Preparing Service Modules for Communication

This chapter describes how to prepare service modules for operation in an MGX switch. All MGX switch cards except PXM, SRM, XM-60, and RPM are service modules. Service modules add ATM, circuit emulation and Frame Relay services to a switch. Table 1-3 in Chapter 1, “Preparing for Configuration,” lists service module services and the service modules that provide them. This table also lists the interfaces supported on the service modules.

Tip

For information on which slots support each type of service module and redundancy options for each service module, see the table titled “Valid Slot Installation Options” in Cisco MGX 8800/8900 Hardware Installation Guide, Releases 2 - 5.1.

The procedures in this chapter help you complete the initial configuration required for each service module. After the initial configuration is complete, the card is ready for provisioning. Provisioning is described in the configuration and command reference guide for each service module. Table 1-1 in Chapter 1, “Preparing for Configuration,” lists the service module configuration and command reference guides.

The following sections provide a quickstart procedure for configuring service modules and describe the following procedures:

- Managing Firmware Version Levels for Service Modules
- Selecting MPSM Interfaces and Services
- Establishing Redundancy Between Two Service Modules
- Selecting a Card SCT
- Selecting a Port SCT

Note

The Cisco MGX 8800/8900 Hardware Installation Guide, Releases 2 - 5.1, describes the physical planning requirements for installing redundant service modules with standalone or redundant lines. If these requirements are not met, the planned service module configuration will not work properly.

Note

For the purposes of this document, the term “AXSM” refers to all types of AXSM cards. In this document, the term AXSM/A distinguishes the first release of AXSM from AXSM/B, AXSME, and AXSM-XG cards.
## Configuration Quickstart

The quickstart procedure in this section provides a summary of the tasks required to prepare service modules for operation in an MGX switch. This procedure is provided as an overview and as a quick reference for those who already have configured Cisco MGX switches.

<table>
<thead>
<tr>
<th>Command</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td>Start a configuration session.</td>
</tr>
<tr>
<td><code>username</code></td>
<td></td>
</tr>
<tr>
<td><code>&lt;password&gt;</code></td>
<td></td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>To perform all the procedures in this quickstart procedure, you must log in as a user with GROUP1 privileges or higher.</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td>Initialize service modules by setting the firmware version level for each one.</td>
</tr>
<tr>
<td><code>setrev &lt;slot&gt; &lt;primary revision&gt;</code></td>
<td></td>
</tr>
<tr>
<td><code>-ccp &lt;CallControlProtocol&gt;</code></td>
<td></td>
</tr>
<tr>
<td><code>-service &lt;ServiceType&gt;</code></td>
<td></td>
</tr>
<tr>
<td>Related commands:</td>
<td></td>
</tr>
<tr>
<td><code>dspcds</code></td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td>If you are configuring an MPSM card, select the back card interface type (T1, E1, T3 or E3). If you are configuring a MPSM-8-T1E1, you must also select the service (ATM, Frame Relay, or circuit emulation) this card will support.</td>
</tr>
<tr>
<td><code>cnfcdmode &lt;slot&gt; &lt;interfaceType&gt; &lt;service&gt;</code></td>
<td></td>
</tr>
<tr>
<td>Related commands:</td>
<td></td>
</tr>
<tr>
<td><code>dspcd</code></td>
<td></td>
</tr>
<tr>
<td><code>dspcds</code></td>
<td></td>
</tr>
<tr>
<td><strong>Step 4</strong></td>
<td>If you are configuring an MPSM card and that card has feature licenses installed on it, use the <code>movelic</code> command to transfer the licenses to the license pool for the switch.</td>
</tr>
<tr>
<td><code>movelic</code></td>
<td></td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>This step is required only for MPSM cards. See Appendix F, “MPSM Licensing”</td>
</tr>
<tr>
<td><strong>Step 5</strong></td>
<td>Define which service modules are operating as redundant cards.</td>
</tr>
<tr>
<td><code>addred &lt;options&gt;</code></td>
<td></td>
</tr>
<tr>
<td><strong>Step 6</strong></td>
<td>This optional step applies only to AXSM, FRSM12, and MPSM-T3E3-155 cards. It applies communications parameters from a preconfigured Service Class Template (SCT) file to all communications between the service module you are configuring and the other service modules in the switch.</td>
</tr>
<tr>
<td><code>cnfcdscet &lt;sctid&gt;</code></td>
<td></td>
</tr>
<tr>
<td>Related commands:</td>
<td></td>
</tr>
<tr>
<td><code>dspcd</code></td>
<td></td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>See the “Selecting a Card SCT” section, which appears later in this chapter.</td>
</tr>
</tbody>
</table>
Managing Firmware Version Levels for Service Modules

