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Operations Alert Bulletin
Setting Session-Based QAM TSID Ranges

Background

In an effort to provide support for table-based Quadrature Amplitude Modulators (QAMs), the Digital Network Control System (DNCS) allows you to specify ranges of transport stream IDs (TSIDs) that are reserved for session-based QAM modulators. This range of TSIDs includes any QAM modulators that are controlled by the DNCS and have sessions set up by the DNCS. All of the following QAM types should fall within this TSID range:

- QAMs
- MQAMs
- GQAMs
- GoQAMs
- Third-party QAMs and Continuum DVP™ eXtra Dense QAM Arrays (XDQAs) which adhere to the Generic QAM Interface (GQI)

This TSID range must *not* include table-based QAMs, including XDQAs that do not adhere to the GQI.

If you have session-based QAM modulators operating outside of your TSID range, the DNCS may be unable to assign the requested resources. If this occurs, your logs may indicate that a resource request failed because the network was unable to assign the requested resources.

When you upgrade to system release (SR) 2.7/3.7/4.2 or later, the installation process checks to see if you have already specified a range of TSIDs reserved for session-based QAM modulators. If you have not already specified a TSID range, the installation process automatically sets the TSID range for session-based QAM modulators to 32768 through 65535.

If your site uses table-based QAM modulators (or plans to use them in the future), you should set aside a block of TSIDs for these table-based QAM modulators. If you do this, you should not need to reevaluate your TSID values when you add table-based QAM modulators in the future.

Even if your site does *not* use or plan to use table-based QAM modulators, you should specify a range for session-based TSIDs so that the installation process will not limit your TSID range. In this case, set your session-based TSID range to 0 through 65535.

Notes:

- The upgrade process to SR 2.7/3.7/4.2 or later only changes the TSID range if you do *not* already have a range specified.
- If your site uses table-based QAMs, use the getTSID script noted in the following Recommendation to determine the TSID ranges for your session-based QAM modulators and your table-based QAM modulators. Then set the session-based TSID range appropriately in your DNCS.

Important: The procedures in this document should be completed within a maintenance window.

Recommendation

If you are using SR 2.5/3.5/4.0 or later, you should follow this procedure to verify that the session-based QAM reserved range for your facility matches the TSIDs that you actually use.

1 Does your site use table-based QAM modulators?

- If **yes**, or if you are not sure, go to step 2.
- If **no,** go to step 12.

2 Log on to the Cisco FTP server.

Notes:

- The address of the server is **ftp.sciatl.com** or **192.133.243.133**.

  Note: The address for the Cisco FTP server is subject to change. If you are unable to reach the FTP server, please contact Cisco Services for the latest address.
- The username is **anonymous**.
- The password is the e-mail address of the person logging in.

3 Choose one of the following options to navigate to the directory in which the file is located:

- If you are *outside* of Cisco's firewall, type **cd /pub/scicare/TOOLS**
- If you are *inside* of Cisco's firewall, type **cd /external_pub/scicare/TOOLS**

4 Type **ascii** and press **Enter**. The system sets the ftp transfer mode to ascii.

5 Type **hash** and press **Enter**. The system configures itself to display hash marks that show file-transfer progress.

6 Type **prompt** and press **Enter**. The system indicates that interactive mode is off.

7 Type **mget getTSID** and press **Enter**. The system begins copying the file (or files) from the FTP site to the current directory on your DNCS.

8 Type **bye** and press **Enter** to log out of the Cisco FTP server.

9 Copy the getTSID file into the /export/home/dncs/scripts directory of the DNCS.

10 Type **chmod 755 getTSID** and press **Enter** to change the permissions of the getTSID file.

11 Type **getTSID** and press **Enter**. The DNCS displays the range of TSIDs that your facility uses.

Example:

```
$./getTSID
database access in progress. Please wait ...
database access in progress. Please wait ...

SA TSID Range
=====================================
Min: 101
Max: 10111

NON SA TSID Range
=====================================
Min: 50010
Max: 50010
```

Important: Be sure that the session-based (SA) range and the table-based (non-SA) range do *not* overlap. If these ranges overlap, then you must re-map your TSIDs.

12 From the DNCS Administrative Console, select the **DNCS** tab and then the **System Provisioning** tab.

13 Click **DNCS System**. The DNCS System Configuration window opens.

Note: Beginning with SR 2.7.1/3.7.1/4.2.1, this button is labeled **Sys Config**.

14 Click the **Advanced Parameters** tab.

15 Verify that the **Start Transport Stream ID** and **End Transport Stream ID** values encompass the session-based TSID Range that you found with the getTSID tool.

Notes:

- If your site uses only session-based QAM modulators, these values should be 0 and 65535, respectively.
- If your site uses table-based QAM modulators, make sure that the TSID ranges for the table-based QAM modulators do not fall within the range of SA reserved TSIDs.

- If your site uses switched digital video (SDV), the DNCS will not allow you to save a TSID range unless you have also defined a range of MPEG program numbers for SDV. Click on the SDV Parameters tab to define starting and ending MPEG program numbers.

