



ISDP Set-Top Tips, Configuration, and Troubleshooting Guide

Please Read

Important

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

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About This Guide

Introduction

This guide provides troubleshooting information to help you maintain IPTV Services Delivery Platform (ISDP) set-tops in good working order.

Purpose

After reading this guide, you should be able to provide quick and accurate responses to your customers to help them resolve issues they may have with their set-tops.

Audience

This guide is written for customer service representatives (CSRs), headend technicians, and customer application engineers who provide support to subscribers for ISDP set-tops.

Document Version

This is the second formal release of this document.

1

Set-Top Boot Sequence

This chapter describes both the sequence of events that occur when a set-top boots, including the LED blinking pattern that a set-top should display after a set-top has rebooted.

In This Chapter

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- LED Indicators Displayed During Boot Sequence 8
- Boot Sequence Error Display Codes 10

Set-Top Boot Overview

ISDP set-tops follow a different boot sequence depending upon how they receive their IP addresses:

- **NAT environment** - When deployed in a Network Address Translation (NAT) environment, a set-top acquires its IP address from the residential gateway. In this configuration, the set-top connects to a STUN (Simple Transversal of UDP Over NAT) server on the IPTV Services Delivery System (ISDS). A STUN server allows a set-top that resides behind a NAT device to discover its public address. Additionally, a STUN server enables the ISDS to bypass a host and connect directly to a Cisco set-top.
- **Bridged Mode environment** - When deployed in Bridged Mode environment, a set-top acquires its IP address from the DHCP server.

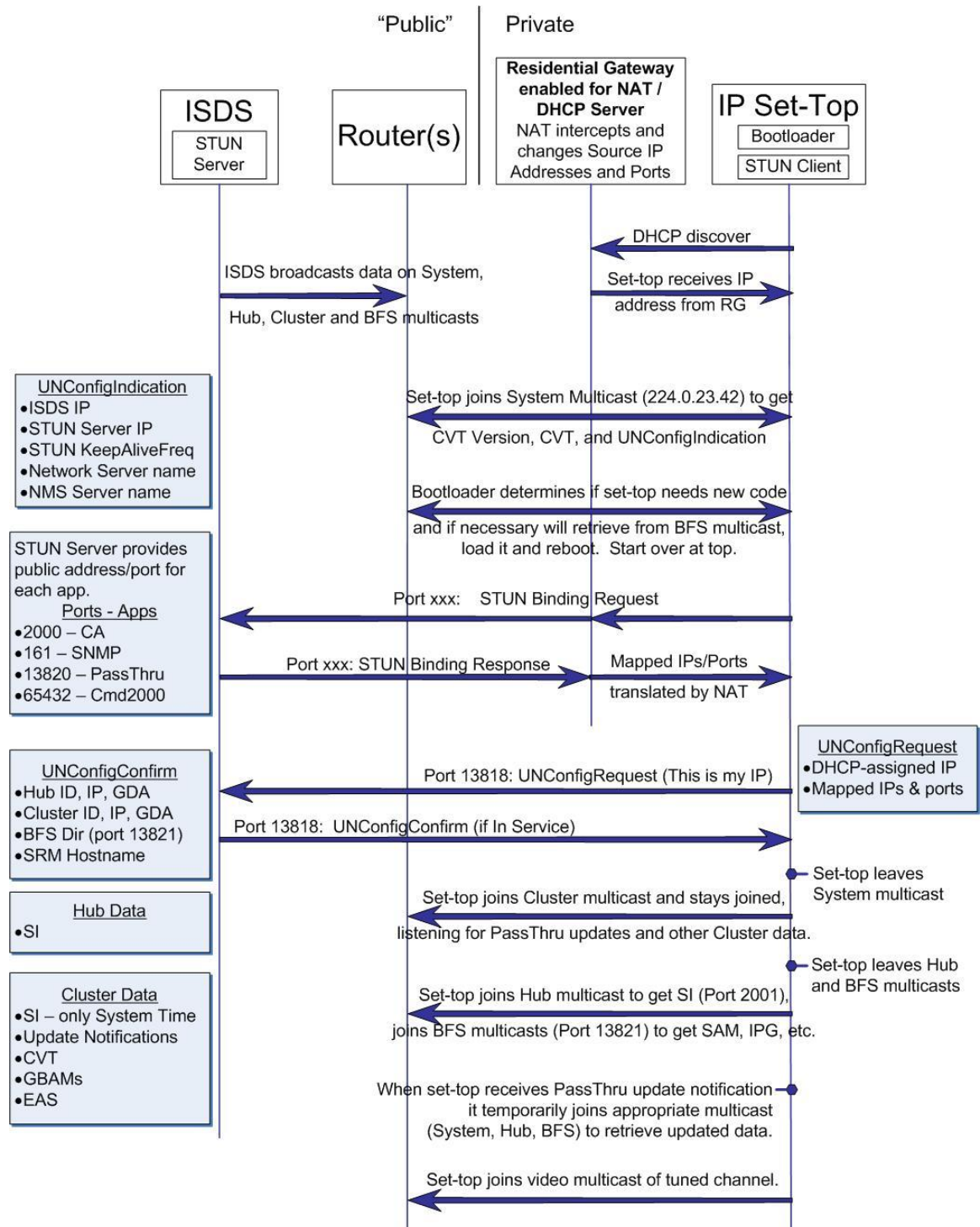
Requirement for Successful Boot

Whether a set-top is deployed in a NAT or a Bridged Mode environment, the set-top Administrative status must be set to **In Service Two Way** on the ISDS for the boot process to succeed. Otherwise, the set-top is not allowed to register with the ISDS and the boot process will stop with the set-top on the Startup screen.

The following diagrams summarize the set-top boot process for each type of home environment: NAT or Bridged Mode.

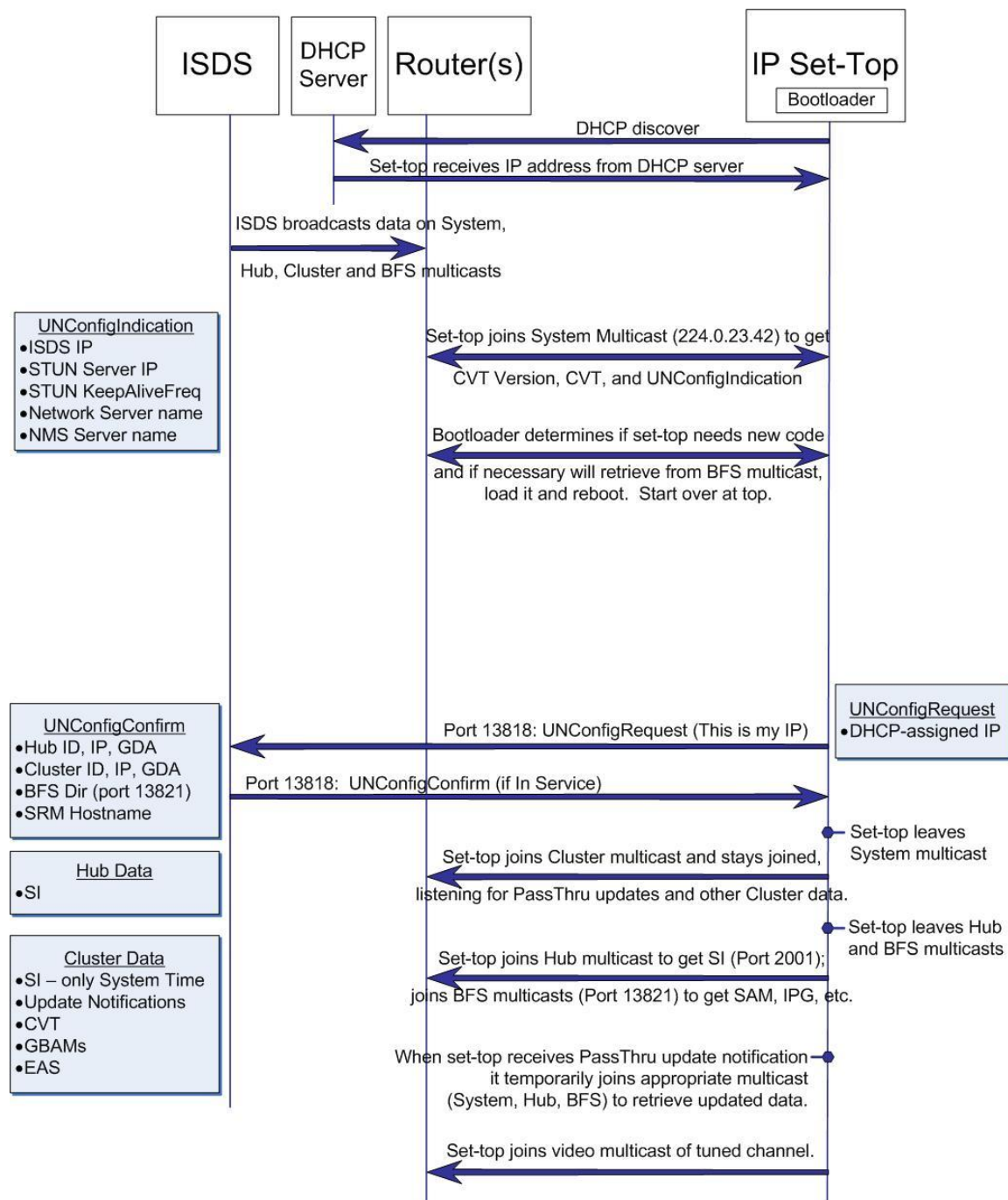
ISDP Boot Sequence in a NAT Home Environment

As the following diagram indicates, in a NAT environment, the residential gateway issues an IP address to a set-top.



ISDP Boot Sequence in a Bridge Mode Home Environment

As the following diagram indicates, in a Bridged Mode environment, the DHCP server issues an IP address to a set-top.



Set-Top LEDs During Boot Sequence

The following table shows expected results of the set-top LEDs and television monitor during the boot sequence.

Stage	Set-Top Activity	LED Results
1	Power is applied to the set-top, or the set-top is rebooted.	On the front of the set-tops, the Power LED blinks and all other LEDs turn on.
2	The bootloader process begins by starting the power-on self-test (POST) and then the Dynamic Host Configuration Protocol (DHCP) discover process to retrieve its IP address and other information from the DHCP server.	When the POST successfully completes, the Power LED continues to blink and the Link LED turns on. All other LEDs remain off.
3	Set-top acquires its IP address. The ISDS sends out System, Hub, Cluster, and BFS Multicast data to the network for the set-top to read when needed. The set-top joins the system multicast (224.0.23.42) and begins to process CVT data.	The Power LED continues to blink and the Link LED turns on. All other LEDs remain off.
4	Set-top successfully joins the system multicast (224.0.23.42) and processes the CVT version and CVT.	The Record LED blinks a few times and then pauses as the set-top processes CVT information. If the present code on the set-top is correct, the set-top proceeds with launching the currently installed code. If the set-top needs to load code, the Record LED will blink again as the download process starts. If the code on the set-top is incorrect and the CVT does not indicate the version of code that the set-top should have, the set-top reboots.
5	Set-top sends a UNConfigRequest to the ISDS to establish its IP address with the ISDS. The ISDS replies by sending the set-top a UNConfigConfirm that contains the set-top Hub ID, GDA Cluster ID, GDA BFS directory, and SRM Hostname.	The Power LED continues to blink and the Link LED turns on. All other LEDs remain off.