The service modules within the switch run two types of firmware: boot firmware and runtime firmware. The boot firmware provides the startup information the card needs. The boot firmware is installed on the board at the factory. The runtime firmware controls the operation of the card after startup. The runtime firmware file is stored on the PXM hard disk.

After service modules are installed in the switch, you must specify the correct runtime firmware version for each card before the switch can begin using the card. The following sections explain how to:

- Locate the cards that need to have the firmware version level set
- Set the firmware version levels for cards in the switch
- Verify the firmware version levels being used by cards

Locating Cards that Need the Firmware Version Set

When a service module is installed and the firmware version needs to be set, the System Status LED on the front of the card blinks red. The `dspcds` command shows that the card status is Failed. Other events can display these symptoms, but if the service module is new, the problem is probably that the firmware version number has not been set. To locate the cards that need to have the firmware version set, use the following procedure.

**Step 1**
Establish a CLI management session at any access level.

**Step 2**
To display a list of all the cards in the switch, enter the `dspcds` command.

```
8850_NY.7.PXM.a > dspcds
```

The following example shows the display for this command. The card state for the card in slot 3 is listed as Failed/Active. This is how a card appears when the runtime firmware version has not been selected.

```
M8850_LA.7.PXM.a > dspcds
M8850_LA                         System Rev: 02.01   Sep. 27, 2001 20:33:09 PST
Chassis Serial No:   SAA03230375 Chassis Rev: B0     GMT Offset: -8
                       Node Alarm: NONE
Card  Front/Back          Card           Alarm      Redundant   Redundancy
Slot  Slot State          Type           Status     Slot        Type
---   ----------          --------       --------   -------     -----  
01    Active/Active       AXSM_4OC12     NONE       NA          NO REDUNDANCY
02    Empty               ---            ---        ---         ---
03    Failed/Active       AXSM_16T3E3    NONE       NA          NO REDUNDANCY
04    Empty               ---            ---        ---         ---
05    Active/Active       AXSMR_2OC12    NONE       NA          NO REDUNDANCY
06    Active/Active       AXSM_16OC3_B  NONE       NA          NO REDUNDANCY
07    Active/Active       PXM45          NONE       08          PRIMARY SLOT
08    Standby/Active      PXM45          NONE       07          SECONDARY SLOT
09    Active/Active       RPM_PR         NONE       NA          NO REDUNDANCY
10    Empty               ---            ---        ---         ---
11    Empty               ---            ---        ---         ---
12    Empty Reserved               ---            ---        ---         ---
13    Empty Reserved               ---            ---        ---         ---
14    Empty               ---            ---        ---         ---
```

Note the slot number, card type, and redundancy type for each card that needs to have the firmware version set. You will need this information to activate these cards as described in the next section, “Initializing Service Modules.”
Initializing Service Modules

Before a service module can operate, it must be initialized in a switch slot. The initialization process defines the runtime software version that will run on the card and identifies the slot in which the card operates. To initialize a service module, use the following procedure.

**Note**
The line count for all cards in the switch must not exceed the maximum number of lines supported by the current PXM. The PXM45/A supports 192 UNI/NNI lines. The PXM45/B and PXM45/C support up to 4,000 UNI/NNI interfaces. Keep this information in mind as you add service modules to your switch.

