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Change the CableCARD Module Staging Limit

Overview

Introduction

Currently, system releases that support the staging and binding of CableCARD modules allow 100 CableCARD modules and set-tops to be bound during each staging period. However, by executing the modCCardStagingLimit script on these systems, staging personnel can bind up to 1500 CableCARD modules and set-tops during a staging period. This script supports the following staging methods:

- Combo-binding
- Auto-binding
- Manual binding
- Billing system binding

Important! Some older system releases do not support newer staging methods. For a list of the staging methods supported in each release, refer to *Separable Security Host Staging Guide*.

Note: The amount of time required to stage CableCARD modules varies from system to system; however, a staging period generally takes about two hours. During a staging period, a paired set-top and CableCARD module download their respective operating systems and reboot. After this occurs, the CableCARD module downloads entitlement management messages (EMMs). Finally, the set-top receives the bindAuth record from the BFS carousel, which enables the set-top and CableCARD module to bind.

Purpose

This document provides instructions for obtaining the modCCardStagingLimit script and executing it on appropriate system releases so that these systems are able to bind up to 1500 CableCARD modules and set-tops during a staging period.

Scope

This document enables Cisco Digital Network Control System (DNCS) operators to modify their systems so that they are able to bind up to 1500 CableCARD modules and set-tops during a staging period. This document does not provide instructions for staging CableCARD modules or binding modules to set-tops. For assistance with CableCARD staging and binding, refer to the documents listed in ***Related Publications*** (on page 2).

Audience

This document is written for Cisco DNCS operators who manage their systems using any of the following system releases:

- SR 2.2/3.2 Service Pack (SP) 5 and later
- SR 2.5/3.5/4.0 SP 3 (Patch 3) and later
- SR 2.7/3.7/4.2 and later

Important! SR 2.2/3.2 SP 5 does not support the combo-binding staging method. For a list of the staging methods supported in each release, refer to *Separable Security Host Staging Guide*.

Related Publications

You may find the following publications useful as resources when you implement the procedures in this document. Check the copyright date on your resources to assure that you have the most current version. The publish dates for the following documents are valid as of this printing. However, some of these documents may have since been revised:

- *Best Practices for Using Multi-Stream CableCARD™ Modules* (part number 4005658, expected publish date: mid-year 2007)
- *Best Practices for Using Single-Stream PowerKEY® CableCARD™ Modules* (part number 4015091, published September 2006)
- *Preparing for SSC Host DHCT Deployment* (part number 4020566, published June 2007)
- *Separable Security Host Staging Guide* (part number 736107, published May 2007)

Document Version

This is the third release of this document. The following list describes the technical changes to this document.

- The list of system releases that support the modCCardStagingLimit script was expanded to include all releases that support CableCARD binding.
- CableCARD binding methods supported by the modCCardStagingLimit script were added.

Prerequisites and Considerations

This section lists the prerequisites for executing the modCCardStagingLimit script and provides other information you should consider before attempting to obtain and execute the script.

Which Sites Are Affected?

The modCCardStagingLimit script supports the following system releases:

- SR 2.2/3.2 SP 5 and later
- SR 2.5/3.5/4.0 SP 3 (Patch 3) and later
- SR 2.7/3.7/4.2 and later

Important! SR 2.2/3.2 SP 5 does not support the combo-binding staging method. For a list of the staging methods supported in each release, refer to *Separable Security Host Staging Guide*.

When Should I Execute the Script?

You do not need to execute the script during a maintenance window, as a restart of the system is not required for changes to take effect. However, for the system to implement changes that the script makes, you must restart the CableCARD Server process. While the CableCARD Server process stops and restarts, no binding can occur. To ensure the best results, we recommend that you execute the script at a time when your system does not experience heavy revenue-generating activity.

How Long Does it Take to Execute the Script?