Chapter 1 Set-Top Boot Sequence

Stage	Set-Top Activity	LED Results
6	Set-top joins the Cluster multicast and stays joined to listening for PassThru updates and other Cluster data.	The Power LED continues to blink and the Link LED turns on. All other LEDs remain off.
7	Set-top leaves the system multicast and joins the Hub multicast to obtain system information (SI) data. Joins the BFS multicast to obtain SAM and IPG data.	The Power LED continues to blink and the Link LED turns on. All other LEDs remain off.
8	Set-top receives PassThru update notification and it temporarily joins the appropriate multicast to retrieve updated data.	The Power LED continues to blink and the Link LED turns on. All other LEDs remain off.

Troubleshoot Set-Top

The following table provides possible solutions for set-tops that boot unsuccessfully.

Status	Indication	Recommended Action
Set-top boots and indicates it failed POST.	A hardware failure has occurred.	Return the set-top to Cisco for repair. For assistance, see <i>Return Products for Repair</i> (on page Error! Bookmark not defined.).
Set-top boots and indicates it reads CVT (record light flashes for a few seconds) and then reboots again.	Set-top does not have 2nd stage bootloader (no code has been loaded).	1 Check configuration of ISDS to make sure a download is configured for this set-top type. 2 If this check does not point to a problem try a second set-top of the same type. – If one set-top works and the other fails, the failed set-top should be returned to Cisco for repair. For assistance, see <i>Return Products for Repair</i> (on page Error! Bookmark not defined.). – If both set-tops fail, it is most likely a configuration issue. Contact Cisco Services to open a case.
Set-top boots and indicates it reads CVT (record light flashes for a few seconds) and then attempts to load code before rebooting again.	Set-top is unable to process the software file.	1 Check the configuration of ISDS to make sure the software file is good. Try loading a different file, and check to see that the BFS carousel is being propagated to the set-top using Wireshark or a similar tool. 2 If this check does not point to a problem, try a second set-top of the same type. – If one set-top works and the other fails, the failed set-top should be returned to Cisco for repair. For assistance, see <i>Return Products for Repair</i> (on page Error! Bookmark not defined.). – If both set-tops fail, it is most likely a configuration issue. Contact Cisco Services to open a case.

LED Indicators Displayed During Boot Sequence

The following table shows an example of front panel LED boot sequence blinking patterns that appear after AC power is applied to the set-top or after the set-top is rebooted.

Note: Times are approximate and vary based on image size and download rate.

●=On ○=Off ⊙=Blink ⊗=Fast Blink

Time Elapsed (Approx)	Pwr LED	Link LED	HD LED	REC LED	Status
2 sec	○	○	○	○	Power on/reset
1 sec	⊙	●	●	●	All on
<1 sec	⊙	○	○	○	Begin bootloader startup
5 sec	⊙	○	○	○	Power-on self-test / check flash CRCs
2 sec	⊙	○	○	○	Begin DHCP / network activity
1 sec	⊙	●	○	○	IP address acquired
1 sec	⊙	●	○	⊙	Downloading directory
Typically 5 to 10 minutes	⊙	●	○	⊙	Downloading update image
10 sec	⊙	●	○	⊙	Integrity and authentication check
10 sec	⊙	●	○	⊗	Erasing flash
20 sec	⊙	●	○	⊗	Writing flash
n/a	⊙	●	○	○	Flash write complete
20 sec	●	●	○	○	Authentication check
n/a	○	●	○	○	Control passing to next stage (Link LED is actual link state)

Notes:

- When complete, the **Power** LED goes off for a long period of time.
- The stages shown in the shaded rows are only performed when downloading updates.

LED Error Indications

The following table shows an example of the front panel LED display if an error occurs during the boot sequence or software update.

●=On ○=Off ◉= Blink ⊙=Fast Blink

Time Elapsed (Approx)	Pwr LED	Link LED	HD LED	REC LED	Status
n/a	◉	◉	◉	◉	Hard-error (non-recoverable)
n/a	◉	◉	◉	●	Soft-error (recoverable, will reboot)

Boot Sequence Error Display Codes

When the Stage 1 bootloader fails, a blink pattern is displayed on the front panel LEDs.

For hard errors, which are non-recoverable errors (for example, DRAM test fail, flash write fail), all LEDs blink.

For soft errors, which are recoverable with a new download, all LEDs blink except the REC LED which remains on.

The following table shows the various errors and corresponding codes:

●=On ○= Blinking

Blink-Pattern				Failure
Pwr	Link	HD	REC	
○	○	○	●	Internal bootloader error
○	○	○	●	Could not find next-stage image to launch
○	○	○	●	Next-stage image is corrupt
○	○	○	○	DRAM test failed
○	○	○	○	Locked-Objects table corrupt
○	○	○	○	KeyCerts table corrupt
○	○	○	○	Platform section corrupt
○	○	○	○	Identity section corrupt
○	○	○	○	Flash write failure
○	○	○	○	Flash type incompatible

2

Set-Top Diagnostic Pages

After the set-top has completed booting, you can access diagnostic pages that are helpful for troubleshooting common set-top issues. This chapter describes the following ways to use diagnostic pages when troubleshooting set-top issues:

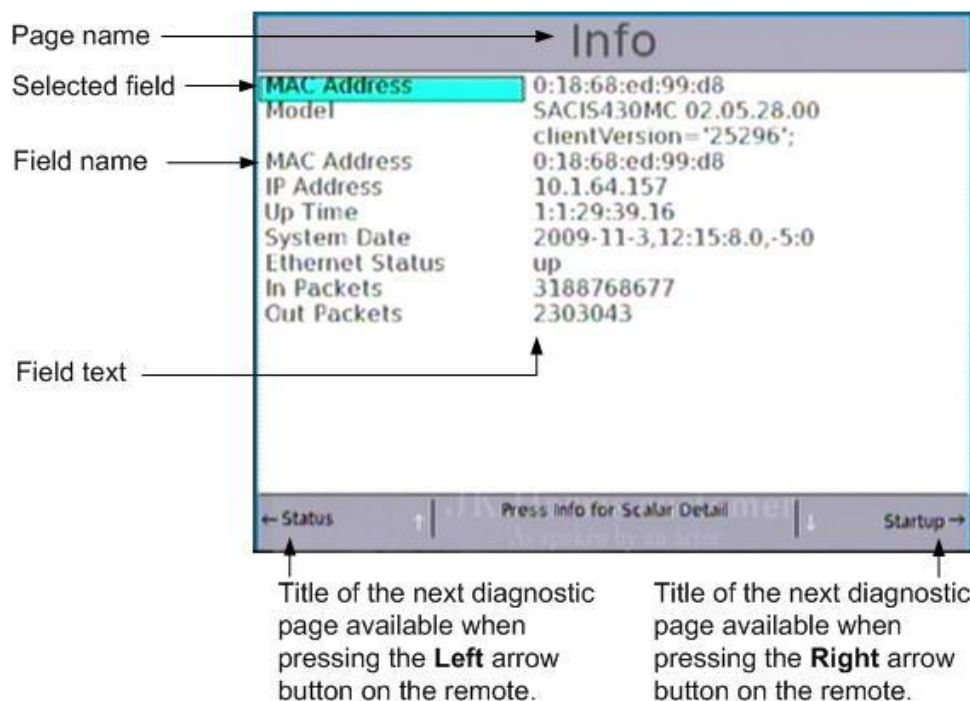
- The layout of a diagnostic page
- How to display and navigate diagnostic pages
- Recommendations for using certain display methods to diagnose specific problems, such as macroblocking.
- The fields and possible values that may be shown on diagnostic pages
- How to use the diagnostic pages to change set-top settings

In This Chapter

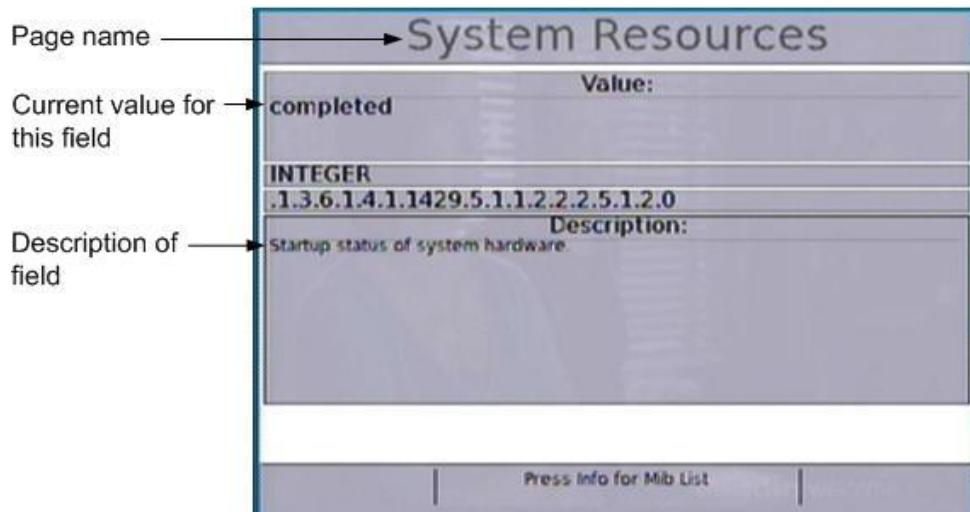
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Layout of Diagnostic Pages

This section uses examples of diagnostic pages to describe where key elements are located on a diagnostic page. For example, the following example shows the Info diagnostic page with the **MAC Address** field selected. When a field is selected, a blue band highlights the selected field.



The following example shows the System Resource informational page and the layout of its key elements.



Display Diagnostic Pages

This section provides procedures to help you use the remote control to perform the following tasks:

- Display and navigate through on-screen diagnostic pages
- Display descriptions of the fields that appear on a diagnostic page
- Display a blended image
- Exit the diagnostic pages

You can use the remote control to display diagnostic pages whenever the set-top is on or is in the process of starting up. A blinking **Power** LED (on the front of the set-top) indicates that the set-top is on.

Display and Navigate Diagnostic Pages

- 1 Press and hold the **OK** button until the HD LED blinks on the front of the set-top.
- 2 Press the **Down** arrow button. The Startup page appears, similar to the following example:

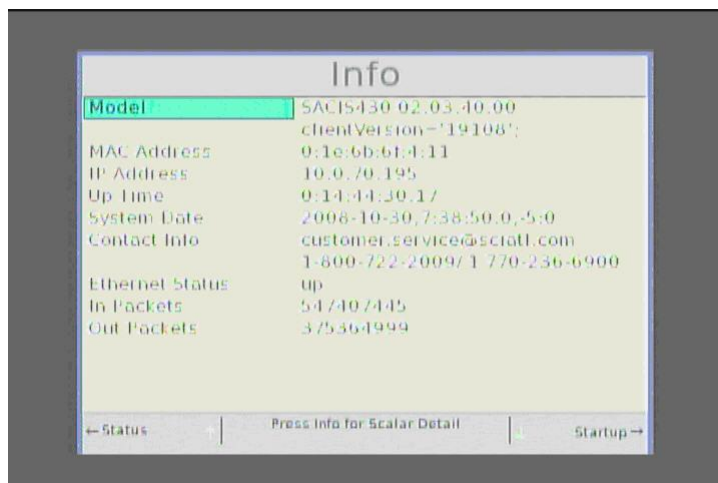


- 3 To view another diagnostic page, press the **Left** or **Right** arrow button. The next page in sequence is displayed.
- 4 To exit the diagnostic pages, press the **Exit** button.

