to define the EAS service area of each OOB bridge. If you do not assign FIPS codes to a bridge, that bridge receives all EAMs.

Follow these steps to configure FIPS filtering.

- 1 On the DNCS Administrative Console, click the **DNCS** tab.
- 2 Click the **System Provisioning** tab.
- 3 In the EAS Message section, click **FIPS Code**. The Assign FIPS Codes to QPSK/CMTS Bridges window opens.



- 4 Click the **QPSK/CMTS Bridge** arrow and select a bridge from the list.
- 5 Click the **State** arrow and select a state from the list.
- 6 Click the **County** arrow and select a county from the list.
- 7 Click the **Subdivision** arrow and select a subdivision from the list or select **All Subdivisions**.
- 8 Click **Add**.
- 9 Repeat steps 4 through 8 until you have assigned all the required FIPS codes to this bridge.

- 10 Click the **Force Tune Service** arrow and select a Force Tune Service from the list.

**Notes:**

- The Force Tune Service you enter here overrides the default Force Tune Service defined in MMM Config on the DNCS for the messages you send through this bridge.
- If you select **None** in the Force Tune Service field, the system uses the default Force Tune Service (if defined in MMM Config on the DNCS).

- 11 Choose one of the following options:

- To save your changes and keep the Assign FIPS Codes to QPSK/CMTS Bridges window open, click **Apply**.
- To save your changes and close the Assign FIPS Codes to QPSK/CMTS Bridges window, click **Save**.

## EAS Messages

### Configuring EAS Messages

The FCC has defined 54 EAM message types, which are listed on the FCC website.

The configuration of an EAM specifies how the set-top presents the alert. By default, all EAMs use the same configuration, which means that they are presented by the set-top in the same way. On a set-top (that uses an output other than the IEEE 1394 interface), the default configuration displays a red banner at the top of the screen and the text for the message is shown in white. If the message is sent with audio content, it is played instead of the normal program audio while the message is active. CableCARD hosts only display text.

**Important:** If the set-top is connected to the TV with only the IEEE 1394 interface, the TV will only receive the EAS audio. The set-top must be connected to the TV with an additional digital video connection (HDMI™, DVI, or PrPbY) to receive the EAS video (text).

The DNCS lets you configure an alternate behavior for each EAM by modifying one of the existing MMM configurations and by associating an EAM configuration with the new configuration. For example, if you want a Child Abduction Warning (e.g., an Amber Alert) to force tune the set-tops to a local news service, you would use the force-tune configuration for that EAM.

Although the DNCS provides the capability to have a unique configuration for each type of EAM, most operators only use a few configurations (one for messages that will use the banner, a second for force tuning, one for required weekly tests and finally one for required monthly tests). You should check current FCC and local requirements to determine what settings are most appropriate for your operating environment.

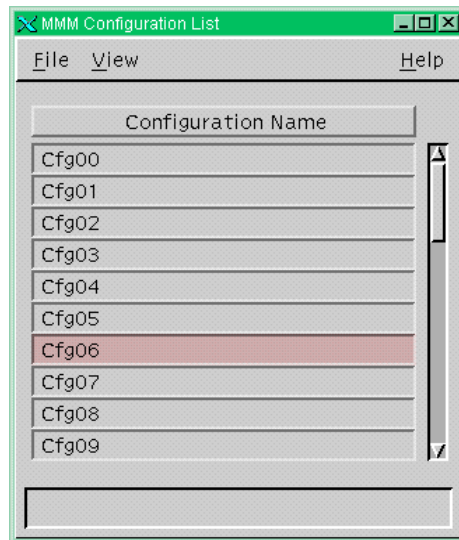
The following options can be configured as part of an EAS Configuration.

- **Force Tune Type**—Defines where the set-top is supposed to tune when an EAM that uses this configuration is received.
- **Message Time**—Defines the delay in seconds between repeats of the message. For example, if this is set to **6** then the message will repeat 6 seconds after the end of the last time the message was broadcast.
- **Alert Type**—Defines how long the message stays on the screen (in seconds).
- **Display Type**—Defines the type of display motion and how long the emergency message appears on the screen (in seconds).