Allow about 30 minutes to perform the following tasks, which are required to execute the script:

1. Obtain the script from the Cisco FTP server.
2. Change the staging limit to 1500 binding operations per staging period by executing the script on the DNCS.
3. Restart the CableCARD Server process and wait one minute after restarting this process to have the system implement this change.

   Important! You must restart the CableCARD Server process and then allow one minute to elapse to enable the system to bind up to 1500 CableCARD modules and hosts. Failing to restart the CableCARD Server process after executing the script results in no change to the staging capacity.

Obtain the modCCardStagingLimit Script

This section provides instructions for the following tasks:

- Creating a directory for the modCCardStagingLimit script on the DNCS
- Transferring the script from the Cisco FTP server to a folder on the DNCS
- Decompressing and extracting the script so that it can be executed

Important! To complete the procedures in this section, you must be logged on to the DNCS as the dncs user.

Creating a Directory for the Script

Follow these instructions to create a directory for the script on the DNCS.

1. If you have not already done so, log on to the DNCS as the **dncs** user.

   Important! You must be the dncs user in order to complete these procedures.
2. Open an xterm window.
3. Does the directory /export/home/dncs/download exist?
   - If **yes**, go to the next step.
   - If **no**, type **mkdir /export/home/dncs/download** and press **Enter**. The system creates a subdirectory called download in the /export/home/dncs directory. Continue with the next step.
4. Type **cd /export/home/dncs/download** and press **Enter**. The /export/home/dncs/download directory becomes the working directory.
5. Type **mkdir CCardStagingLimit** and press **Enter**. The system creates a subdirectory called **CCardStagingLimit** in the /export/home/dncs/download directory.
6. Type **cd CCardStagingLimit** and press **Enter**. The /export/home/dncs/download/CCardStagingLimit directory becomes the working directory.
7. Go to *Transferring the Script from the FTP Site to the DNCS* (on page 6).

Transferring the Script from the FTP Site to the DNCS

Access to the FTP server requires current FTP server site access information. Because many sites do not allow an open Internet connection to the DNCS for security reasons, the following procedure provides generic instructions to access the FTP server and download the software.

This procedure also assumes the software is in a TAR file format. The TAR file is a compressed image format that is the typical format of a software image released on CD. If you have any questions about this process, contact Cisco Services.

Follow these instructions to transfer the script from the Cisco FTP server to the DNCS folder you created earlier in ***Creating a Directory for the Script*** (on page 5).

1 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.

2 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/scripts/CCardStagingLimit**
- If you are *inside* of Cisco's firewall, type **cd /external_pub/scicare/TOOLS/scripts/CCardStagingLimit**

3 Type **bin** and press **Enter**. The system sets the ftp transfer mode to binary.

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

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

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

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

8 Go to ***Decompressing and Extracting the Script*** (on page 7).

Decompressing and Extracting the Script

Follow these instructions to decompress and extract files in the CCardStagingLimit directory.

1 From the xterm window, type **gzip -d CCardStagingLimit.tar.gz** and press **Enter**. The system decompresses the CableCARD_Staging_Limit.tar file.

2 Type **tar xvf CCardStagingLimit.tar** and press **Enter**. The system extracts the individual files and places them in the /export/home/dncs/download/CCardStagingLimit directory.

3 Go to ***Execute the Script*** (on page 8).

Execute the Script

This section contains instructions for executing the script on the DNCS.

Complete the following steps to execute the modCCardStagingLimit script and change the CableCARD staging limit from its current setting of 100 binding operations per staging period to 1500 binding operations.

Important! To complete the procedures in this section, you must be logged on to the DNCS as the dncs user.

Notes:

- Follow these steps only if your system supports the system releases listed in ***Prerequisites and Considerations*** (on page 4).
- All commands are case-sensitive.