Display a Blended Image

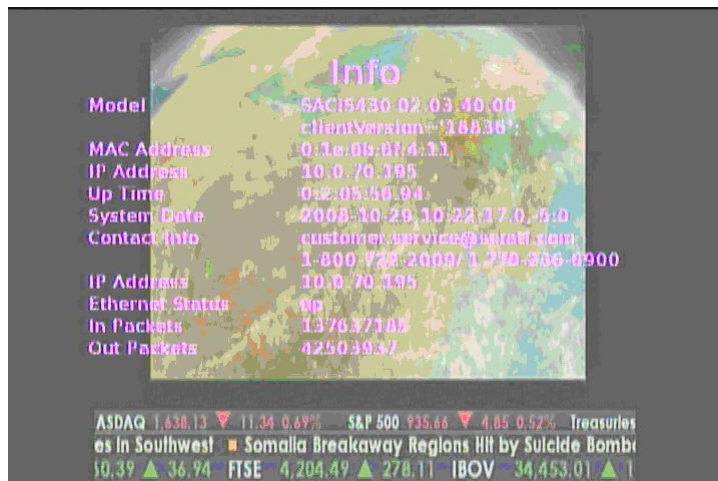
Follow these instructions to display video for the current channel in combination with the diagnostic page. This is referred to as a *blended image*.

- 1 Press and hold the **OK** button until the HD LED blinks on the front of the set-top.
- 2 Press the **Down** arrow button. The Startup page appears.
- 3 Press the Left or Right arrow to scroll through the diagnostic pages to find the page you want to examine. In this example, we've displayed the Info page.



- 4 To display a blended image, press the **Guide** button. Video for the current channel is displayed behind the diagnostic page, similar to the following example.

Note: To display another diagnostic page, press the **Left** or **Right** arrow button. The next page in sequence is displayed on top of the video.



- 5 To exit the diagnostic pages, press the **Exit** button.

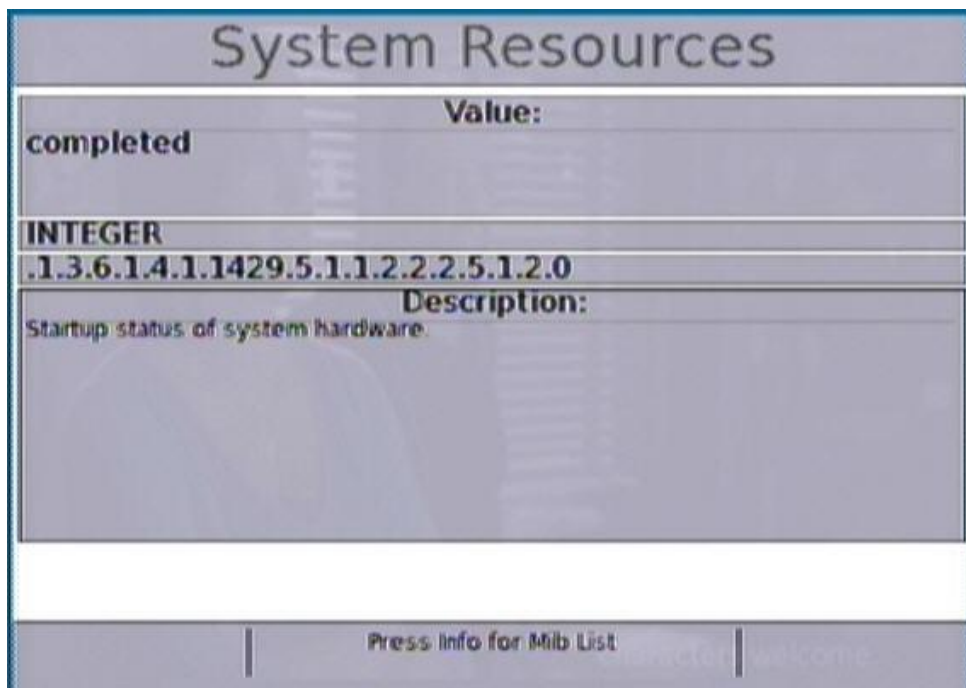
Display Field Descriptions

- 1 Press and hold the **OK** button until the HD LED blinks on the front of the set-top.
- 2 Press the **Down** arrow button. The Startup page appears, similar to the following example:

Note: To display another diagnostic page, press the **Left** or **Right** arrow button. The next page in sequence is displayed.



- 3 To view information about the fields in a diagnostic page, press the **Up** or **Down** arrow button to select a field. For example, from the Startup page, you might select the System Resources field.
- 4 When the field you want to learn more about is selected, press the **Info** button to display information about the selected field. A description page displays, similar to the following example.



- 5 To return to the previous diagnostic page (in this example, the Startup page), press the **Info** button again to close the informational page.
- 6 To exit the diagnostic pages, press the **Exit** button.

Exit the Diagnostic Pages

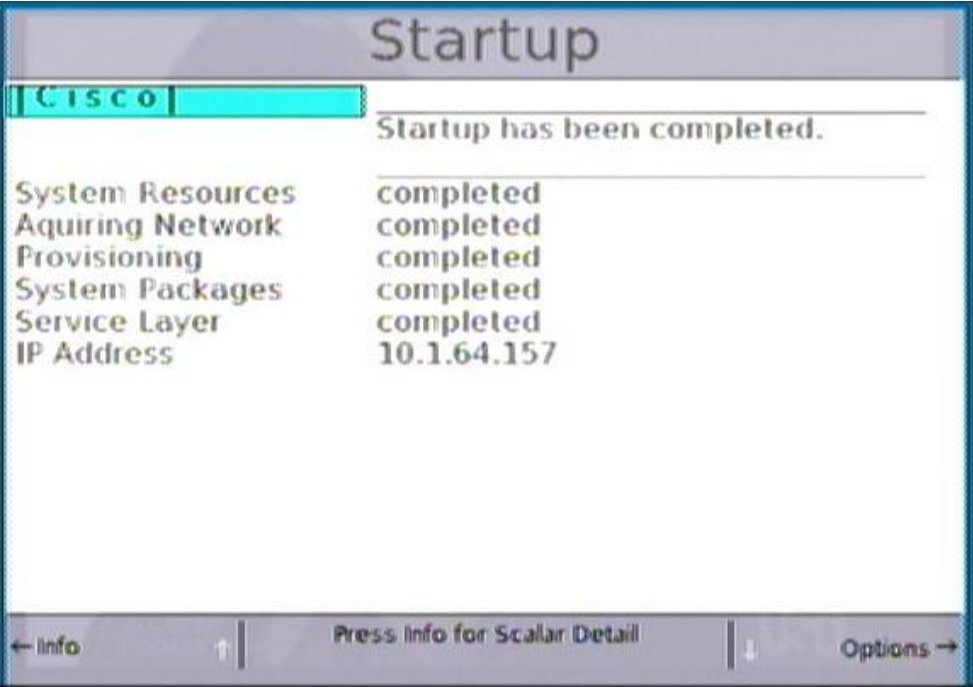
To exit the diagnostic pages, press the **Exit** button.

Diagnostic Pages Data

This section describes the fields and possible values that may be shown on diagnostic pages.

Startup Page

This section provides an example of the Startup diagnostic page and describes the fields that appear on this page.



Use the following table to assist in troubleshooting the boot process with the Startup diagnostic page.

Field Name	Description	Desired Value and Corrective Action
System Resources	The status of set-top hardware. The following values may be shown for this field: ■ processing - internal initialization of the set-top memory, hardware registers, and software processes ■ waiting - similar to the processing state, except some internal hardware register has not fully initialized ■ completed - set-top is internally configured to proceed to connect to the network	■ Completed is the desired value for this field. ■ If another value is shown, verify home network connections and reboot the set-top to see if this corrects the situation. If these changes are not effective, contact Cisco Services for assistance.
Acquiring Network	The set-top is attempting to acquire a valid IP address via DHCP. The following values may be shown for this field: ■ processing - set-top is engaged in the DHCP IP address acquisition protocol ■ waiting - set-top is waiting to receive information from the network; this state usually indicates that the set-top is waiting to start the DHCP process; extended waits can indicate failure on the network or headend configuration ■ completed - set-top has acquired a valid IP address from the headend server	■ Completed is the desired value for this field. ■ If another value is shown, try rebooting the residential gateway to correct the situation. If a residential gateway reboot is not effective, contact Cisco Services for assistance.

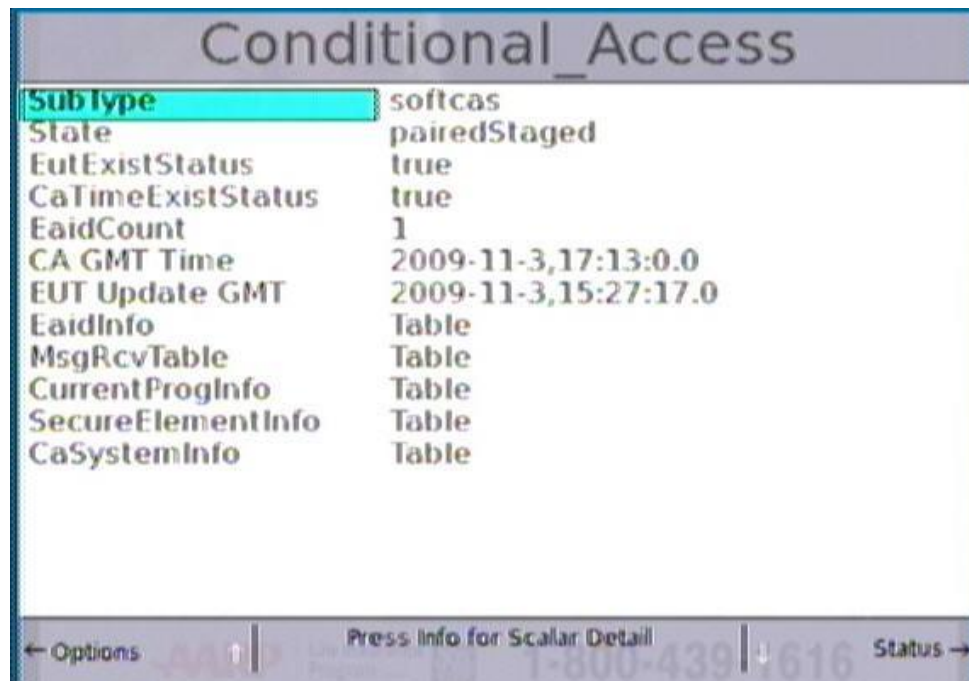
Field Name	Description	Desired Value and Corrective Action
Provisioning	The progress of provisioning the client in the network by obtaining BFS data downloads. The following values may be shown for this field: ■ processing - set-top is reading UNCI/UNCR/UNCC sign-on protocol from the BFS Note: The set-top toggles back and forth between the processing state and waiting state as it downloads BFS data. ■ waiting - set-top is waiting for further information from the headend; may indicate lack of headend staging of the set-top by the operator; can also indicate a network-wide issue involving network flow control setup ■ completed - set-top has received both general and set-top-specific information necessary for subsequent establishment of IP video or system information	■ Completed is the desired value for this field. ■ If another value is shown, try resetting and then rebooting the residential gateway to correct the situation. If these changes are not effective, contact Cisco Services for assistance. ■ If the set-top toggles back and forth between the processing state and waiting state, but does not reach the completed state, check for the following: – The set-top may be out of service. – The set-top does not receive the UNConfigConfirm response from the ISDS. – The BFS is not operating as expected. If these checks do not correct the situation, contact Cisco Services for assistance.

Field Name	Description	Desired Value and Corrective Action
System Packages	The progress the set-top has made in reading System Information (tuning data). The following values may be shown for this field: ■ processing - set-top is actively reading system information, including files from the BFS carousels Note: The set-top toggles back and forth between the processing state and waiting state up to one minute before reaching the completed state. ■ waiting - set-top is waiting to establish one or more IP flows necessary for reading system information ■ completed - set-top has completed reading all necessary system information required for AV program viewing	■ Completed is the desired value for this field. ■ If the status will not move beyond processing, the set-top may not be able to read files from the BFS. Verify that the BFS is operational on the ISDS and that the BFS-related multicast flows are able to reach the set-top over the network. If this occurs for a single set-top, confirm that the set-top is set to In Service Two way. If other set-tops are impacted, look for an upstream issue, either at the ISDS or at a router between the ISDS and the set-top.

