Operations Alert Bulletin
Cleaning Up SAM Services to Prevent Set-Tops From Booting Into Analog-Only Mode

Overview

Background

While a set-top is booting, it must read and process the system's Service Application Manager (SAM) data in order to build its channel map. The SAM is a table that identifies available services and associated applications. The more SAM data the set-top must process, the longer the set-top takes to display video.

In some extreme cases, when the set-top has to process a very large amount of SAM data, the set-top may actually boot into analog-only mode if the set-top power button is pressed before the clock on the set-top appears. This happens when it takes longer than 2 minutes from the time the power button is pressed to process the SAM table.

Purpose

This document provides system operators with a few guidelines and procedures that they can follow to help prevent set-tops from booting into analog-only mode.

Scope

This document pertains only to sites that run theCisco Resident Application (SARA). This bulletin does not pertain to sites that run the Aptiv Digital (Passport), the Time Warner Mystro (MDN/ODN), or the Comcast i-Guide™ Resident Applications.

Audience

This document is intended for system operators of Cisco's Digital Broadband Delivery System (DBDS). Cisco engineers who help system operators troubleshoot and maintain their systems will also find this document useful.

Related Publications

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

- *DBDS Utilities Version 5.1 Installation Instructions and DNCS Utilities User's Guide* (part number 740020)
- *Recommendations for Data Carousel Rate Management* (part number 716377)

Document Version

This is the second release of this document.

Clean Up SAM and PPV Services

The amount of SAM data on your system directly corresponds to the number of SAM service entries you have saved in the SAM Service List window on the DNCS. Even if all of the SAM services are not in a channel map, the information contained in the SAM service entry is still broadcast to all set-tops. Each set-top must download and process this data before it can display video.

Use the following guidelines to remove duplicate or unused SAM and PPV services from your system. The less SAM data you have on your system, the faster your set-tops can boot.

SAM and PPV Service Cleanup Tips

Consider these tips when cleaning up the SAM and PPV services:

- Combine SAM services, if possible. You may have multiple SAM service entries for the same channel because you may have a unique source on each transport hub. Combine the source definitions from each source into one source, and have one source definition for each hub. Then, remove hub-specific SAM service entries. Leave one SAM service that points to the global source containing all the hub-specific source definitions. Remove any sources that the hub-specific SAM services referenced.
- Combine duplicated channel maps.

  Note: A site is likely to have duplicated channel maps if the DNCS at that site has been merged with other sites, or split into two sites.
- Remove unused channel maps.
- Delete unused or obsolete PPV services from the DNCS.

  Note: The creation of a PPV service also creates a SAM service.
- Delete any Interactive Program Guide (IPG) configuration data that is mapped to unused or obsolete SAM services.
- Ensure that the IPG data provider does not send data for services that are not offered.

Delete Unused or Obsolete SAM and PPV Services

Follow these general guidelines to delete unused or obsolete SAM and PPV services.

- To delete an unused SAM service, highlight the SAM service on the SAM Service List window, select **File** and then choose **Delete**.
- To delete an unused PPV service, highlight the PPV service on the PPV Service List window, select **File** and then choose **Delete**.

Reference the *DNCS Online Help* for more detailed instructions on completing either of these tasks.

Important: Note these important points:

- Take care to *not* delete any SAM service that may not be in a channel map, but may be used by applications, instead. Likewise, do not delete any SAM service that may be used by SARA to enable other services or features. Call Cisco Services if you are unsure about deleting any SAM or PPV service.
- SAM files do not rebuild immediately. By default, the system waits 20 minutes before rebuilding SAM files.

What's Next?

After cleaning up your SAM and PPV services, run the Doctor Report. Output from the Doctor Report can tell you how much data your SAM OOB and Out_of_Band carousels still carry after cleaning up the SAM and PPV services. Go to ***Run the Doctor Report*** (on page 5).

Run the Doctor Report

In the procedure that follows, you are instructed to run and examine the Doctor Report. Based upon the data that you see in the Doctor Report, you may then be instructed to examine the size of two database tables that contain SAM data. Cisco may additionally recommend that you adjust the data rate of the SAM OOB and Out-of-Band data carousels.

