ATM Connections

The Cisco 12000 GSR uses both terminating Permanent Virtual Circuits (PVCs) and Switched Virtual Circuits (SVCs). A PVC is modeled in CGM as an object that is deployed beneath an interface. The interface acts as the endpoint. An SVC is modeled in CGM as an object that is deployed beneath an interface, but it has two endpoints. The remote endpoint can either be a non-CEMF endpoint (which means it is outside Cisco EMF) or a CEMF endpoint (which means it is within Cisco EMF).

SVCs are similar to PVCs in setup; however, they function differently. The PVC is always operating and is always up. On the other hand, the SVC shuts down when it is not in use. It does not cease to exist, but only goes down until traffic occurs, then it re-establishes again.

This chapter contains the following information:

- Overall Process of Creating ATM Connections
- Uploading PVCs and ATM QoS Profiles
- Creating ATM QoS Profiles
- Deploying a PVC
- Deploying an SVC
- Applying an ATM QoS Profile to an ATM Connection
- PVC Configuration
- SVC Configuration
- PVC Status

Overall Process of Creating ATM Connections

To create a PVC or SVC, follow these instructions:

1. Upload any existing ATM connections and QoS (Quality of Service) profiles, if required (for details, refer to “Uploading PVCs and ATM QoS Profiles.”)
2. Create an ATM QoS profile, if required (for details, refer to “Creating ATM QoS Profiles.”)
3. Deploy (create) the PVC or SVC, using the Deployment Wizard (for details, refer to “Deploying a PVC” or “Deploying an SVC.”) This process creates the PVC or SVC in Cisco EMF only; it does not create the connection on the device.
4. Apply the QoS profile to the PVC or SVC (for details, refer to “Applying an ATM QoS Profile to an ATM Connection.”)
5. Configure the fields for the PVC or SVC, including layer 2 and 3 information (for details, refer to “PVC Configuration” or “SVC Configuration.”) You can then create the connection on the device, which automatically commissions the PVC or SVC.

**Uploading PVCs and ATM QoS Profiles**

When you upload PVCs, any corresponding ATM QoS profiles are uploaded as well. PVCs are discovered and placed into the normal state, so that management of these connections begins automatically. Once these connections and/or profiles are uploaded, you can view and adjust them in CGM.

Before you can upload any connections or profiles, make sure your telnet passwords are correctly configured in CGM (for details, refer to “Entering or Changing Username and Passwords.”)

The Uploading PVCs and ATM QoS Profiles section covers the following areas:
- Viewing the ATM Connection Upload Window
- ATM Configuration Upload Window—Detailed Description

**Viewing the ATM Connection Upload Window**

To open the ATM Connection Upload window, proceed as follows;

**Step 1** Right-click a chassis object, then choose CGM Management>Logical>ATM>VCL Management>Upload. The ATM Connection Upload window appears.
Step 2  The chassis you selected appears at left. Click **Upload**, and all ATM connections and ATM QoS profiles currently configured on the selected device are uploaded into CGM.

Uploaded ATM connections and ATM QoS profiles are named according to the following formats:
- ATM connections—*PVC* - (*"VCL_VPI.VCI"*, for example VCL_10.20.)
- ATM QoS Profiles—*QoSProfile_(assigned number)*

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**Note**  Only PVC upload will be available no SVC upload is available.

### ATM Configuration Upload Window—Detailed Description

The ATM Connection Upload window contains a single Connection Upload tab.

#### Connection Upload Tab

The Connection Upload tab contains a single Upload area.

#### Upload

- **Upload Progress**—Current progress of the upload operation.
- **Upload Status**—Upload status messages for the current upload operation.
- **Upload**—Click **Upload** to initiate the upload of the ATM connections and QoS profiles from the selected chassis.

### Creating ATM QoS Profiles

The ATM QoS Profile Configuration window allows you to create and save ATM QoS profiles. ATM QoS profiles are stored in CGM and the associated fields are created on the device when the connection (PVC or SVC) is created.

**Note**  Once you have created an ATM QoS profile, you can only edit that profile if it is not being used. If any connections are using that profile, you cannot alter the profile. You can view which specific connections are using a certain profile by running a Cisco EMF query against the profile name (for details, refer to the *Cisco EMF User Guide*.)