Field Name	Description	Desired Value and Corrective Action
Service Layer	The status of the GUIDE protocol, which contains user information files, such as logos, long descriptions, and custom skins. The following values may be shown for this field: ■ processing - the Guide subsystem is still processing the previously received system information Note: The set-top toggles back and forth between the processing state and waiting state up to one minute before reaching the completed state. ■ waiting - the Guide subsystem is waiting for an internal state to clear or for a network flow to be established ■ completed - the Guide subsystem has finished processing all required system information and is ready for interactive use	Completed is the desired value for this field.
IP Address	The IP address assigned to the set-top by the residential gateway or DHCP server.	The IP address should be the only value shown for this field. If you see an unexpected IP address contact Cisco Services for assistance.

Conditional Access Page

This section provides an example of the Conditional Access diagnostic page and describes the fields that appear on this page.



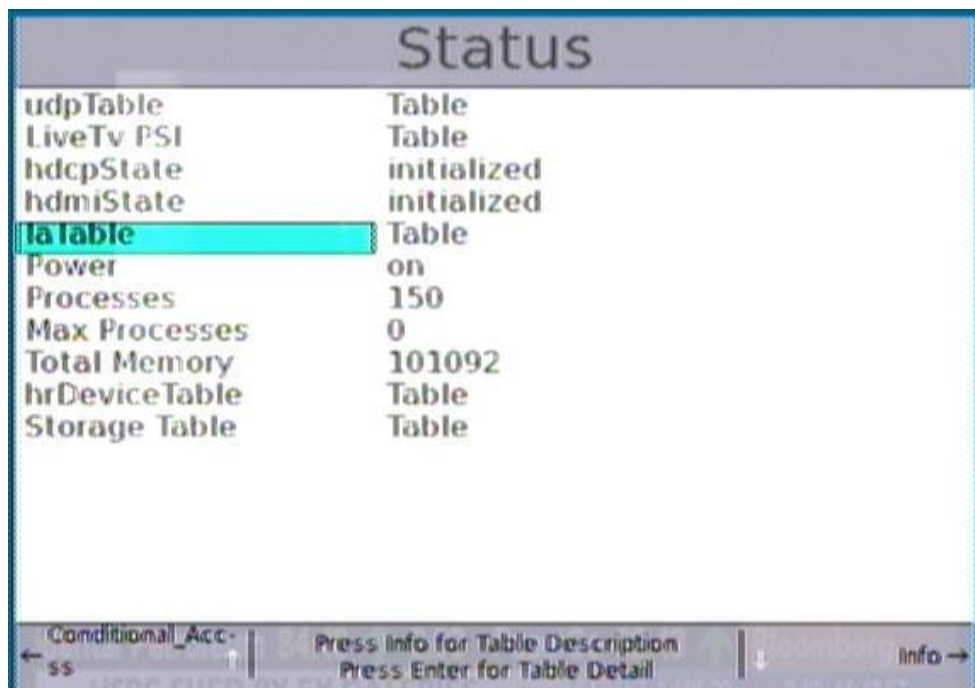
The following table describes the fields and possible values for the Conditional Access diagnostic page.

Field Name	Description	Possible Values
SubType	Indicates the sub type of Conditional Access System (CAS) that is in use	■ Softcas ■ PowerKEY®
State	Indicates the state of the CAS	■ pairedStaged - set-top has received its staging EMMs ■ pairedUnstaged - set-top has not received its staging EMMs (Send a modDhctCfg -s <mac> transaction to restage the set-top.)
EutExistStatus	Indicates whether or not the set-top has received the Entitlement Unit Table (EUT)	■ true ■ false
CATimeExistStatus	Indicates whether or not the authenticated time (CA time) is available	■ true ■ false

Field Name	Description	Possible Values
EaidCount	Indicates the number of individual packages assigned to the set-top	■ A value of 1 or more Note: A value of 1 shows if the set-top is staged.
CA GMT Time	Indicates the current authenticated time (CA time) received from the controller	■ [Date, Time] - indicates the date and time received ■ 00000000 - indicates the time was never received
EUT Update GMT	Indicates the last time the controller received an update to the EUT	■ [Date, Time] - indicates the date and time received ■ 00000000 - indicates the time was never received
EaidInfo	Lists the EIDs	Table (To view tables, press OK to see the list and OK to go back.)
MsgRcvTable	Displays information about messages received for each message type	Table (To view tables, press OK to see the list and OK to go back.)
CurrentProgInfo	Displays information for each currently active program	Table (To view tables, press OK to see the list and OK to go back.)
SecureElementInfo	Lists the table of secure elements, such as PowerKEY secure micros	Table (To view tables, press OK to see the list and OK to go back.)
CaSystemInfo	Lists the conditional access systems present in the set-top	Table (To view tables, press OK to see the list and OK to go back.)

Status Page

This section provides an example of the Status page.

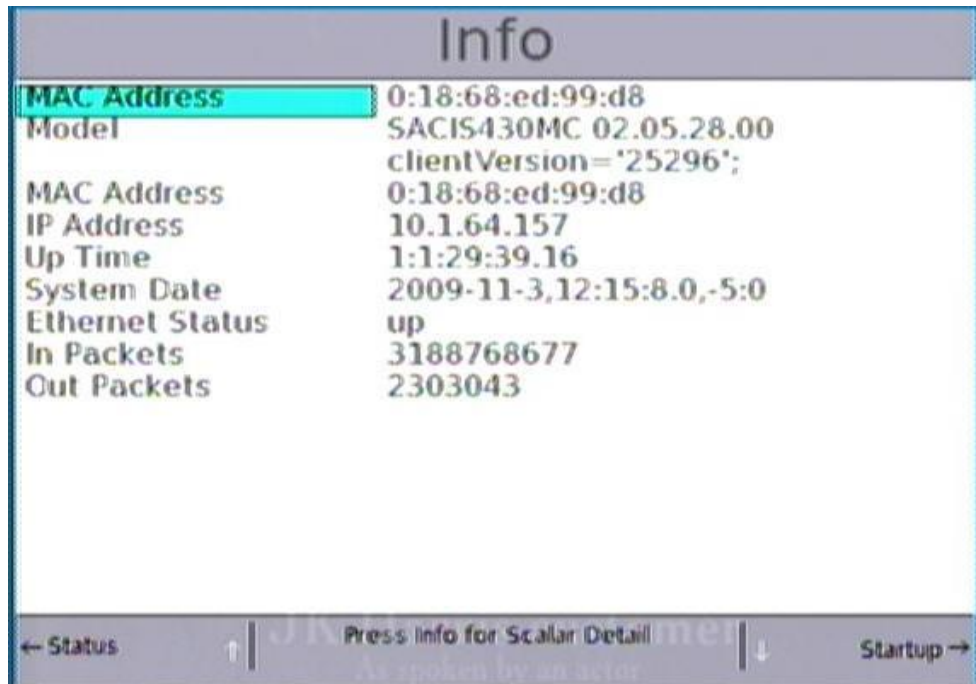


Status	
udpTable	Table
LiveTv PSI	Table
hdcpState	initialized
hdmiState	initialized
laTable	Table
Power	on
Processes	150
Max Processes	0
Total Memory	101092
hrDeviceTable	Table
Storage Table	Table

Conditional_Acc- ss Press Info for Table Description Press Enter for Table Detail Info ->

Info Page

This section provides an example of Info diagnostic page and describes the fields that appear on this page.



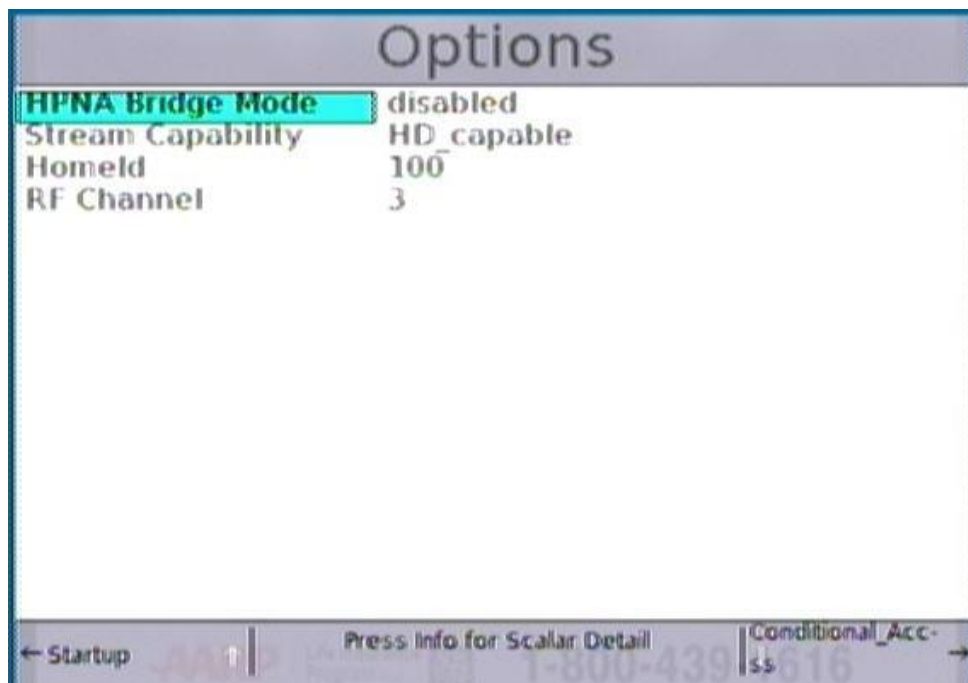
The following table describes the fields and possible values for the Info diagnostic page.

Field Name	Description	Possible Values
MAC Address	MAC address of the set-top	MAC address assigned to the set-top
Model	Model of set-top	A factory-assigned text string that includes the hardware model and software version (client version)
MAC Address	MAC address of the set-top	MAC address assigned to the set-top.
IP Address	IPv4 address of the set-top	Any valid IPv4 address in the format AA.BB.CC.DD.EE.FF
Up Time	Amount of time that power has been applied to the set-top	Days:Hours:Minutes:Seconds.hundredths of a second
System Date	The current time	Year-Month-Day, Hour:Minutes:Seconds, Internal number

Field Name	Description	Possible Values
Ethernet Status	Ethernet device state	■ Up - Ethernet connectivity has been established ■ Down - connectivity has not been established
In Packets	Number of IP packets received since last set-top boot	0- 4294967295
Out Packets	Number of IP packets transmitted since last set-top boot	0- 4294967295

Options Page

This section provides an example of the Options page and describes the fields that appear on this page.



The following table describes the fields and possible values for the Options diagnostic page.

Field Name	Description	Possible Values
HPNA Bridge Mode	Indicates the status of bridging HPNA connection to Ethernet	■ enabled - HPNA Bridge Mode is currently enabled To enable this setting, go to <i>Enable HPNA Bridge Mode</i> (on page 28). ■ disabled - HPNA Bridge Mode is currently disabled
Stream Capability	Indicates whether the set-top can process high-definition (HD) or standard-definition (SD) compliant AV streams Note: The ISDS operator can control this capability via an _SDO (standard-definition only) SAM service.	■ HD-capable - set-top can process and display HD or SD AV programming streams ■ SD-only - set-top can process and display SD AV programming streams only.
HomeId	Identifies the home identifier (HomeID). The HomeID is the number that is programmed into an RF remote and sent from the remote to the set-top to identify a set-top association to that remote. The typical HomeID range is 0 to 999.	■ Any number from 0 to 999 ■ The default is 100.
RF Channel	Specifies the UHF modulator channel number that a TV receiver should be tuned to in order to view AV programming when the set-top is connected to the TV with an RF cable	Any of the following channel numbers: ■ 3 (default) ■ 4 ■ 55 ■ 65

Use Diagnostic Pages to Change Set-Top Settings

This section describes how to use the diagnostic pages to change set-top settings.