**Step 1**
If you have not already done so, determine the software version number for the card by referring to the following release note documents:

- *Release Notes for Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Switches, Release 5.1.00*
- *Release Notes for the Cisco MGX 8880 Media Gateway, Release 5.0.02*

**Tip**
If you have trouble locating the runtime firmware version level, use the filenames on the PXM hard disk to determine the level. For more information, see the “Determining the Software Version Number from Filenames” section in Chapter 9, “Switch Operating Procedures.”

**Step 2**
Establish a configuration session using a user name with SERVICE_GP privileges or higher.

**Step 3**
To set the firmware revision level for a card, enter the `setrev` command in the following format:

```
mgx8850a.7.PXM.a > setrev <slot> <primary revision> [-ccp <CallControlProtocol>] [-service <ServiceType>]
```

**Note**
Each card should be initialized only once with the `setrev` command. The only other time you should enter the `setrev` command is to initialize cards after the card firmware revision level or service type configuration has been cleared with the `clrallcnf <slot#> all` command.

Replace `<slot>` with the card slot number and replace `<primary revision>` with the software version number. In addition, use these options if they apply:

- For VXSM cards, add a call control protocol with the `-ccp` option (1: H.248 (default), 2: TGCP, or 3: MGCP)
- For MPSM-16-T1E1 cards, specify a `<ServiceType>` with the `-service` option (0: ATM/FR (Default) or 1: MLPPP)

For example,

```
mgx8850a.7.PXM.a > setrev 1 2.1(60)
```
After you enter the `setrev` command, the System status LED blinks red until the firmware load is complete, and then it changes to non-blinking green.

**Step 4**

To verify the activation of a card for which the status was previously listed as Failed/Active, enter the `dspcds` command. The status should appear as follows:

- All service modules except the MPSM-8-T1E1 card should display Active/Active.
- MPSM-8-T1E1 cards should display Standby/Active.

To bring MPSM-8-T1E1 cards up to the Active/Active status, you must configure a service and interface type. For MPSM-8-T1E1 cards, you must also configure an interface and service.

---

**Verifying Card Firmware Version Levels**

When you are having problems with your switch, or when you have taken delivery of a new switch but delayed installation, it is wise to verify the firmware versions installed on the switch. If newer versions of this firmware are available, installing the updated firmware can prevent switch problems.

To verify the firmware versions in use on your switch, use the following procedure.

**Step 1**

To display the software revision status of all the cards in a switch, enter the `dsprevs` command as follows:

```
M8850_SF.8.PXM.a > dsprevs
M8850_SF                         System Rev: 05.00   Oct. 25, 2004 20:22:08 GMT
MIXX8850                         Node Alarm: CRITICAL
 Phy. Log. Inserted Cur Sw            Boot FW
 Slot Slot Card    Revision            Revision
---- ---- --------          --------            --------
01   01   RPM_XF         IOSver              IOSver
     Cur SW Rev: 12.3(20040916:060502) 
     Boot FW Rev: 12.3(20040916:060502)
02   02   RPM            12.3(7)T3           12.3(3.9)T2
03   04   AXSME_8OC3     5.0(28.65)A           5.0(28.65)A
04   04   AXSME_8OC3     5.0(28.65)A           5.0(28.65)A
05   05   AXSM_4OC12_B   5.0(28.65)A           5.0(28.65)A
06   06   AXSM-32-T1E1-E 5.0(28.65)A           5.0(28.65)A
07   07   PXM45B         5.0(29.102)P1         5.0(29.102)A
08   07   PXM45B         5.0(29.102)P1         5.0(29.102)A
09   09   ---            ---                ---
10   10   MPSM-T3E3-15S  5.0(28.65)A           5.0(28.65)A
11   11   ---            ---                1.0(2.0)
12   12   FRSM_8T1       22.0(28.17)A          1.0(2.0)
13   13   FRSM_8E1       22.0(28.17)A          1.0(2.0)
14   14   FRSM_2CT3      22.0(28.17)A          1.0(7.0)
Type <CR> to continue, Q<CR> to stop:
15   15   SRME_OC3      ---                ---
16   15   SRME_OC3      ---                ---
17   17   ---            ---                ---
18   18   ---            ---                ---
19   19   ---            ---                ---
20   20   ---            ---                ---
21   21   ---            ---                ---
22   22   ---            ---                ---
23   23   ---            ---                ---
24   24   ---            ---                ---
25   25   MPSM-16-T1E1   5.0(29.102)A         5.0(29.102)A
```
Step 2  To see the software revision levels for a single card, enter the `dspversion` command as follows:

```
8850_NY.1.AXSM.a > dspversion
```