16 Click **Save** and close the DNCS System Configuration window.

17 Stop and restart the DNCS and the Application Server to ensure that the new settings take effect for each configuration change.

Stop System Components

Stopping the Application Server

This section provides procedures for stopping either a SARA Server or an Aptiv Application Server. Choose the procedure that pertains to your system.

Stopping the Application Server at SARA Sites

1. Press the middle mouse button on the Application Server and select **App Serv Stop**.
2. From an xterm window on the Application Server, type **appControl** and then press **Enter**. The Applications Control window appears.
3. Type **2** (for Startup/Shutdown Single Element Group), and then press **Enter**. The system displays all Application Server processes.

   Note: The system updates the display periodically, or you can press **Enter** to force an update.
4. When the **Curr Stt** (Current State) field of the Applications Control window indicates that all of the Application Server processes have stopped, follow the on-screen instructions to close the Applications Control window.

Stopping the Time Warner Mystro Application Server

If the site you are upgrading uses the Time Warner Mystro Application Server (MDN), refer to the documents provided by Mystro to shut down the Mystro Application Server.

Stopping the Application Server at Aptiv Sites

1. Press the middle mouse button on the Application Server and select **Passport Stop**.
2. From an xterm window on the Application Server, type **CheckServices** and then press **Enter**. A list of drivers appears.

   Note: Each driver is associated with an Application Server process.
3. Wait until the word **No** appears next to each driver.

   Note: If the word **No** does not appear next to each driver within a minute or two, repeat steps 2 and 3 again.

Stopping the DNCS

1. At the DNCS, press the middle mouse button and then select **DNCS Stop**. A confirmation message appears.
2. Click **Yes**.
3. From an xterm window on the DNCS, type **dncsControl** and then press **Enter**. The Dncs Control window appears.
4. Type **2** (for Startup/Shutdown Single Element Group), and then press **Enter**. The system displays all DNCS processes.

   Note: The system updates the display periodically, or you can press **Enter** to force an update.
5. When the **Curr Stt** (Current State) field of the Dncs Control window indicates that all of the DNCS processes have stopped, follow the on-screen instructions to close the Dncs Control window.

Restart the System Components

Restarting the DNCS

1 Click the middle mouse button on the DNCS and select **DNCS Start**. The DNCS processes start.

2 Click the middle mouse button on the DNCS and select **Administrative Console**. The DNCS Administrative Console opens.

3 From the DNCS Administrative Console Status window, click **DNCS Control**.

Results:

- The DNCS Control window opens.
- Green indicators begin to replace red indicators on the DNCS Control window.

4 From an xterm window on the DNCS, type **dncsControl** and then press **Enter**. The Dncs Control utility window opens.

5 Type **2** (for Startup / Shutdown Single Element Group) and then press **Enter**. The Dncs Control window updates to list the status of all of the processes and servers running on the DNCS.

6 Wait for the Dncs Control window to list the current status (Curr Stt) of all the processes and servers as **running**.

Notes:

- The Dncs Control window updates automatically every few seconds, or you can press **Enter** to force an update.
- The indicators on the DNCS Control window all become green when the processes and servers have restarted.

Restarting the Application Server

This section provides procedures for restarting either a SARA Server or an Aptiv Application Server. Choose the procedure that pertains to your system.

Restarting the Application Server at SARA Sites

1 Press the middle mouse button on the Application Server and select **App Serv Start**.

2 From an xterm window on the Application Server, type **appControl** and then press **Enter**. The Applications Control window opens.

3 Select option **2** on the Applications Control window. The system displays a list of Application Server processes and their current status.

Note: The system updates the display periodically, or you can press **Enter** to force an update.

4 When the Application Control window indicates that the current state (**Curr Stt**) of each process is stopped, follow the on-screen instructions to close the Applications Control window.

Restarting the Application Server at Aptiv Sites

Complete the following steps to verify that the Passport resident application has started on the Application Server, and then to start it, if necessary.

1 Open an xterm window on the Application Server.

2 Type **CheckServices** and then press **Enter**. A list of drivers appears.

Note: Each driver is associated with an Application Server process.

3 Does the word **Yes** appear next to each driver, indicating that the process has started?

- If **yes**, you have completed this procedure.
- If **no**, go to step 4.

4 Press the middle mouse button, and then select **Passport Start**.

5 When the word **Yes** appears next to each driver, go to step 6.

6 Follow the on-screen instructions to close the window containing the list of drivers associated with the Passport resident application.

Restarting the Time Warner Mystro Application Server

If necessary, refer to the documents supplied by Mystro to restart the MDN.

About This Bulletin

Audience

This document was written for Digital Network Control System (DNCS) operators. Cisco field service engineers and Cisco Service 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.

- *System Release 4.2 Release Notes* (part number 4012157)
- *UniPack Upgrade Installation Instructions For SR 2.7 /3.7 or SR 4.2* (part number 4012120)

Document Version

This is the second release of this document.

For More Information

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

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