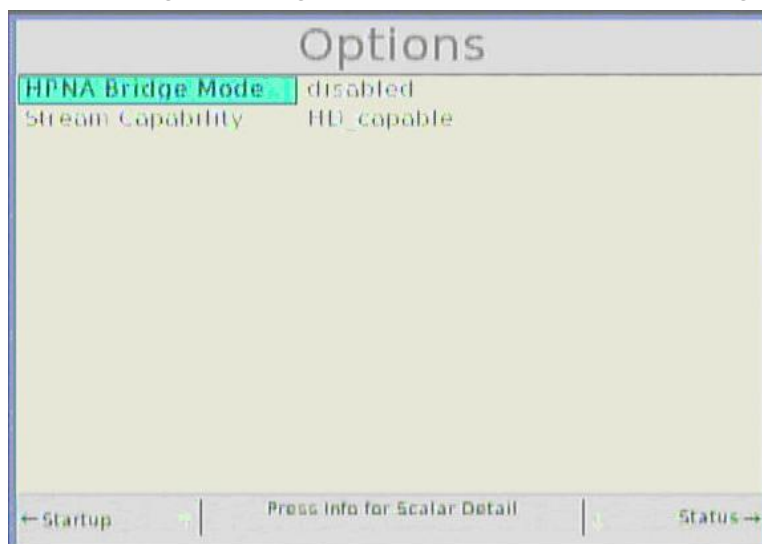
Enable HPNA Bridge Mode

Cisco ISDP set-tops support Home Phoneline Networking Alliance (HPNA™) bridging. However, HPNA Bridged mode option is disabled by default. HPNA Bridge mode is typically enabled when the set-top is connected to the network by means other than an Ethernet cable connected to the Ethernet port on the set-top.

Important: If HPNA Bridge Mode is enabled, but the home network does not use HPNA, macroblocking can occur.

To enable the set-top for HPNA Bridged mode, follow this procedure.

- 1 On the remote control, press and hold the **OK** button until the HD LED blinks on the front of the set-top.
- 2 Press the **Down** arrow button. The Startup page appears.
- 3 Press **Right** arrow button to move through the diagnostic pages until the Options diagnostic page appears, similar to the following example.



- 4 Press and hold the **Phone** button on the remote control until the HD LED blinks on the front of the set-top.
- 5 With **HD** LED flashing, press the **Down** Arrow button on the remote control to enable the HPNA Bridge mode, and then wait for five seconds for the Options diagnostic page to display this change.
- 6 When the Options page lists the HPNA Bridge Mode as "enabled," press the **Exit** button to exit the diagnostic pages.

Change Stream Capabilities

Follow this procedure to configure the set-top to either display all services it is authorized to display (both HD and SD) or to force the set-top to display only authorized SD services.

- 1 On the remote control, press the **VOD** button three times. The HD LED blinks on the front of the set-top.
- 2 Press the **Down** arrow button on the remote control to change stream capabilities from its current setting.
- 3 Press the **Exit** button to exit the diagnostic pages.

3

Tools to Manage Set-Tops

This chapter describes how to use the IIH and modDhctCfg utilities to troubleshoot and manage set-tops.

In This Chapter

- The IIH Utility 32
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The IIH Utility

This section describes how to use the IIH utility with IPTV set-tops. IIH is a utility that allows you to send billing transactions to a single set-top or to a group of set-tops listed in a file. When rebooting a list of set-tops, you typically use a text editor such as vi to prepare a file that lists the set-tops by MAC address.

Important: Entering IIH with no options displays a list of all the commands supported by the IIH utility; however, only the commands that are supported for IPTV set-tops are covered in this document.

Reboot Set-Tops

Follow the instructions in this section to configure the IIH utility to reboot either a single set-top or a list of set-tops.

Rebooting an Individual Set-Top

Follow these instructions to reboot an individual set-top.

- 1 Open an xterm window on the ISDS.
- 2 Type **IIH -b [set-top MAC address]** and press **Enter**. The system reboots the specified set-top.

Notes:

- Substitute the MAC address of the set-top for [set-top MAC address]. Do not type the brackets [] in the command.
- The MAC address can be formatted with or without colons (:).

Examples:

IIH -b 00:02:DE:A6:45:92

IIH -b 0002DEA64592

Rebooting a List of Set-Tops

Follow these instructions to reboot a list of set-tops.

Note: When the IIH utility processes a list of set-tops, the utility processes 10 set-tops at a time to avoid monopolizing the bossServer process on the ISDS.

- 1 Open an xterm window on the ISDS.
- 2 Type **IIH -b [text file name]** and press **Enter**.

Note: Substitute the name (including path) of the text file for [text file name]. Do not type the brackets [] in the command.

Example: **IIH -b /tmp/maclist.txt**

Result: A confirmation message, similar to the following, appears:

```
DHCTs listed in file "[filename]" will be Rebooted ...
[#] MAC addresses will be involved.
Do you want to continue? (Y/N)
```

- 3 Type **y** and press **Enter**. The system lists the MAC addresses of the set-tops as it sends a bootDhct transaction to each.

Refresh Set-Top EMMs

Follow the instructions in this section to configure the IIH utility to refresh the EMMs for a single set-top or for a list of set-tops by sending a dhctInstantHit transaction to specified set-tops.

Refreshing the EMMs of an Individual Set-Top

Follow these instructions to refresh the EMMs of an individual set-top.

- 1 Open an xterm window on the ISDS.
- 2 Type **IIH -i [set-top MAC address]** and press **Enter**. The system refreshes the specified set-top with its EMMs.

Notes:

- Substitute the MAC address of the set-top for [set-top MAC address]. Do not type the brackets [] in the command.
- The MAC address can be formatted with or without colons (:).

Examples:

IIH -i 00:02:DE:A6:45:92

IIH -i 0002DEA64592

Refreshing the EMMs of a List of Set-Tops

Follow these instructions to refresh the EMMs of a list of set-tops.

Note: When the IIH utility processes a list of set-tops, the utility processes 10 set-tops at a time to avoid monopolizing the bossServer process on the ISDS.

- 1 Open an xterm window on the ISDS.
- 2 Type **IIH -i [text file name]** and press **Enter**.

Note: Substitute the name (including path) of the text file for [text file name]. Do not type the brackets [] in the command.

Example: **IIH -i /tmp/maclist.txt**

Result: A confirmation message, similar to the following, appears:

```
DHCTs listed in file "[filename]" will be Instant-Hit ...  
[#] MAC addresses will be involved.  
Do you want to continue? (Y/N)
```

- 3 Type **y** and press **Enter**. The system lists the MAC addresses of the set-tops as it sends a dhctInstantHit transaction to each one.

Reset Set-Top NVM

Follow the instructions in this section to configure the IIH utility to reset the non-volatile memory (NVM) of a single set-top or for a list of set-tops. Resetting the NVM reapplies the default (factory) settings to the set-top.

Important: Resetting the NVM on DVR set-tops instructs set-tops to erase all DVR recordings and scheduled recordings as default settings are reapplied to DVR set-tops.

Resetting the NVM of an Individual Set-Top

Follow these instructions to reset the NVM of an individual set-top.

- 1 Open an xterm window on the ISDS.
- 2 Type **IIH -r [set-top MAC address]** and press **Enter**. The system resets the NVM of the specified set-top.

Notes:

- Substitute the MAC address of the set-top for [set-top MAC address]. Do not type the brackets [] in the command.
- The MAC address can be formatted with or without colons (:).

Examples:

IIH -r 00:02:DE:A6:45:92

IIH -r 0002DEA64592

Resetting the NVM of a List of Set-Tops

Follow these instructions to reset the NVM of a list of set-tops.

Note: When the IIH utility processes a list of set-tops, the utility processes 10 set-tops at a time to avoid monopolizing the bossServer process on the ISDS.

- 1 Open an xterm window on the ISDS.
- 2 Type **IIH -r [text file name]** and press **Enter**.

Note: Substitute the name (including path) of the text file for [text file name]. Do not type the brackets [] in the command.

Example: **IIH -r /tmp/maclist.txt**

- 3 Type **y** and press **Enter**. The system lists the MAC addresses of the set-tops as it sends a resetClientNvm transaction to each.

Reset Set-Top Parental Control PIN

Follow the instructions in this section to configure the IIH utility to reset the Parental Control PIN for a single set-top or for a list of set-tops.

Resetting the Parental Control PIN of an Individual Set-Top

Follow these instructions to reset the Parental Control PIN for an individual set-top.

- 1 Open an xterm window on the ISDS.
- 2 Type **IIH -bpDDDD [set-top MAC address]** and press **Enter**. The system resets the Parental Control PIN of the specified set-top.

Notes:

- Substitute the MAC address of the set-top for [set-top MAC address]. Do not type the brackets [] in the command.
- The MAC address can be formatted with or without colons (:).

Examples:

IIH -bpDDDD 00:02:DE:A6:45:92

IIH -bpDDDD 0002DEA64592

Resetting the Parental Control PIN for a List of Set-Tops

Follow these instructions to reset the Parental Control PIN for a list of set-tops.

Note: When the IIH utility processes a list of set-tops, the utility processes 10 set-tops at a time to avoid monopolizing the bossServer process on the ISDS.

- 1 Open an xterm window on the ISDS.
- 2 Type **IIH -bpDDDD [text file name]** and press **Enter**.

Notes:

- Substitute the new PIN number for **DDDD**. For example, if the new PIN is 1234, you would substitute 1234 for DDDD.
- Substitute the name (including path) of the text file for [text file name]. Do not type the brackets [] in the command.

Example: IIH -bp1234 /tmp/maclist.txt

- 3 When a confirmation message appears, type **y** (for Yes) and press **Enter**. The system lists the MAC addresses of the set-tops as it sends a Reset PIN transaction to each set-top.

Reset Set-Top Purchase PIN

Follow the instructions in this section to configure the IIH utility to reset the Purchase PIN for a single set-top or for a list of set-tops.

Resetting the Purchase PIN of an Individual Set-Top

Follow these instructions to reset the Purchase PIN for an individual set-top.

- 1 Open an xterm window on the ISDS.
- 2 Type **IIH -ppDDDD [set-top MAC address]** and press **Enter**. The system resets the Purchase PIN of the specified set-top.

Notes:

- Substitute the MAC address of the set-top for [set-top MAC address]. Do not type the brackets [] in the command.
- The MAC address can be formatted with or without colons (:).
- Substitute the new PIN number for DDDD. For example, if the new pin is 1234, you would substitute 1234 for DDDD.

Examples:

IIH -pp1234 00:02:DE:A6:45:92

IIH -pp1234 0002DEA64592

Resetting the Purchase PIN for a List of Set-Tops

Follow these instructions to reset the Purchase PIN for a list of set-tops.

Note: When the IIH utility processes a list of set-tops, the utility processes 10 set-tops at a time to avoid monopolizing the bossServer process on the ISDS.

- 1 Open an xterm window on the ISDS.
- 2 Type **IIH -ppDDDD [text file name]** and press **Enter**.