<table>
<thead>
<tr>
<th>Image Type</th>
<th>Shelf Type</th>
<th>Card Type</th>
<th>Version</th>
<th>Built On</th>
</tr>
</thead>
<tbody>
<tr>
<td>Runtime</td>
<td>MGX</td>
<td>AXSM</td>
<td>2.1(0)</td>
<td>Feb 13 2001, 07:47:35</td>
</tr>
<tr>
<td>Boot</td>
<td>MGX</td>
<td>AXSM</td>
<td>2.1(0)</td>
<td></td>
</tr>
</tbody>
</table>

Step 3  Another way to see the software revision levels for a single card is to enter the `dspcd` command as follows:

```
M8850_LA.7.PXM.a > dspcd 1
```

<table>
<thead>
<tr>
<th>Slot Number</th>
<th>Redundant Slot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NONE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Front Card</th>
<th>Upper Card</th>
<th>Lower Card</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AXSM_4OC12</td>
<td>SMFIR_2_OC12</td>
<td>Active</td>
<td>SAK0350007N</td>
<td>2.1(60)</td>
<td>2.1(60)</td>
<td>2.1(60)</td>
<td>2.1(60)</td>
<td>800-05774-05</td>
<td>800-05383-01</td>
<td>BAA1BADAAA</td>
<td>On Power up</td>
<td>NONE</td>
<td>None</td>
<td>Type &lt;CR&gt; to continue, Q&lt;CR&gt; to stop:</td>
</tr>
</tbody>
</table>

Step 4  Using the `dsprevs` and `dspcd` commands, complete the hardware and software configuration worksheet in Table E-6.

Step 5  Compare the versions you noted in Table E-6 with the latest versions listed in the release note documents:

- *Release Notes for Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Switches, Release 5.1.00*

- *Release Notes for the Cisco MGX 8880 Media Gateway, Release 5.0.02*

Step 6  If the switch requires software updates, upgrade the software using the instructions in Appendix A, “Downloading and Installing Software Upgrades.”
Selecting MPSM Interfaces and Services

MPSM cards are designed to support multiple interface types (T1, E1, T3, E3, and OC3) and multiple services (ATM, Frame Relay, circuit emulation, and PPP), depending on the card. The following sections describe the following procedures:

- Configuring MPSM-8-T1E1 Interfaces and Services
- Configuring MPSM-T3E3-155 and MPSM-16-T1E1 Interfaces and Services

Configuring MPSM-8-T1E1 Interfaces and Services

After you initialize an MPSM-8-T1E1 card (using the `setrev` command), the status changes from Failed/Active to Standby/Active. To bring this card to the Active/Active state, you must specify the interface type and service using the PXM `cnfcdmode` command.

To configure MPSM-8-T1E1 interfaces and services, follow this procedure:

**Step 1** Establish a configuration session using a user name with SERVICE_GP privileges or higher.

**Step 2** Enter the PXM `cnfcdmode` command using the following format:

```
M8850_SF.7.PXM.a > cnfcdmode <slot> <interfaceType> <service>
```

Table 4-1 defines the parameters for this command. After you enter the `cnfcdmode` command, the card resets and the status changes to Active/Active.