The Creating ATM QoS Profiles section covers the following areas:

- Viewing the ATM QoS Profiles Configuration Window
- Deploying a PVC
- Editing or Deleting an ATM QoS Profile
Creating ATM QoS Profiles

Viewing the ATM QoS Profiles Configuration Window

To open the ATM QoS Profiles Configuration window, proceed as follows:

**Step 1**
Right-click on an interface, then choose **CGM Management>Logical>ATM>QoS>Profile**. The ATM QoS Profiles window appears.

*Figure 11-2 ATM QoS Profiles Window—Profile Tab*

The ATM QoS Profiles window contains two tabs: Profile and RxTx Parameters. The Profile tab appears by default when you open the ATM QoS Profiles window.

**Step 2**
Create a profile by typing information in the required fields, or by copying the parameters from an existing profile.

- To create a new profile, proceed as follows:
  - Click **Create Profile**.
  - Type in the new profile name, then click **Ok**.
  - Fill in the required fields in the Profile tab and in the RxTx Parameters tab (only the Tx or transmit area is applicable).
  - Click the Save icon to save your changes.
- To create a profile based on an existing profile, click the profile you want to model from the profile list box at left.
  - Click **Create Profile** and type a name for the new profile.
  - Choose the newly created profile from the list box at left.
Creating ATM QoS Profiles

– Modify the fields in the Profile tab and in the RxTx Parameters tab (only the Tx or transmit area is applicable) if necessary.
– Click the Save icon to save your changes.

Editing or Deleting an ATM QoS Profile

An existing ATM QoS profile can only be edited or deleted if it is not currently being applied to any interfaces. Once you have applied a QoS profile to an interface, you cannot edit or delete it unless you remove it from the interface. If that QoS profile is being used by any other interfaces, you will still not be able to edit or delete the QoS profile. If you want to view the connections that are using a specific profile, run a Cisco EMF query against the profile name (for details, refer to the Cisco EMF User Guide.) Once you have removed a QoS profile from all interfaces, you can proceed to edit the fields within the ATM QoS Profiles Configuration window or delete the selected QoS profile.

To delete an ATM QoS Profile, proceed as follows:

• In the ATM QoS Profiles Configuration window, in the list box at left, right-click on the profile name you want to delete
• Go to Deployment>Delete Objects. The delete wizard appears.
• Click Finish to delete the selected object. A message appears, confirming successful deletion. Note that deletion fails if the QoS profile is currently being used.

ATM QoS Profiles Configuration Window—Detailed Description

The ATM QoS Profiles Configuration window contains two tabs: Profile and RxTx Parameters.

Profile Tab

The Profile tab contains the following fields:
Profile Type—Enter the type of profile you are creating. This is the level of service, for example, gold service or bronze service.
Profile Description—Enter a description for this profile. Use the horizontal and vertical scroll tools to view text not displayed in the window.

RxTx Parameters Tab

It is possible to select a Service Category that is not supported by the GSR, such as ubr. However, this will be detected when an attempt is made to create the connection on the device & the operator informed. Also, Transmit & Receive are applicable to SVCs. Only Transmit is applicable for PVCs.

The RxTx Parameters tab contains the Receive and Transmit Parameters for the selected ATM QoS profile. Note that only the Transmit (Tx) parameters are applicable to QoS profiles.
Creating ATM QoS Profiles

Figure 11-3  ATM QoS Profiles Configuration Window—RxTx Parameters Tab

The RxTx Parameters tab has three areas:

- Category
- Receive Parameters (not applicable for CGM)
- Transmit Parameters

Category

The Category area contains one field, as follows:

QoS—Service category of the selected QoS profile.

Transmit Parameters

The Transmit Parameters area contains the following fields:

CLP (Cell Loss Priority)—Determines the probability of a cell being dropped if the network becomes congested. Cells with CLP = 0 are insured traffic, which is unlikely to be dropped. Cells with CLP = 1 are best-effort traffic, which might be dropped in congested conditions in order to free up resources to handle insured traffic.

SCR (Sustainable Cell Rate)—Maximum sustained-cell-rate (scr) traffic parameter that is allowed for connections.

PCR (Peak Cell Rate)—Maximum transmitting rate of cells.
MCR (Minimum Cell Rate)—Lowest acceptable transmitting rate (specified in cells per second) for connections.
MBS (Maximum Burst Cell Size)—Maximum burst cell size permitted by cells of connections.
CDVT (Cell Delay Variation Tolerance)—Cell delay variation estimated to be experienced by cells of connections.

Deploying a PVC

Tips

PVC and VCL are interchangeable terms in CGM.