Notes:

- Substitute the new PIN number for **DDDD**. For example, if the new PIN is 1234, you would substitute 1234 for DDDD.
- Substitute the name (including path) of the text file for [text file name]. Do not type the brackets [] in the command.

Example: IIH -pp1234 /tmp/maclist.txt

- 3 When a confirmation message appears, type **y** (for Yes) and press **Enter**. The system lists the MAC addresses of the set-tops as it sends a Reset PIN transaction to each set-top.

The modDhctCfg Utility

You can use the modDhctCfg utility to transmit the ModifyDhctConfiguration transaction to set-tops. The ModifyDhctConfiguration transaction modifies the status and authorizations of one or more set-top records.

Staging Operations and the Billing Interface

When the modDhctCfg utility runs, it tends to compete for system resources with staging operations, as well as with the activities of the billing computer.

If you have to process a large number of set-tops with the modDhctCfg utility, and if time is important, consider temporarily disabling the billing interface and suspending staging operations.

Options

The following table describes the options that are available for use with the modDhctCfg utility.

Important: The modifyDhctConfiguration utility cannot be used to stage a set-top for the first time. The utility reads information about the set-top from the database to formulate a valid ModifyDhctConfiguration transaction. Set-tops must be staged according to normal staging procedures to populate the database properly.

Note: Do not type the brackets [] in any of the following commands.

Option	Purpose
-?	The -? option displays the help window associated with the modDhctCfg utility. Example: modDhctCfg -?
-v	The -v option displays the version number of the modDhctCfg that is installed on your system. Example: modDhctCfg -v
-h	The -h option specifies the hostname or IP address of the ISDS when the modDhctCfg utility executes on a remote computer. Example: modDhct -h172.18.28.176 +dms [set-top MAC address]
+a	Not applicable to ISDS.
-a	

Option	Purpose
-B#	The -B option sets the blocking factor for the modDhctCfg transaction. The blocking factor refers to the number of set-top records transmitted at one time in the modDhctCfg transaction. Note: The default blocking factor is 10. Example: <code>modDhctCfg -B50 [file name]</code>
-c#	Not applicable to ISDS.
+dms -dms	The +dms and -dms options enable (+) or disable (-) digital packages for the set-top. Example: <code>modDhctCfg +dms [set-top MAC address]</code>
+dis -dis	The +dis and -dis options are used to enable (+) or disable (-) the decryption of encrypted sessions. Example: <code>modDhctCfg +dis [set-top MAC address]</code>
-e#	Not applicable to ISDS.
+f -f	Not applicable to ISDS.
-l	The -l option instructs the ISDS to process imported set-top records from another ISDS. This option deletes the secure_micro record from the database and sets to null the ip_address field. To restore this data, the set-tops must reboot. Example: <code>modDhctCfg -l [file name]</code>
+i -i	Not applicable to ISDS.
+pXX -pXX	The +pXX and -pXX options add (+) or remove (-) package XX from a set-top. Example: <code>modDhctCfg +pHBO [set-top MAC address]</code>
!pQQQ	The !pQQQ option replaces all packages assigned to a set-top with the packages included in file QQQ. Note: File QQQ must contain only one package name per line. Example: <code>modDhctCfg !p[package file name] [set-top MAC address]</code>
-s	The -s option restages set-tops. The secure_micro record in the database is deleted and then re-added. Example: <code>modDhctCfg -s [file name]</code>

Using modDhctCfg

The instructions and examples in this section describe how to use the modDhctCfg utility for the options that our engineers think you are most likely to use.

The transaction that the utility sends is the same ModifyDhctConfiguration transaction that was sent to the set-top(s) the last time the set-tops received a ModifyDhctConfiguration transaction. The utility simply retrieves the data from the database and re-transmits it.

Important: The modifyDhctConfiguration utility cannot be used to stage a set-top for the first time. The utility reads information about the set-top from the database to formulate a valid ModifyDhctConfiguration transaction. Set-tops must be staged according to normal staging procedures to populate the database properly.

Sending modDhctCfg to a Single Set-Top

Follow these instructions to send the ModifyDhctConfiguration transaction to a single set-top.

- 1 Open an xterm window on the ISDS.
- 2 Type **modDhctCfg [set-top MAC address]** and press **Enter**. The system sends the ModifyDhctConfiguration transaction to the specified set-top.

Note: Substitute the MAC address of the set-top for [set-top MAC address]. Do not type the brackets [] in the command.

Example: **modDhctCfg 00:02:DE:4A:11:92**

Sending modDhctCfg to a List of Set-Tops

Follow these instructions to send the ModifyDhctConfiguration transaction to a list of set-tops.

- 1 Open an xterm window on the ISDS.
- 2 Type **modDhctCfg [text file name]** and press **Enter**. The system sends the ModifyDhctConfiguration transaction to all the set-tops represented in the file.

Note: Substitute the name of the file you prepared for [text file name]. Do not type the brackets [] in the command.

Example: **modDhctCfg /tmp/maclist.txt**

- 3 When a confirmation message appears, type **y** (for Yes) and press **Enter**. The system lists the MAC addresses of the set-tops as it sends a ModifyDhctConfiguration transaction to each set-top.

4

Manage Channel Logos

This chapter provides the requirements your system must meet in order to download standard channel logos to the ISDS so that they can then be downloaded to ISDP set-tops. It also provides requirements for creating custom logos and placing them on the ISDS for download to ISDP set-tops.

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Logo Requirements

The ISDP client supports downloadable channel logos, making it possible for you to display logos for any channel or service. You can use standard logos that have already been created for common services, or you can create your own logos. This section lists the requirements for the following logos that the ISDP client supports:

- **Large logos** - used in the "Info" banner
- **Small logos** - used in other applications

Specifications

When creating custom logos, make sure that they meet the following specifications.

Specification	Large (Info) Logos	Small Logos
Size	100px wide by 40px tall	30px wide by 30px tall
Position	As far right in the 100px space as possible	In the center of the 30px by 30px space
Color	8-bit color RGBA, non-interlaced	8-bit color RGBA, non-interlaced
Location on BFS	/bfs/isdpclient/galio/channel_logos.zip /logos	/bfs/isdpclient/galio/channel_logos.zip/ logos30x30
	Notes: ■ If a logo exists in the channel_logos.zip file, this logo will override the default logos built into Galio. ■ You can also add new logos using the channel_logos.zip file. For example, if you want to associate a newly created Walled Garden service with Logo ID 1 in the SAM Services Dialog, and a logo "1.png" exists in the logos30x30 and logos directory of the channel_logos.zip file, this logo will be used as the service logo (in the EPG, Info Banner, and Menu, if desired) for that Walled Garden Service.	Notes: ■ If a logo exists in the channel_logos.zip file, this logo will override the default logos built into Galio. ■ You can also add new logos using the channel_logos.zip file. For example, if you want to associate a newly created Walled Garden service with Logo ID 1 in the SAM Services Dialog, and a logo "1.png" exists in the logos30x30 and logos directory of the channel_logos.zip file, this logo will be used as the service logo (in the EPG, Info Banner, and Menu, if desired) for that Walled Garden Service.
File Type	Compressed PNG	Compressed PNG

Specification	Large (Info) Logos	Small Logos
File Name	Standard logos must be named according to the service number that is identified in <i>Standard IPTV Logos in Order by Logo Number</i> (on page 45) or <i>Standard IPTV Logos in Order by Channel Title</i> (on page 50). For example, the ABC Family Channel Logo must be named 10006.png.	Standard logos must be named according to the service number that is identified in <i>Standard IPTV Logos in Order by Logo Number</i> (on page 45) or <i>Standard IPTV Logos in Order by Channel Title</i> (on page 50). For example, the ABC Family Channel Logo must be named 10006.png.
Example		

Configuration Requirements

This section describes the requirements your system must meet in order to support downloadable channel logos.

ISDS Configuration

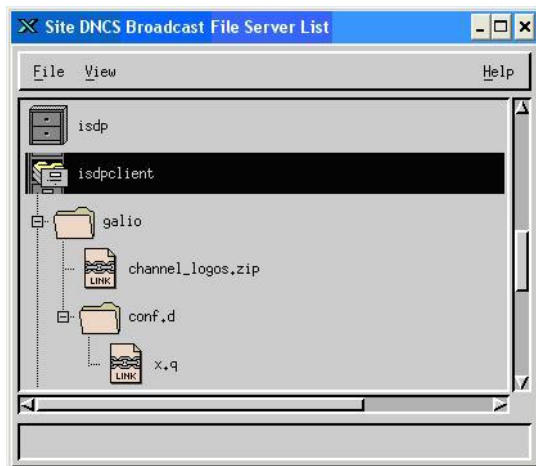
For ISDP 2.5 and earlier, your ISDS must be configured as described in this section in order to download logos to set-tops. Logos are only loaded once: at the time that the ISDP client boots.

The Logo directory is located here: `/bfs/isdpclient/v2_2_logos/<hub_id>/logo.png`, where `<hub_id>` is the hub that has been assigned to that operator.

BFS Configuration

In addition to these requirements, the BFS must be configured as described in this section.

- A file named **channel_logos.zip** must be placed in the BFS client directory `/bfs/isdpclient/galio`, as shown in the following example.



- The **channel_logos.zip** file must contain the following top-level directories:
 - **logos** - contains the 100px by 40px PNG logos.
 - **logos30x30** - contains the 30px by 30px PNG logos.

Important: If a logo exists in the channel_logos.zip file, this logo will override the default logos built into Galio.

- For standard logos, each logo should be named according to the number identified in *Standard IPTV Logos in Order by Logo Number* (on page 45) or *Standard IPTV Logos In order by Channel Title* (on page 50). For example, the ABC Family Channel Logo must be named 10006.png.

Standard IPTV Logos in Order by Logo Number

This section lists the number and name of common service logos in numerical order by logo number. When using these logos, the logo file name must match the service number identified in this section.

10000	@Max	10078	CNBC World
10003	5StarMax	10079	CNC Columbia
10004	A&E Network	10080	CNN (Cable News Network)
10005	ABC	10081	CNN en Espanol
10006	ABC Family Channel	10082	CNN Headline News
10007	ABS-CBN (The Filipino Channel)	10083	CNNI (CNN International)
10008	ActionMax	10086	Comedy Central
10009	African Independent Television (AIT)	10087	truTV (formerly Court TV)
10010	Africast Television Network	10088	Crime Channel, The
10012	AMC	10089	CRN; Networks
10015	Home Shopping Network	10090	C-SPAN (Cable Satellite Public Affairs Network)
10018	American Life TV Network	10091	C-SPAN 3
10020	Animal Planet	10092	C-SPAN 2
10021	Anime Network	10093	CSTV
10022	Anime Network On Demand	10094	CTI Zhong Tian Channel
10024	ART (Arab Radio & Television)	10095	CW Television Network, The
10027	AYM Sports	10097	Daystar Television Network
10028	B Mania	10098	DePelicula
10030	Bandamax	10102	Discovery Channel
10032	BBC America	10103	Discovery en Espanol
10035	BET (Black Entertainment Television)	10104	Discovery HD Theater™
10036	BET Gospel	10105	Discovery Health Channel
10037	BET Hip-Hop	10106	Planet Green (formerly Discovery Home Channel)
10038	BET Jazz: The Jazz Channel	10107	Discovery Kids Channel
10041	Biography Channel, The	10108	Investigation Discovery (formerly Discovery Times Channel)
10045	Black Family Channel	10110	Disney Channel
10048	Bloomberg Television	10111	DIY -Do-It-Yourself Network
10056	Bravo	10112	DMX MUSIC
10058	Broadway.com Television	10114	E! Entertainment Television
10059	Buzztime Entertainment, Inc	10115	ECOLOGY Communications
10060	Canal 24 Horas	10118	Encore
10063	Cartoon Network	10119	Encore Action
10065	CBS	10120	Encore Drama
10066	CCTV-4	10121	Encore HDTV
10067	CCTV International	10122	Encore Love
10068	Channel One Russia Worldwide Network	10124	Encore Mystery
10070	Church Channel, The	10125	EncoreWAM
10071	Cine Latino	10126	Encore Westerns
10072	Cinemax	10129	ESPN
10073	Cinemax HD	10130	ESPN Classic
10074	Classic Arts Showcase	10131	ESPN Deportes
10076	CMT: Country Music Television	10132	ESPN HD
10077	CNBC	10133	ESPN2