**Table 4-1 cnfcdmode Command Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>slot</code></td>
<td>Enter the number for the slot in which the MPSM card is installed.</td>
</tr>
</tbody>
</table>
| `interfaceType` | Enter a number from the following list that selects the interface type to be used with the MPSM-8-T1E1:  
  - T1 Interface = 1  
  - E1 Interface = 2  
  - T3 Interface = 3 (not supported)  
  - E3 Interface = 4 (not supported) |
| `service` | Enter a number from the following list that selects the service the MPSM will support:  
  - Frame Relay Service = 1  
  - ATM Service = 2  
  - CES Service = 3 |

The following example shows how to configure an MPSM-8-T1E1 card to use a T1 interface and Frame Relay services:

```
M8850_SF.7.PXM.a > cnfcdmode 28 1 1
You are about to configure MPSM in slot 28 to:  
Service Type : Frame Interface Type : T1
```
### Establishing Redundancy Between Two Service Modules

Unknown line module back card present

```
cnfcdmode: Do you want to proceed (Yes/No)? y
```

After you set the interface type and service, the card resets. You can check the status with the `dspcd <slot>` command. You can verify that the `cnfcdmode` command has been run by looking at the `Inserted Card` row of the `dspcd` display.

Before MPSM-8-T1E1 configuration, the `Inserted Card` row displays the generic name _MPSM-8-T1E1_. After configuration, the generic name changes to a specific name such as _MPSM-8T1-FRM_.

Table 4-2 lists the card names and what they mean when they appear in the `dspcd` and `dspcds` command displays. While the card is resetting, the status will be _Empty Resvd_. When the reset is complete and the card is ready for provisioning, the status changes to _Active_.

<table>
<thead>
<tr>
<th>Card Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPSM-8-T1E1</td>
<td>No service configured on card.</td>
</tr>
<tr>
<td>MPSM-8E1-ATM</td>
<td>Configured for ATM services and E1 interfaces.</td>
</tr>
<tr>
<td>MPSM-8E1-CES</td>
<td>Configured for circuit emulation services and E1 interfaces.</td>
</tr>
<tr>
<td>MPSM-8E1-FRM</td>
<td>Configured for Frame Relay services and E1 interfaces.</td>
</tr>
<tr>
<td>MPSM-8T1-ATM</td>
<td>Configured for ATM services and T1 interfaces.</td>
</tr>
<tr>
<td>MPSM-8T1-CES</td>
<td>Configured for circuit emulation services and T1 interfaces.</td>
</tr>
<tr>
<td>MPSM-8T1-FRM</td>
<td>Configured for Frame Relay services and T1 interfaces.</td>
</tr>
</tbody>
</table>

### Configuring MPSM-T3E3-155 and MPSM-16-T1E1 Interfaces and Services

The MPSM-T3E3-155 card is set to the Active/Active state during initialization using the `setrev` command. Use the MPSM `cnfcdmode` command to specify the interface type when using the BNC-3-T3E3 backcard only. (This card supports simultaneous ATM and Frame Relay services.)

The MPSM-16-T1E1 card is also set to the Active/Active state during initialization (using the `setrev` command with a specified service). When using a backcard that supports both T1 and E1 interfaces, use the MPSM `cnfcdmode` command to specify the interface type. (Setting the service type is done during initialization using the `setrev` command.)

For details on initializing the MPSM cards, see “Initializing Service Modules”. For details on configuring the MPSM card interfaces and services, refer to the _Cisco ATM and Frame Relay Services (MPSM-T3E3-155 and MPSM-16-T1E1) Configuration Guide and Command Reference for MGX Switches, Release 5.1_ for more details.

### Establishing Redundancy Between Two Service Modules

Guidelines for configuring redundancy between two service modules are provided in the _Cisco MGX 8800/8900 Hardware Installation Guide, Releases 2 - 5.1_. To establish redundancy between two service modules, use the following procedure.