### Accessing the Set Up MMM Configuration Window

Follow these steps to access the Set Up MMM Configuration window.

- 1 On the DNCS Admin console, click the **DNCS** tab.
- 2 Click the **System Provisioning** tab.
- 3 Click **MMM Config**. The MMM Configuration List window opens.



- 4 Click to highlight the configuration name that you want to configure, then select **File > Open**. The Set Up MMM Configuration window opens.

### Configuring the Force Tune Type

Follow these steps to set up the **Force Tune Type**.

**Important:** Most systems configure their force-tune type to use an analog channel as the force-tune channel for EAS messages. If you have subscribers who use digital-only set-top boxes, or who use the IEEE 1394 interface on their set-tops, and you use forced tuning, the channel that you force tune to *must* be a digital channel that can display information about local and national emergencies. For example, if you use an analog community access channel as the force-tune channel, you will need to convert this channel to a digital channel with an encoder.

- 1 On the Set Up MMM Configuration window, select the **Force Tune Type** tab.
- 2 Enter a **Description** for this configuration.
- 3 Does the configuration require force tuning?
  - If **yes**, go to step 4.
  - If **no**, click **None** in the **Force Tune** field. Go to step 5.
- 4 **If the configuration requires force tuning**, complete the following steps in the **Force Tune Type** fields:
  - Click **Default Service**.
  - In the **Default Service** field, select the SAM Service short description of the force-tune service from the menu.

**Note:** An EAM with configured with a forced tuning redirects the subscriber's TV to the selected service that provides the emergency alert information.

- 5 In the **Priority** field, type a priority for the message. The lower the number, the higher the priority.

**Note:** For tru2way set-tops, never set the message priority to 0 (zero). If you set the priority to 0, tru2way set-tops will ignore the message. For true2way set-tops to display a message, you must set the priority of the message to a value greater than 0 (zero).

## Configuring the Message Time

The message time establishes the delay between repeats of the EAS message in seconds. Follow these steps to set up the **Message Time**.

- 1 On the Set Up MMM Configuration window, select the **Message Time** tab.

- 2 In the **Delay Between Repeats** field, type a delay time for the EAS message, depending on the type of message you are configuring:
  - **For standard EAS messages and Amber Alerts**, type a delay that is *at least 6 seconds* for all configurations.
  - **For required weekly test (RWT) and required monthly test (RMT) messages**, type a delay greater than the default duration for each message so that subscribers only see the alert once during the RWT and RMT. Refer to the *Configuring and Troubleshooting the Digital Emergency Alert System* (part number 4004455) for more information about configuring RWT and RMT messages.
- 3 In the **Open Cable Repeat Rate** field, type 0.
- 4 In the **Audio File Timeout** field, type one of the following values, depending on the type of message you are configuring:
  - **For standard EAS messages**, type a timeout of **10** seconds for all configurations.
  - **For Amber Alerts**, type the delay recommended by your local Amber Alert specification (or type **10** if none is specified).
  - **For RWT and RMT messages**, type **780**.

### Configuring the Alert Type

**Note:** The value in the Alert Remaining Time field defines the duration of EAS messages on OpenCable hosts (with and without CableCARD modules).

Follow these steps to set up the **Alert Type**.

- 1 On the Set Up MMM Configuration window, select the **Alert Type** tab.

The screenshot shows the 'Set Up MMM Configuration' window with the 'Alert Type' tab selected. The 'Name' field is 'Cfg00'. The 'Description' field is empty. The 'Alert Remaining Time' is set to '120' seconds. The 'Save', 'Cancel', and 'Help' buttons are at the bottom.

- 2 In the **Alert Remaining Time** field, type the number of seconds the messages will display on the screen, depending on the type of message you are configuring:
  - For standard EAS messages and Amber Alerts, keep the default, maximum time limit of 120 seconds.
  - For RWT and RMT messages, type 30 seconds.