You can deploy a PVC either under a main interface or a subinterface. To deploy a PVC on a main interface or a subinterface, proceed as follows:

Step 1

Right-click on a selected line card or physical interface, then choose Deployment>CGM>Logical>ATM>PVC. The Deployment Wizard appears.

Figure 11-4 Deployment Wizard—Templates

Step 2

Choose the template you want to use, either: Cisco PVC under ATM EndPoint or Cisco PVC under ATM EndPoint on Sub Interface, and select either auto named or user named (for details on auto vs. user named, refer to “Deploying Modules.”) Make sure your selection is highlighted in black before clicking Forward.
Figure 11-5 Deployment Wizard—Object Parameters

Step 3 Enter the number of Cisco PVCs (VCLs) you want to create.

Step 4 Enter a unique name (prefix and suffix) for the VCL (Cisco PVC by default).

Step 5 Enter the PVC Object Number. If you are creating multiple PVCs, you need to provide a start number which will be included in the PVC name. For example, if you are creating three PVCs, and you specify a start number of one, the PVCs will be numbered one, two, and three. If you deploy more PVCs in the future on this same interface, remember to not duplicate this starting number. For example, if you already have three PVCs deployed on this interface and they are numbered one, two, and three, and you now want to deploy six more, begin your PVC object number at four, where you left off previously. The six new PVCs will be numbered four, five, six, seven, eight, and nine. (for details on auto-named deployment, refer to “Deploying Modules.”)

Step 6 Click Forward to proceed.
Figure 11-6 Deployment Wizard—Object Parameters

Step 7 Enter a Subscriber ID.
Step 8  Click **Select**. A new window appears. Navigate down the hierarchy until you find the interface you wish to deploy the PVC under. Click on the object to select, then click **Apply**. You are returned to the window above.

Step 9  Click **Forward** to proceed.
Figure 11-8 Deployment Wizard—Summary

Step 10 Click Finish if the deployment summary information is correct. Click Dismiss to complete the deployment. The Deployment Wizard closes and the object is created under the selected interface.

Deploying an SVC

To deploy a SVC object on a main interface, proceed as follows:

Step 1 In the Map Viewer, within the GSR Manager view, right-click on a selected line card, then choose Deployment>Generic Component Objects>Logical>ATM>SVC. The Deployment Wizard appears.
Step 2  Choose a template, either an SVC with a CEMF end point or an SVC with a non-CEMF end point. Click Forward to proceed.
Step 3  Enter the number of SVCs you want to deploy. Click Forward to proceed.
Step 4  Enter an SVC name. This name must be unique.

Step 5  Enter the Destination NSAP Address. This field only appears if you have selected to deploy a non-CEMF endpoint.

Step 6  Click **Forward** to proceed.
Step 7 Click the first **Select** button. A new window appears. Navigate down the hierarchy until you find the interface which will be the local endpoint. Click on the object to select, then click **Apply**. You are returned to the window above. If you have selected the CEMF endpoint option, you need to repeat this process for the second interface (remote endpoint) by clicking the second **Select** button.

Step 8 When you have selected the appropriate interfaces or subinterfaces for both endpoints (if applicable), click **Forward** to proceed.
Applying an ATM QoS Profile to an ATM Connection

Now you can apply the ATM QoS Profile you created earlier to a PVC or an SVC. To view the ATM Connection QoS Configuration window, proceed as follows:

**Step 1** Right-click the interface that contains the created ATM connection, then choose CGM Management > Logical > ATM > PVC or SVC > QoS > Management. The ATM QoS Profiles Management window appears.

---

Step 9: Click **Finish** if the Deployment Summary information is correct. Click **Cancel** to stop the deployment. The Deployment Wizard closes and the object is created under the selected interface.

---

**Applying an ATM QoS Profile to an ATM Connection**

**Figure 11-13 Deployment Wizard—Templates**

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Step 2 Choose the related Chassis, Module, Interface, and Connection (PVC or SVC) from the list box at left. This connection should be the PVC or SVC that you want to apply the ATM QoS profile to. Any current ATM QoS profiles applied to the selected PVC or SVC appear in the tabs at right.

Step 3 Choose Edit from the toolbar. Go down to the Apply Profile menu option. A list of ATM QoS profiles appear. Click the named ATM QoS profile you want to apply. After you apply the profile, a status line appears in the lower left corner of the window, telling you if the profile was applied successfully or not. The information for the selected new profile appears in the tabs at right.