**Step 1** Establish a configuration session using a user name with SUPER_GP privileges or higher.
Step 2 If you have not done so already, set the firmware version for both cards, as described in the “Initializing Service Modules” section.

Step 3 Enter the `dspcds` command to verify that both service modules are in the Active state.

Step 4 Enter the `addred` command as follows:

```
pop20one.7.PXM.a > addred <redPrimarySlotNum> <redSecondarySlotNum> <redType>
```

Replace `<redPrimarySlotNum>` with the slot number of the service module that will be the primary card, and replace `<redSecondarySlotNum>` with the slot number of the secondary service module.

Replace `<redType>` with the number 1 to select 1:1 card redundancy (also called Y-cable redundancy), or enter 2 to select 1:N redundancy. Each service module type supports only one redundancy type, and the redundancy types are defined in the Cisco MGX 8800/8900 Hardware Installation Guide, Releases 2 - 5.1.

**Note** One of the two cards can be configured before redundancy is established. If this is the case, the configured card should be specified as the primary card. Redundancy cannot be established if the secondary card has active lines. If the secondary card has active lines, you must delete all ports and down all lines before it can be specified as a secondary card.

**Tip** If the switch displays the message, `ERR: Secondary cd is already reserved`, then lines are already in use on the specified secondary card. Enter the `dnln` command to bring down these lines before re-entering the `addred` command.

**Note** When MPSM cards are installed on the switch, the `addred` command will fail if there are not enough licenses on the secondary card (1:N redundant configurations) or in the license pool to match the licenses already in use on the primary card.

For example, if the primary card is configured to use the ABR rate control feature, and if the configuration of other primary cards has not already added a ABR rate control license to the secondary card, the secondary card will require an ABR rate control license from the license pool. If no license is available, the `addred` command fails.

Step 5 To verify that the redundancy relationship is established, enter the `dspred` command as shown in the following example:

```
pop20two.7.PXM.a > dspred
pop20two MX8850 Primary SlotNum Primary Type Primary State Secondary SlotNum Secondary Type Secondary State Redundancy Type
------- -------- --------- --------- -------- --------- ------- ------- --------
1        AXSM    Active     2        AXSM    Standby   1-1
7        PXM45   Active     8        PXM45   Standby   1-1
15       SRM-3T3 Empty Res 16       SRM-3T3 Empty Resvd 1-1
31       SRM-3T3 Empty Res 32       SRM-3T3 Empty Resvd 1-1
```

```
System Rev: 02.01
Feb. 06, 2001 11:24:53 PST
Node Alarm: NONE
```

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The secondary state for the card in the secondary slot changes to Standby only when the secondary card is ready to take over as active card. After you enter the `addred` command, the switch resets the secondary card. When you first view the redundancy status, the state may be Empty Resvd or Init. The secondary card may require one or two minutes to transition to standby.

**Note**
The `dspcds` command also shows the redundancy relationship between two cards.

For information on managing redundant cards, see the “Managing Redundant Cards” section in Chapter 9, “Switch Operating Procedures.”

### Selecting a Card SCT

A Service Class Template (SCT) is a configuration file that defines the traffic characteristics of the various class of service queues in AXSM, MPSM-T3E3-155, MPSM-16-T1E1, and FRSM-12-T3E3 service modules. The same card SCT may be used for multiple cards of the same card type.

**Note**
An SCT must be registered before you can select it for a card or port. For instructions on registering SCTs, see “Registering SCT Files” in Chapter 7, “Managing Service Class Templates.”

To select an SCT for a card, use the following procedure.

**Step 1**
Establish a configuration session using a user name with GROUP1 privileges or higher.

**Step 2**
Enter the `cc` command to change to an active service module for which you will select an SCT.

```
M8850_LA.2.AXSM.a > cc 1
```

Note
In a redundant card configuration, you must specify the SCT on the active card.