1 Run the Doctor Report, using the *-vb* option.

Note: If necessary, refer to Chapter 4, **Analyze System Configuration with the Doctor Report**, of *DBDS Utilities Version 5.1 Installation Instructions and DNCS Utilities User's Guide* (part number 740020), for instructions on how to run the Doctor Report.

2 Locate the **BFS Carousel and OSM Sessions Status** heading in the output of the Doctor Report. The data in the **BFS Carousel and OSM Sessions Status** section verifies that all BFS carousels are running and reports the data rate, amount of data, and the indication interval of each carousel.

3 Locate the specific entry for the **SAM OOB** carousel.

Example: Typical data might look something like this:
OK: SAM OOB s(9) up .05 Mbps 46.615 (KBytes) 100 Y

4 In the space provided, record the amount of data that the SAM OOB carousel carries: _____

Note: The example in step 3 shows that the SAM OOB carousel carries 46.615 KBytes of data.

5 Locate the specific entry for the **Out_of_Band OOB** carousel.

Example: Typical data might look something like this:
OK: Out_of_Band OOB s(1) up .10 Mbps 2.719 (KBytes) 100 Y

6 In the space provided, record the amount of data that the Out_of_Band OOB carousel carries: _____

Note: The example in step 5 shows that the Out_of_Band OOB carousel carries 2.719 KBytes of data.

7 On your system, are either the SAM OOB or Out_of_Band carousels carrying more than 60 KBytes of data?

- If **yes** go to ***Determine the Size of the bulk and service Tables*** (on page 6).

  Note: The bulk and service tables contain most of the information in the SAM Services GUI.

- If **no**, set-tops on your system are unlikely to experience delays while booting. You can stop reading and skip the rest of this bulletin.

Determine the Size of the bulk and service Tables

You were directed here because either the SAM OOB or Out_of_Band carousel carried more than 60 KBytes of data, even after cleaning up the SAM and PPV services.

In the procedure that follows, you will determine the size of the bulk and service tables. If the combined size of the bulk and service tables exceeds 25,000 bytes, the procedure will then direct you to increase the data rate of the SAM OOB and Out_of_Band data carousels.

1 If necessary, open an xterm window on the Digital Network Control System (DNCS).

2 Type **ls -l /dvs/dvsFiles/SAM/service.tbl** and then press **Enter**. The system lists various characteristics of the service.tbl file.

Note: The "l" used in **ls** and **-l** is a lowercase letter L.

Example: Your output will be similar to
-rw-r--r-- 1 dncs dncs 10405 Sep 11 05:54 /dvs/dvsFiles/SAM/service.tbl
This example shows that the service.tbl file is 10,405 bytes.

3 In the space provided, write down the size of the service.tbl file: _____

4 Type **ls -l /dvs/dvsFiles/SAM/bulk.tbl** and then press **Enter**. The system lists various characteristics of the bulk.tbl file.

Note: The "l" used in **ls** and **-l** is a lowercase letter L.

Example: Your output will be similar to
-rw-r--r-- 1 dncs dncs 24972 Sep 11 05:54 /dvs/dvsFiles/SAM/bulk.tbl
This example shows that the bulk.tbl file is 24,972 bytes.

5 In the space provided, write down the size of the bulk.tbl file. _____

6 In the space provided, write down the sum of the .tbl files that you recorded in steps 3 and 5: _____

Example: Using the examples provided in steps 2 and 4, the sum of the .tbl files is 35,377 bytes (10,405 + 24,972).

7 Is your total from step 6 greater than 25,000 bytes?

- If **yes**, go to ***Increase the Data Rate of the SAM OOB and Out_of_Band Carousels*** (on page 7).
- If **no**, set-tops on your system are unlikely to experience delays while booting. You can stop reading and skip the rest of this bulletin.

Increase the Data Rate of the SAM OOB or Out_of_Band Carousels

If the amount of data on either the SAM OOB or Out_of_Band carousels exceeds 60 KBytes, and the sum of the service.tbl and bulk.tbl files exceeds 25,000 bytes, increase the data rates for the SAM OOB and Out_of_Band carousels to .1 Mbps. Refer to *Recommendations for Data Carousel Rate Management* (part number 716377) for instructions on how to increase the data rates.

For More 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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