PVC Configuration

The PVC Configuration section covers the following areas:
- Viewing the PVC Configuration Window
- Connecting or Disconnecting a PVC
- Decommissioning or Re-Commissioning a PVC
- PVC Configuration Window—Detailed Description

Viewing the PVC Configuration Window

To view the PVC Configuration window, follow these steps:
Step 1  
Right-click on a selected interface, then choose **CGM Management>Logical>ATM>PVC>Configuration**. The ATM VCL Configuration window appears, with the Configuration tab displayed.

*Figure 11-15  ATM VCL Configuration Window—Configuration Tab*

Step 2  
Choose the chassis, module, interface, and Cisco VCL (PVC) from the list boxes at left.

Step 3  
Enter the relevant values in both tabs, using the drop-down lists and data entry boxes. For a detailed description of the fields within both tabs, refer to “PVC Configuration Window—Detailed Description.”

Step 4  
Click the **Save** icon to save the changes made.

### Connecting or Disconnecting a PVC

You can connect or disconnect a PVC in the Layer 3 Configuration tab.

Connecting a PVC creates the PVC on the device, which makes it a real, working connection. The PVC is also commissioned at this time, which allows you to manage configuration and status details.

Disconnecting a PVC disconnects the connection entirely from the device.
Make sure that the Cisco VCL (PVC) you want to connect or disconnect is selected in the list box at left.

Click the Connect or Disconnect button in the Action area.

**Decommissioning or Re-Commissioning a PVC**

When you connect a PVC, it is automatically commissioned as well. Decommissioning does not disconnect the PVC; it simply stops active management on the connection.

To decommission a connected PVC:

- Make sure that the PVC you want to decommission is selected in the list boxes at left. You can select multiple PVCs if desired.
- Click the Decommission button in the Action area.

Once you have decommissioned a connected PVC, you might want to commission it again, to re-establish management on the connection. To re-commission a PVC, simply click Connect and the connection is commissioned.

**PVC Configuration Window—Detailed Description**

The ATM VCL Configuration window (see Figure 11-15) contains two tabs: Configuration and Layer 3 Configuration.
PVC Configuration

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PVC Configuration

Configuration Tab

The Configuration tab (see Figure 11-15) contains four areas: VPI/VCI, Traffic Information, Encapsulation Parameters, and OAM Information.

VPI/VCI

The VPI/VCI area allows you to configure the following fields:
- VPI—Current VPI values for the PVC.
- VCI—Current VCI values for the PVC.

Traffic Information

The Traffic Information area allows you to configure the following fields:
- EPC Mode—Displays whether the Early Packet Discard operation is enabled or disabled at this specific connection.
- UPC Mode—Details of the Usage Parameter Control Mode, whose operations are pass, tag, drop or local shaping on the connection made.

Encapsulation Parameters

The Encapsulation Parameters area allows you to configure the following fields:
- Encapsulation Protocol—Allows you to specify the Protocol for terminating VC if Encapsulation Flag is aal5Mux. The options available are: other, ip, xns, appletalk, clns, decnet, novell, apollo and vines.
- Encapsulation Flag—Allows you to specify the encapsulation type for terminating VC. The options available are: other, aal5Snap, aal5Nlpid, aal5FrNlpid, aal5Mux, aal34Smds, aalQsAal, aal5Ilmi, aal5Lane and aal5Pnni.
- AAL User Type—Allows you to specify the user types if the Encapsulation flag is aal5Lane. The options available are:
  - boxConfigure—Shared Server or Client end of a Configure VCC.
  - busForward—BUS end of the Data Forward VCC.
  - busSend—BUS end of the Data Send VCC.
  - clientConfigure—LE Client end of the Configure Direct VCC.
  - clientData—One end of the Data Direct VCC.
  - clientDirect—LE Client end of the Control Direct VCC.
  - clientDistribute—LE Client end of the Control Distribute VCC.
  - clientForward—LE Client end of the Multicast Forward VCC.
  - clientSend—LE Client end of the Multicast Send VCC.
  - configure—Config Server end of any Configure VCC.
  - serverConfigure—LE Server end of the Configure VCC.
  - serverDirect—LE Server end of the Control Direct VCC.

OAM Information

The OAM Information area allows you to configure the following fields:
AIS Mode—Not applicable for CGM.

RDI Mode—Details on the Enable Remote Defect Indication OAM cell generation. In ATM, when the physical layer detects loss of signal or cell synchronization, RDI cells are used to report a VPC or VCC failure. RDI cells are sent upstream by a VPC or VCC endpoint to notify the VPC or VCC endpoint of the downstream failure.