### Configuring the Display Type

**Display Type** controls the type of display motion and how long the emergency message appears on the screen in seconds. Follow these steps to set up the **Display Type**.

- 1 On the Set Up MMM Configuration window, select the **Display Type** tab.

The screenshot shows the 'Set Up MMM Configuration' window with the 'Display Type' tab selected. The 'Name' field is 'Cfg00'. The 'Description' field is empty. The 'Display Motion' is set to 'Delayed Scroll'. The 'Motion Delay' is set to '2' seconds. The 'Save', 'Cancel', and 'Help' buttons are at the bottom.

- 2 Type the number of seconds the message will appear on the screen into the **Motion Delay** field.
- 3 To complete the configuration of the EAS message, click **Save**.



## Configure EAS Suppression in a tru2way Environment



### **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.**

The EAS suppression feature allows service providers to suppress EAS information on digital channels that already provide EAS coverage to their viewers.

For example, the digital channel might carry a local over-the-air TV station that is rebroadcast through the service provider's system. The TV station provides EAS coverage through its own process.

Enabling EAS Suppression on a source prevents the receiving host device from playing SCTE-18 EAS messages received from that source.

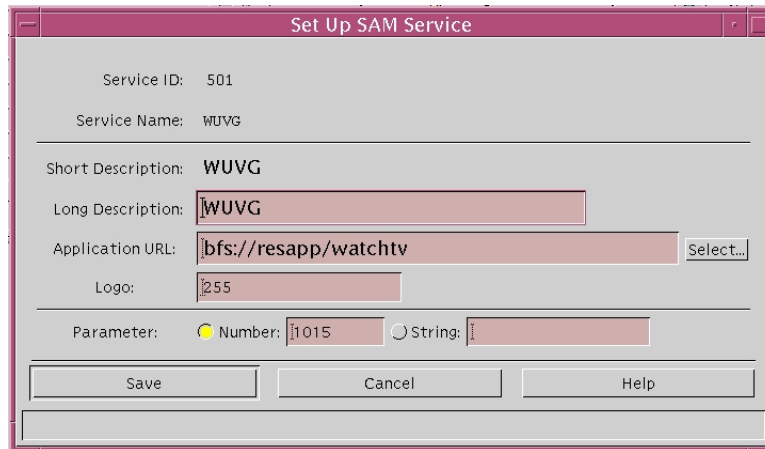
### **EAS Suppression Process**

The following steps describe the process for suppressing EAS messages on a digital channel in a tru2way system:

- 1 Configure the channel to suppress EAS messages.
- 2 Configure the source for EAS suppression.

## Configuring a Channel to Suppress EAS Messages

- 1 On the DNCS Administrative Console, click the **Application Interface Modules** tab.
- 2 Click **SAM Service**. The SAM Service List window opens.
- 3 Double-click the digital service you want to edit. The Set Up SAM Service window for that service opens.

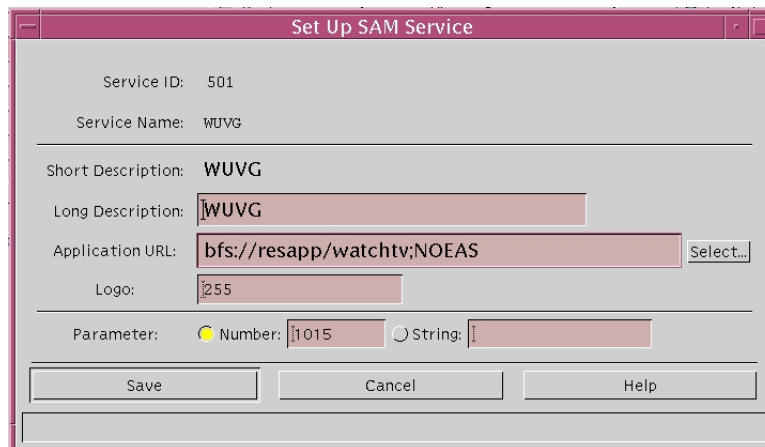


The 'Set Up SAM Service' window displays the following configuration:

- Service ID: 501
- Service Name: WUVG
- Short Description: WUVG
- Long Description: WUVG
- Application URL: bfs://resapp/watchtv
- Logo: 255
- Parameter: ☒ Number: 1015 ☐ String:

Buttons: Save, Cancel, Help

- 4 Click in the Application URL line to place your cursor at the end of the URL statement.
- 5 Append the line to include ;NOEAS.