Standard IPTV Logos in Order by Logo Number, continued

10134	ESPN2 HD	10185	Fuel
10135	ESPNEWS	10186	Fuse
10136	ESPN PPV	10187	FX (Fox Basic Cable)
10137	ESPNU	10188	FX On Demand
10139	Events iNDEMAND	10189	G4 (formerly G4TechTV)
10140	EWTN	10190	Galavision
10144	Familyland Television Network	10192	German TV
10145	FamilyNet	10195	Gol TV
10147	FCS Atlantic	10196	Golden Eagle Broadcasting
10148	FCS Central	10197	Golf Channel, The
10149	FCS Pacific	10201	Grandes Documentales
10152	FitTV	10202	Great American Country (GAC)
10153	FLiX	10203	GSN
10154	Food Network	10205	Hallmark Channel
10155	FOX Cable Networks	10206	Hallmark Movie Channel
10156	Fox College Sports	10207	HBO (Home Box Office)
10158	FOX Movie Channel	10208	HBO 2
10159	FOX News Channel	10209	HBO Comedy
10160	Fox Business Channel	10210	HBO Family
10161	Fox Reality Channel	10211	HBO HD
10162	Fox Soccer Channel	10212	HBO Latino
10163	Fox Sports en Espanol	10213	HBO Signature
10164	Fox Sports Latin America	10214	HBO ZONE
10166	FSN	10215	HDNet
10167	FSN Arizona	10216	HDNet Movies
10168	FSN Bay Area	10217	here!TV
10169	FSN Chicago	10218	History Channel en Espanol, The
10170	FSN Detroit	10219	History Channel, The
10171	FSN Florida	10220	History Channel On Demand, The
10172	FSN HD	10221	History International
10173	FSN Midwest	10222	HITN-TV Hispanic Information & Telecommunications Network
10174	FSN New England	10223	Hollywood.com Television
10175	FSN New York	10224	Home and Garden Television (HGTV)
10176	FSN North	10228	HorseRacing TV
10177	FSN Northwest	10229	Hot Body Channel, The
10178	FSN Ohio	10231	Hot Zone
10179	FSN Pittsburgh	10233	HSN, The Home Shopping Network
10180	FSN Rocky Mountain	10234	HTV
10181	FSN South	10235	Hustler TV
10182	FSN Southwest	10239	iN DEMAND Networks
10183	FSN West	10240	iNDEMAND Pay-Per-View
10184	FSN West 2	10241	Independent Film Channel (IFC), The

Standard IPTV Logos in Order by Logo Number, continued

10243	Infinito	10304	National Iranian Television (NITV)
10244	MOJO (formerly INHD)	10306	NBA TV
10245	INHD2 (iNDEMAND HD2)	10307	NBC
10247	Inspiration Network, The (INSP)	10308	NBC Universal Cable
10248	Inspirational Life Television (i-Lifetv)	10309	New England Cable News
10249	International Channel	10310	New England Sports Network (NESN)
10251	JCTV	10312	Newsworld Inlemational
10252	Jewelry Television by ACN	10313	NFL Network
10254	Kids Unlimited	10314	NHL Network
10256	La Familia Network	10315	Nick at Nite
10258	Learning Channel, The (TLC)	10316	Nick2
10259	Liberty Channel	10317	Nickelodeon
10260	Lifetime Movie Network	10319	Nicktoons
10261	Lifetime Real Women	10320	Noah's World International Television
10262	Lifetime Television	10321	nickjr (formerly Noggin)
10264	LOGO	10322	NorthWest Cable News
10267	Mas Musica TV	10324	NTV America
10268	MavTV--Mav'rick Entertainment Network	10328	Outdoor Channel, The
10269	MBC America (MunHwa Broadcasting Corp.)	10329	Versus (formerly Outdoor Life Network)
10270	Meadows Racing Network, The	10330	OuterMax
10272	Military Channel, The (Discovery)	10331	OVATION -The Arts Network
10273	Military History Channel	10332	Oxygen Media, Inc
10274	Moody Broadcasting Network	10333	ion (formerly PAX TV)
10276	MoreMax	10336	Playboy TV Networks
10277	Movie Channel-HD, The	10337	Playgirl TV
10278	Movie Channel, The (TMC)	10338	Pleasure
10279	Movie Channel en Espanol, The	10340	Product Information Network (PIN)
10280	Movie Channel On Demand, The	10341	Puma TV
10281	Movie Channel Xtra, The	10344	QVC
10282	Movie Channel Xtra en Espanol, The	10346	RAI International
10284	MOVIEplex	10347	Rang-A-Rang
10285	Movies On Demand	10352	Regional News Network (RNN)
10287	MSNBC	10354	Ritmoson Latino
10289	MTV Espanol	10356	Russian Television Network of America (RTN)
10290	MTV Hits	10359	Saigon Broadcasting Television Network (SBTN)
10291	MTV Jams	10360	SyFy (formerly SCI FI Channel)
10292	MTV: Music Television	10361	Science Channel, The
10293	MTV2	10362	SCOLA
10295	mun2	10366	Shop At Home Network
10297	Music Choice	10367	ShopNBC
10299	Music Unlimited	10368	Short TV
10303	National Geographic Channel	10369	Showtime

Standard IPTV Logos in Order by Logo Number, continued

10370	Showtime en Espanol	10415	Sur
10371	Showtime Beyond	10416	TBN -Trinity Broadcasting Network
10372	Showtime Beyond en Espanol	10417	TBN Enlace USA
10373	Showtime Extreme	10418	TBS
10374	Showtime Extreme en Espanol	10419	Telefe Internacional
10375	Showtime Family Zone	10420	Telefutura
10376	Showtime Family Zone en Espanol	10421	Telehit
10377	Showtime HD	10422	Telemundo
10378	Showtime Next	10423	Telemundo Internacional
10379	Showtime On Demand	10424	Penthouse TV (formerly TEN)
10380	Showtime Showcase	10425	TEN On Demand
10381	Showtime Showcase en Espanol	10426	Vavoom (formerly TENBlox)
10382	Showtime Too	10427	SexxSee (formerly TENBlue)
10383	Showtime Too en Espanol	10428	TENClips
10384	Showtime Women	10429	TENMax
10385	ShowtimeWomen en Espanol	10430	Tennis Channel, The
10386	Si-TV	10431	TENXtsy
10387	SOAPnet	10434	ThrillerMax
10388	Sorpresa!	10436	TNT (Turner Network Television)
10389	Soundtrack Channel (STC)	10437	TNT HD
10390	Southern Entertainment Television	10438	Disney XD (formerly Toon Disney)
10391	Southern Entertainment Television 2: Bluegrass Music Channel	10439	TR!0
10392	Southern Entertainment Television 3: Classic Black Gospel	10440	Travel Channel
10393	Speed Channel	10442	Turner Classic Movies (TCM)
10394	Spice 1	10443	Turner South
10395	Spice 2	10444	TV 5
10397	Spike TV	10445	TV Asia
10398	Sports iNDEMAND	10446	TV Games Network
10399	Sportsman Channel, The	10447	TV Guide Channel
10400	STARZ	10448	TV Guide Interactive
10401	STARZ Cinema	10449	TV JAPAN
10402	STARZ Comedy	10450	TV Land
10403	STARZ Edge	10451	TVOne
10405	STARZ HDTV	10452	TV Polonia
10406	STARZ in Black	10453	TVE Internacional
10407	STARZ Kids & Family	10454	TVG Network
10408	STARZ On Demand	10455	tvK24
10410	Style Network, The	10458	Universal HD
10411	Studio 4 Kids	10459	Univision
10412	Sun Sports	10460	Urban Xtra
10413	Sundance Channel	10462	USA Network
10414	Sundance Documentary Channel	10463	Utilisima Satelital

Standard IPTV Logos in Order by Logo Number, continued

10464	Vegas Channel, The	10507	Teennick
10465	MTVU (formerly VH Uno)	10508	TLC HD
10466	VH1 (Music First)	10509	USA HD
10467	VH1 Classic	10510	Versus HD
10468	VH1 Country	10511	PBS Kids Sprout
10469	VH1 Mega Hits	10512	ABC News Now
10470	VH1 Soul	10513	RFD TV
10471	Video Rola	10514	CMT Pure Country
10472	VOY Network	10515	MTV TR3S
10473	We: Women's Entertainment	10516	Chiller
10474	Wealth TV	10517	Sleuth
10475	Weather Channel, The	10518	Crime & Investigation Network
10476	Weatherscan	10519	Discovery Familia
10480	Wisdom Television	10520	Urge
10481	Wmax	10521	IndiePlex
10482	Word Network, The	10522	RetroPlex
10483	Worship Network, The	10523	A&E HD
10485	Zee TV USA, Inc	10524	E! HD
10486	Zhong Tian Channel	10525	Food Network HD
10487	ABC Family HD	10526	HGTV HD
10488	Animal Planet HD	10527	National Geographic HD
10489	Big Ten HD	10528	NFL Network HD
10490	Cartoon Network HD	10529	Palladia
10491	Club Jenna	10530	STARZ Kids & Family HD
10492	CNN Headline News HD	10531	STARZ Edge HD
10493	Discovery HD	10532	STARZ Comedy HD
10494	Disney HD	10533	HBO 2 HD
10495	Disney XD HD	10534	HBO Family HD
10496	ESPN News HD	10535	HBO Comedy HD
10497	ESPNU HD	10536	HBO Signature HD
10498	Fresh	10537	HBO Zone HD
10499	Golf Channel HD	10538	HBO Latino HD
10500	Investigation Discovery	10539	MoreMax HD
10501	Lifetime HD	10540	ActionMax HD
10502	Planet Green HD	10541	ThrillerMax HD
10503	Science HD	10542	Wmax HD
10504	SkinTV (formerly Shorteez)	10543	@Max HD
10505	SyFy HD	10544	5StarMax HD
10506	TBS HD	10545	OuterMax HD

Standard IPTV Logos in Order by Channel Title

This section lists the name and number of common service logos in alphabetical order by channel title. When using these logos, the logo file name must match the service number identified in this section.