1. If you have not already done so, log on to the DNCS as the **dncs** user.
2. If necessary, open an xterm window on the DNCS.
3. Type **cd /export/home/dncs/download/CCardStagingLimit**. The system makes this the working directory.
4. Type **modCCardStagingLimit** and press **Enter**. A message displays and confirms that the limit was successfully set to the default value of 1500.
5. Type **exit** and press **Enter** to close the xterm window. You have successfully set the staging limit to 1500 binding operations per staging period.
6. Go to ***Restart the CableCARD Server Process*** (on page 9) to have the system implement this change.

   Important! You must restart the CableCARD Server process and then allow one minute to elapse to implement this change and enable the system to bind up to 1500 CableCARD modules and set-tops. Failing to restart the CableCARD Server process after executing the script results in no change to the staging capacity.

Restart the CableCARD Server Process

After you execute the script, you must restart the CableCARD Server process to have the system implement the new staging limit of 1500 binding operations per staging period. Failing to restart the CableCARD Server process after executing the script results in no change to the staging limit.

This section provides instructions for the following tasks, which are required to restart the CableCARD Server process:

- Stopping the CableCARD Server process
- Starting the CableCARD Server process

Stopping the CableCARD Server Process

Follow these instructions to display the DNCS Control window and use the dncsControl utility to stop the CableCARD Server process.

Note: Opening the DNCS Control window allows you to see the effect that dncsControl commands have on DNCS processes so that you can stop and start processes effectively.

1. If the DNCS Control window is not open, click **Control** in the DNCS area of the DNCS Administrative Console Status window to open the window and display the indicator for the CCardServer process.
2. If necessary, open an xterm window on the DNCS.
3. In the xterm window, type **dncsControl** and then press **Enter**. The dncsControl window opens.
4. Type **2** (for Startup/Shutdown Single Element Group) and then press **Enter**. The dncsControl window refreshes and shows DNCS servers and processes.
5. Type the number associated with the DNCS CCardServer process and press **Enter**. The dncsControl window refreshes and displays a message prompting you to enter the target state for the entire element group or to display the individual elements of the group.
6. Type **1** (for stopped) and then press **Enter**. A confirmation message appears.
7. Type **y** (for yes) and then press **Enter**. After 10 seconds or so, the dncsControl window refreshes and displays **stopped** as the Target State of the DNCS CCardServer process.

   Note: Systems using SR 2.7/3.7/4.2 and later show the current state as **stop**.
8. Wait approximately 10 seconds for the CCardServer indicator to change from green to red, and then press **Enter**. The dncsControl window refreshes and shows stopped as the Current State of the DNCS CCardServer process.
9. When the Current State of the DNCS CCardServer process is **stopped**, go to *Starting the CableCARD Server Process* (on page 10).

Starting the CableCARD Server Process

After you have stopped the CableCARD Server process, follow these instructions to start the process.

1. Type the number associated with the DNCS CCardServer process and press **Enter**. The dncsControl window refreshes and displays a message prompting you to enter the target state for the entire element group or to display the individual elements of the group.
2. Type **2** (for running) and then press **Enter**. A confirmation message appears.
3. Type **y** (for yes) and then press **Enter**. After approximately 10 seconds, the dncsControl window refreshes and displays running as the Target State of the DNCS CCardServer process.
4. Wait approximately 10 seconds for the CCardServer indicator to change from red to green, and press **Enter** to refresh the dncsControl window. The dncsControl window shows running as the Current State of the DNCS CCardServer process.
5. When the current state of the DNCS CCardServer process is **running**, follow the on-screen instructions to exit from the dncsControl utility.

   Note: Systems using SR 2.7/3.7/4.2 and later show the current state as **run**.
6. Type **exit** and press **Enter** to close the xterm window.
7. Now that you have restarted the CableCARD Server process, allow one minute to elapse to ensure that the system implements the change that the modCCardStagingLimit script made to the staging capacity.

   Important! After restarting the CableCARD Server process, you must allow one minute to elapse to enable the system to bind up to 1500 CableCARD modules and set-tops.

   Note: If you determine that your site requires a staging capacity greater than 1500 binding operations per staging period, contact Cisco Services for assistance.

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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