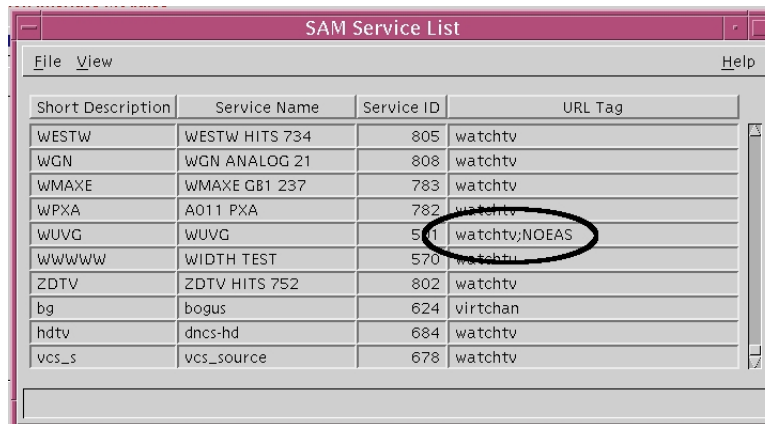


The 'Set Up SAM Service' window displays the updated configuration:

- Service ID: 501
- Service Name: WUVG
- Short Description: WUVG
- Long Description: WUVG
- Application URL: bfs://resapp/watchtv;NOEAS
- Logo: 255
- Parameter: ☒ Number: 1015 ☐ String:

Buttons: Save, Cancel, Help

- 6 Click **Save**. The Set Up SAM Service window closes. The SAM Service List shows the appended URL on the same line as the service you edited.



The screenshot shows a window titled "SAM Service List" with a menu bar containing "File", "View", and "Help". Below the menu bar is a table with four columns: "Short Description", "Service Name", "Service ID", and "URL Tag". The table contains ten rows of service data. The row for "WUUG" (Service ID 501) has its "URL Tag" value "watchtv;NOEAS" circled with a black oval.

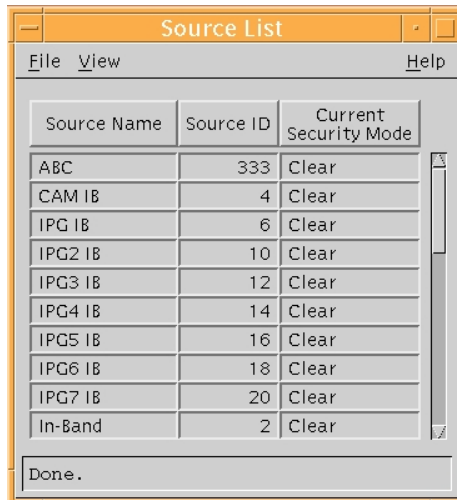
Short Description	Service Name	Service ID	URL Tag
WESTW	WESTW HITS 734	805	watchtv
WGN	WGN ANALOG 21	808	watchtv
WMAXE	WMAXE GB1 237	783	watchtv
WPXA	A011 PXA	782	watchtv
WUUG	WUUG	501	watchtv;NOEAS
WWWWWW	WIDTH TEST	570	watchtv
ZDTV	ZDTV HITS 752	802	watchtv
bg	bogus	624	virtchan
hdtv	dncs-hd	684	watchtv
vcs_s	vcs_source	678	watchtv

- 7 Click **File > Close** to close the SAM Service List.

## Configuring EAS Suppression in a tru2way Environment

Follow these instructions to suppress EAS messages on an existing source.