10000	@Max	10065	CBS
10543	@Max HD	10067	CCTV International
10003	5StarMax	10066	CCTV-4
			Channel One Russia Worldwide Network
10544	5StarMax HD	10068	Chiller
10523	A&E HD	10516	Church Channel, The
10004	A&E Network	10070	Cine Latino
10005	ABC	10071	Cinemax
10006	ABC Family Channel	10072	Cinemax HD
10487	ABC Family HD	10073	Classic Arts Showcase
10512	ABC News Now	10074	Club Jenna
10007	ABS-CBN (The Filipino Channel)	10491	CMT Pure Country
10008	ActionMax	10514	CMT: Country Music Television
10540	ActionMax HD	10076	CNBC
10009	African Independent Television (AIT)	10077	CNBC World
10010	Africast Television Network	10078	CNC Columbia
10012	AMC	10079	CNN (Cable News Network)
10018	American Life TV Network	10080	CNN en Espanol
10020	Animal Planet	10081	CNN Headline News
10488	Animal Planet HD	10082	CNN Headline News HD
10021	Anime Network	10492	CNNI (CNN International)
10022	Anime Network On Demand	10083	Comedy Central
10024	ART (Arab Radio & Television)	10086	Crime & Investigation Network
10027	AYM Sports	10518	Crime Channel, The
10028	B Mania	10088	CRN; Networks
10030	Bandamax	10089	CSTV
10032	BBC America	10093	CTI Zhong Tian Channel
10035	BET (Black Entertainment Television)	10094	CW Television Network, The
10036	BET Gospel	10095	Daystar Television Network
10037	BET Hip-Hop	10097	DePelicula
10038	BET Jazz: The Jazz Channel	10098	Discovery Channel
10489	Big Ten HD	10102	Discovery en Espanol
10041	Biography Channel, The	10103	Discovery Familia
10045	Black Family Channel	10519	Discovery HD
10048	Bloomberg Television	10493	Discovery HD Theater"
10056	Bravo	10104	Discovery Health Channel
10058	Broadway.com Television	10105	Discovery Kids Channel
10059	Buzztime Entertainment, Inc	10107	Disney Channel
10090	C-SPAN (Cable Satellite Public Affairs Network)	10110	Disney HD
10092	C-SPAN 2	10494	Disney XD (formerly Toon Disney)
10091	C-SPAN 3	10438	Disney XD HD
10060	Canal 24 Horas	10495	DIY -Do-It-Yourself Network
10063	Cartoon Network	10111	

Standard IPTV Logos in Order by Channel Title, continued

10112	DMX MUSIC	10164	Fox Sports Latin America
10524	E! HD	10498	Fresh
10115	ECOLOGY Communications	10166	FSN
10114	EI Entertainment Television	10167	FSN Arizona
10118	Encore	10168	FSN Bay Area
10119	Encore Action	10169	FSN Chicago
10120	Encore Drama	10170	FSN Detroit
10121	Encore HDTV	10171	FSN Florida
10122	Encore Love	10172	FSN HD
10124	Encore Mystery	10173	FSN Midwest
10126	Encore Westerns	10174	FSN New England
10125	EncoreWAM	10175	FSN New York
10129	ESPN	10176	FSN North
10130	ESPN Classic	10177	FSN Northwest
10131	ESPN Deportes	10178	FSN Ohio
10132	ESPN HD	10179	FSN Pittsburgh
10496	ESPN News HD	10180	FSN Rocky Mountain
10136	ESPN PPV	10181	FSN South
10133	ESPN2	10182	FSN Southwest
10134	ESPN2 HD	10183	FSN West
10135	ESPNEWS	10184	FSN West 2
10137	ESPNU	10185	Fuel
10497	ESPNU HD	10186	Fuse
10139	Events iNDEMAND	10187	FX (Fox Basic Cable)
10140	EWTN	10188	FX On Demand
10144	Familyland Television Network	10189	G4 (formerly G4TechTV)
10145	FamilyNet	10190	Galavision
10147	FCS Atlantic	10192	German TV
10148	FCS Central	10195	Gol TV
10149	FCS Pacific	10196	Golden Eagle Broadcasting
10152	FitTV	10499	Golf Channel HD
10153	FLiX	10197	Golf Channel, The
10154	Food Network	10201	Grandes Documentales
10525	Food Network HD	10202	Great American Country (GAC)
10160	Fox Business Channel	10203	GSN
10155	FOX Cable Networks	10205	Hallmark Channel
10156	Fox College Sports	10206	Hallmark Movie Channel
10158	FOX Movie Channel	10207	HBO (Home Box Office)
10159	FOX News Channel	10208	HBO 2
10161	Fox Reality Channel	10533	HBO 2 HD
10162	Fox Soccer Channel	10209	HBO Comedy
10163	Fox Sports en Espanol	10535	HBO Comedy HD

Standard IPTV Logos in Order by Channel Title, continued

10210	HBO Family	10258	Learning Channel, The (TLC)
10534	HBO Family HD	10259	Liberty Channel
10211	HBO HD	10501	Lifetime HD
10212	HBO Latino	10260	Lifetime Movie Network
10538	HBO Latino HD	10261	Lifetime Real Women
10213	HBO Signature	10262	Lifetime Television
10536	HBO Signature HD	10243	Infinito
10214	HBO ZONE	10264	LOGO
10537	HBO Zone HD	10267	Mas Musica TV
			MavTV--Mav'rick Entertainment Network
10215	HDNet	10268	
10216	HDNet Movies	10269	MBC America (MunHwa Broadcasting Corp.)
10217	here!TV	10270	Meadows Racing Network, The
10526	HGTV HD	10272	Military Channel, The (Discovery)
10218	History Channel en Espanol, The	10273	Military History Channel
10220	History Channel On Demand, The	10244	MOJO (formerly INHD)
10219	History Channel, The	10274	Moody Broadcasting Network
10221	History International	10276	MoreMax
10222	HITN-TV Hispanic Information & Telecommunications Network	10539	MoreMax HD
10223	Hollywood.com Television	10279	Movie Channel en Espanol, The
10224	Home and Garden Television (HGTV)	10280	Movie Channel On Demand, The
10015	Home Shopping Network	10282	Movie Channel Xtra en Espanol, The
10228	HorseRacing TV	10281	Movie Channel Xtra, The
10229	Hot Body Channel, The	10277	Movie Channel-HD, The
10231	Hot Zone	10278	Movie Channel, The (TMC)
10233	HSN, The Home Shopping Network	10284	MOVIEplex
10234	HTV	10285	Movies On Demand
10235	Hustler TV	10287	MSNBC
10239	iN DEMAND Networks	10289	MTV Espanol
10240	iNDEMAND Pay-Per-View	10290	MTV Hits
10241	Independent Film Channel (IFC), The	10291	MTV Jams
10521	IndiePlex	10515	MTV TR3S
10245	INHD2 (iNDEMAND HD2)	10292	MTV: Music Television
10247	Inspiration Network, The (INSP)	10293	MTV2
10248	Inspirational Life Television (i-Lifetv)	10465	MTVU (formerly VH Uno)
10249	International Channel	10295	mun2
10500	Investigation Discovery	10297	Music Choice
10108	Investigation Discovery (formerly Discovery Times Channel)	10299	Music Unlimited
10333	ion (formerly PAX TV)	10303	National Geographic Channel
10251	JCTV	10527	National Geographic HD
10252	Jewelry Television by ACN	10304	National Iranian Television (NITV)
10254	Kids Unlimited	10306	NBA TV
10256	La Familia Network	10307	NBC

Standard IPTV Logos in Order by Channel Title, continued

10308	NBC Universal Cable	10427	SexxSee (formerly TENBlue)
10309	New England Cable News	10366	Shop At Home Network
10310	New England Sports Network (NESN)	10367	ShopNBC
10312	Newsworld Inlemational	10368	Short TV
10313	NFL Network	10369	Showtime
10528	NFL Network HD	10371	Showtime Beyond
10314	NHL Network	10372	Showtime Beyond en Espanol
10315	Nick at Nite	10370	Showtime en Espanol
10316	Nick2	10373	Showtime Extreme
10317	Nickelodeon	10374	Showtime Extreme en Espanol
10321	nickjr (formerly Noggin)	10375	Showtime Family Zone
10319	Nicktoons	10376	Showtime Family Zone en Espanol
10320	Noah's World International Television	10377	Showtime HD
10322	NorthWest Cable News	10378	Showtime Next
10324	NTV America	10379	Showtime On Demand
10328	Outdoor Channel, The	10380	Showtime Showcase
10330	OuterMax	10381	Showtime Showcase en Espanol
10545	OuterMax HD	10382	Showtime Too
10331	OVATION -The Arts Network	10383	Showtime Too en Espanol
10332	Oxygen Media, Inc	10384	Showtime Women
10529	Palladia	10385	ShowtimeWomen en Espanol
10511	PBS Kids Sprout	10386	Si-TV
10424	Penthouse TV (formerly TEN)	10504	SkinTV (fomerly Shorteez)
10106	Planet Green (formerly Discovery Home Channel)	10517	Sleuth
10502	Planet Green HD	10387	SOAPnet
10336	Playboy TV Networks	10388	Sorpresa!
10337	Playgirl TV	10389	Soundtrack Channel (STC)
10338	Pleasure	10390	Southern Entertainment Television
10340	Product Information Network (PIN)	10391	Southern Entertainment Television 2: Bluegrass Music Channel
10341	Puma TV	10392	Southern Entertainment Television 3: Classic Black Gospel
10344	QVC	10393	Speed Channel
10346	RAI International	10394	Spice 1
10347	Rang-A-Rang	10395	Spice 2
10352	Regional News Network (RNN)	10397	Spike TV
10522	RetroPlex	10398	Sports iNDEMAND
10513	RFD TV	10399	Sportsman Channel, The
10354	Ritmoson Latino	10400	STARZ
10356	Russian Television Network of America (RTN)	10401	STARZ Cinema
10359	Saigon Broadcasting Television Network (SBTN)	10402	STARZ Comedy
10361	Science Channel, The	10532	STARZ Comedy HD
10503	Science HD	10403	STARZ Edge
10362	SCOLA	10531	STARZ Edge HD

Standard IPTV Logos in Order by Channel Title, continued

10405	STARZ HDTV	10446	TV Games Network
10406	STARZ in Black	10447	TV Guide Channel
10407	STARZ Kids & Family	10448	TV Guide Interactive
10530	STARZ Kids & Family HD	10449	TV JAPAN
10408	STARZ On Demand	10450	TV Land
10411	Studio 4 Kids	10452	TV Polonia
10410	Style Network, The	10453	TVE Internacional
10412	Sun Sports	10454	TVG Network
10413	Sundance Channel	10455	tvK24
10414	Sundance Documentary Channel	10451	TVOne
10415	Sur	10458	Universal HD
10360	SyFy (formerly SCI FI Channel)	10459	Univision
10505	SyFy HD	10460	Urban Xtra
10416	TBN -Trinity Broadcasting Network	10520	Urge
10417	TBN Enlace USA	10509	USA HD
10418	TBS	10462	USA Network
10506	TBS HD	10463	Utilisima Satelital
10507	teennick	10426	Vavoom (formerly TENBlox)
10419	Telefe Internacional	10464	Vegas Channel, The
10420	Telefutura	10329	Versus (formerly Outdoor Life Network)
10421	Telehit	10510	Versus HD
10422	Telemundo	10466	VH1 (Music First)
10423	Telemundo Internacional	10467	VH1 Classic
10425	TEN On Demand	10468	VH1 Country
10428	TENClips	10469	VH1 Mega Hits
10429	TENMax	10470	VH1 Soul
10430	Tennis Channel, The	10471	Video Rola
10431	TENXtsy	10472	VOY Network
10434	ThrillerMax	10473	We: Women's Entertainment
10541	ThrillerMax HD	10474	Wealth TV
10508	TLC HD	10475	Weather Channel, The
10436	TNT (Turner Network Television)	10476	Weatherscan
10437	TNT HD	10480	Wisdom Television
10439	TR!0	10481	Wmax
10440	Travel Channel	10542	Wmax HD
10087	truTV (formerly Court TV)	10482	Word Network, The
10442	Tuner Classic Movies (TCM)	10483	Worship Network, The
10443	Turner South	10485	Zee TV USA, Inc
10444	TV 5	10486	Zhong Tian Channel
10445	TV Asia		

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Customer Information

If You Have Questions

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

Access your company's extranet site to view or order additional technical publications. For accessing instructions, contact the representative who handles your account. Check your extranet site often as the information is updated frequently.



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