**Step 3**
All ports on the card must be down before you can configure the card SCT. To verify the status of the ports on the card, enter the `dspports` command.

```
M8850_LA.2.AXSM.a > dspports

<table>
<thead>
<tr>
<th>ifNum</th>
<th>Line</th>
<th>Admin</th>
<th>Oper.</th>
<th>Guaranteed</th>
<th>Maximum</th>
<th>SCT Id</th>
<th>ifType</th>
<th>VPI</th>
<th>minVPI</th>
<th>maxVPI</th>
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<td>1</td>
<td>2.1</td>
<td>Up</td>
<td>Down</td>
<td>1412830</td>
<td>1412830</td>
<td>5</td>
<td>NNI</td>
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<tr>
<td>2</td>
<td>2.2</td>
<td>Up</td>
<td>Down</td>
<td>1412830</td>
<td>1412830</td>
<td>5</td>
<td>NNI</td>
<td>0</td>
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<tr>
<td>3</td>
<td>1.1</td>
<td>Up</td>
<td></td>
<td>1412830</td>
<td>1412830</td>
<td>5</td>
<td>NNI</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
```

Enter the `dnport` command to bring down any ports that are in the Admin State “Up”.

```
M8850_LA.2.AXSM.a > dnport 2
```

Note
`dnport` command can disrupt traffic on existing connections.

**Step 4**
Enter the `cnfcdsct` command.
Selecting a Card SCT

Replace `sctID` with the number of the SCT that you want to assign to the card. Table 7-1 in Chapter 7, “Managing Service Class Templates,” describes the SCTID options.

When a service module is powered up for the first time, the default card SCT file is used. You must run the `cnfcdsct` command in order to use another SCT file. The default SCT file is 0.

Step 5
To display the SCT assigned to a card, enter the following command:

```
pop20two.1.AXSM.a > dspcd
```

The display card report displays a row labeled “Card SCT Id,” which identifies the SCT assigned to the card.

```
M8850_LA.1.AXSM.a > dspcd
                    Front Card     Upper Card     Lower Card
---------------------------------------------
Card Type:          AXSM-4-622       SMFIR-2-622       SMFIR-2-622
State:              Active        Present          Present
Serial Number:      SAK0350007N    SAK03460003F    SBK043902FE
Boot FW Rev:        3.0(0.171)P2  ---              ---
SW Rev:             3.0(0.171)P2  ---              ---
800-level Rev:      09            13           A1
Orderable Part#:     800-5774-5   800-5381-4     800-5381-4
PCA Part#:          73-4504-2    73-4125-1      73-4125-1
CLEI Code:          BAA1BADAAA    0000000000    BAI9ADTAAA
Reset Reason:       Power ON Reset
Card Operating Mode: AXSM-A
SCT File Configured Version: 1
SCT File Operational Version: 1
Card SCT Id: 5
```

Type <CR> to continue, Q<CR> to stop:

Step 6
Enter the `upport <if>` command to bring up any ports you brought down in Step 3. Replace `<if>` with the interface number of the downed port.

```
M8850_LA.1.AXSM.a > upport 1
```

Step 7
Enter the `dssports` command to verify that all ports on the card are up.

```
M8850_LA.1.AXSM.a > dssports
ifNum Line Admin Oper. Guaranteed Maximum SCT Id ifType VPI minVPI maxVPI
State State Rate Rate (D:dflt used) VPI (VNNI, EVNNI, EVUNI)
----- ----- ------ ------ --------- -------------- ----------
 1  2.1  Up   Up     1412830  1412830   5   NNI      0    0    0
 2  2.2  Up   Up     1412830  1412830   5   NNI      0    0    0
 3  1.1  Up   Up     1412830  1412830   5   NNI      0    0    0
```
Selecting a Port SCT

A port SCT defines queue parameters that apply to egress queues on a port. Port SCTs are configured when provisioning ports. For more information on provisioning service module ports and configuring port SCTs, refer to the configuration and command reference guide for the service module. These guides are listed in Table 1-1 in Chapter 1, “Preparing for Configuration.”