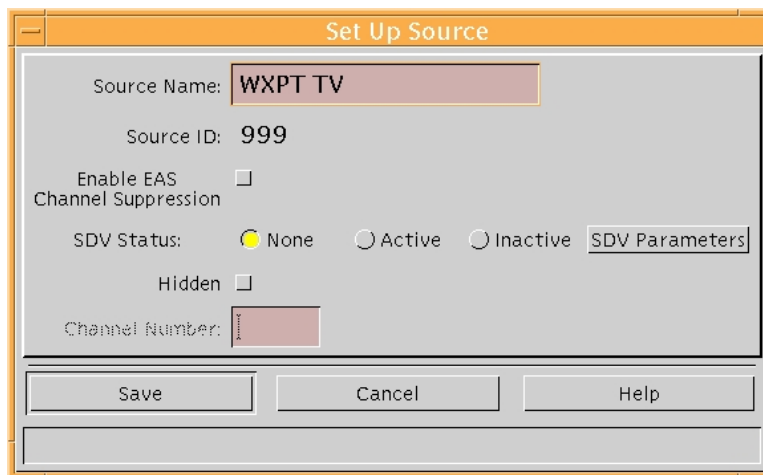
- 1 On the DNCS Administrative Console, click the **DNCS** tab.
- 2 Click the **System Provisioning** tab.
- 3 Under Service Provisioning, click **Source**. The Source List opens.



Source Name	Source ID	Current Security Mode
ABC	333	Clear
CAM IB	4	Clear
IPG IB	6	Clear
IPG2 IB	10	Clear
IPG3 IB	12	Clear
IPG4 IB	14	Clear
IPG5 IB	16	Clear
IPG6 IB	18	Clear
IPG7 IB	20	Clear
In-Band	2	Clear

Done.

- 4 Select the source you want to edit and click **File > Open**. The Set Up Source window for the selected source opens.



Source Name: **WXPT TV**

Source ID: **999**

Enable EAS Channel Suppression ☐

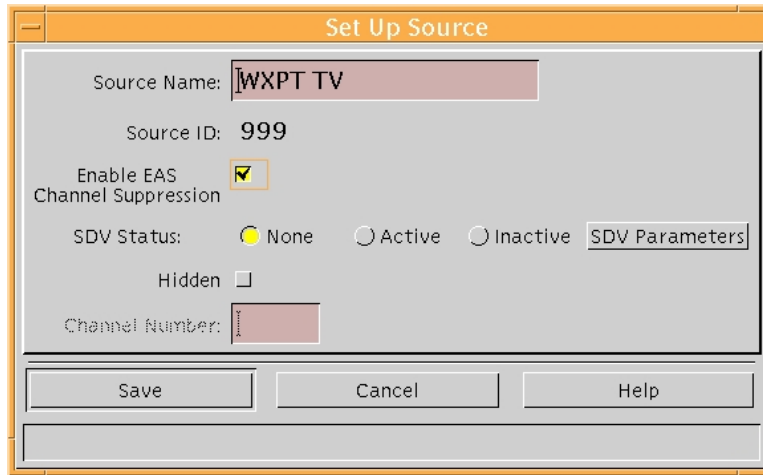
SDV Status: ☒ None ☐ Active ☐ Inactive [SDV Parameters](#)

Hidden ☐

Channel Number:

**Save** **Cancel** **Help**

- 5 Select the **Enable EAS Channel Suppression** option. A check mark should appear in the box.



The image shows a 'Set Up Source' dialog box with the following fields and controls:

- Source Name: WXPT TV
- Source ID: 999
- Enable EAS Channel Suppression: ☒
- SDV Status: ☒ None ☐ Active ☐ Inactive
- Hidden: ☐
- Channel Number: (empty field)
- Buttons: Save, Cancel, Help

- 6 Click **Save**. The DNCS will still create and send SCTE-18 EAS messages for that source; however, the hosts that receive the EAS messages will ignore them.

## For 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.



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