**Layer 3 Configuration Tab**

The Layer 3 Configuration tab (see Figure 11-16) contains the following areas:

- VCL Config
- Interface
- VCL Parameters
- VPI/VCI (including Auto Suggestion feature)
- Subscriber
- OAM Parameters
- Actions

**VCL Config**

The VCL Config area contains one field:

Encapsulation—The following values can be selected for this field:

- None—No encapsulation is selected.
- ILMI—Used for setting up an ILMI PVC in an SVC environment. In an SVC environment, you must configure a PVC for communication with the ILMI so that the router can receive SNMP traps and new network prefixes.
- Qsaal—This signaling PVC can only be set up on ATM main interfaces, not on ATM subinterfaces.

**Interface**

The Interface area contains one field:

Sub-Interface Number—Type in the subinterface number under which this PVC is deployed.

**VCL Parameters**

The VCL Parameters area contains the following fields:

AAL5 Encapsulation—Configure the ATM adaptation layer (AAL) 5 encapsulation type.

Destination IP Address—Enter the IP address of the destination interface to which you want to pass traffic.

Broadcast—Select yes if you want to send duplicate broadcast packets for all protocols configured on a PVC.

**VPI/VCI**

The VPI/VCI area contains one field:
Auto Suggestion—If you enable auto suggestion, CGM automatically suggests VPI or VCI values for you.

Subscriber

The Subscriber area contains one field:
Subscriber ID—Type in your subscriber ID.

OAM Parameters

The OAM Parameters area contains the following fields:
Manage—If this value is set to yes, then the value in frequency will be considered.
Frequency—Specify the frequency (in seconds) that end-to-end F5 OAM loopback cells should be transmitted when a change in up or down state is being verified.
Retry Down Count—Specify the number of consecutive end-to-end F5 OAM loopback cell responses that are not received in order to tear down a PVC.
Retry Up Count—Specify the number of consecutive end-to-end F5 OAM loopback cell responses that must be received in order to change a PVC connection state to up.
Retry Frequency—If a PVC is up and a loopback cell response is not received after the specified frequency attribute, then loopback cells are sent at the retry frequency to verify whether or not the PVC is down.

Actions

The Action area contains three buttons:
Connect—Allows you to connect the selected PVC, creating the connection on the device, making it real and active. Also initiates commissioning activities, including heartbeat polling and alarm reporting on the connection.
Disconnect—Allows you to disconnect the selected PVC, disconnecting the connection on the device, making it inactive. Also stops all commissioning activities, including heartbeat polling and alarm reporting on the selected connection.
Decommission—Allows you to decommission the selected PVC, stopping heartbeat polling and alarm reporting on the selected connection.

SVC Configuration

The SVC Configuration section covers the following areas:
- Viewing the SVC Configuration Window
- Connecting or Disconnecting an SVC
- Decommissioning or Recommisioning an SVC
- SVC Configuration Window—Detailed Description

Viewing the SVC Configuration Window

To view the SVC Configuration window, follow these steps:
Step 1  
Right-click on a selected interface, then choose CGM Management>Logical>ATM>SVC Management>Configuration. The ATM SVC Configuration window appears, with the Configuration tab displayed.

Figure 11-17  ATM SVC Configuration Window—Configuration Tab

<table>
<thead>
<tr>
<th>SVC Parameters</th>
<th>VC Parameters</th>
<th>OAM Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSAP Address</td>
<td>AMEEncapsulation</td>
<td>Manage</td>
</tr>
<tr>
<td></td>
<td>Idle timeout</td>
<td>Frequency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Retry Up Count</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Retry Down Count</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Retry Frequency</td>
</tr>
</tbody>
</table>

Step 2  
Choose the chassis, module, interface, and connections (SVC) from the list boxes at left. Enter the relevant values in the tab, using the drop-down lists and data entry boxes. For a detailed description of the fields within this tab, refer to “SVC Configuration Window—Detailed Description.”

Step 3  
Click the Save icon to save the changes made.

Connecting or Disconnecting an SVC

Connecting an SVC creates the SVC on the device and makes it a real, working connection. The SVC is also commissioned at this time, which allows you to manage configuration and status details.

Disconnecting an SVC disconnects the connection entirely from the device.

To connect or disconnect an SVC:
- Make sure that the SVC you want to connect or disconnect is selected in the list boxes at left.
- Click the Connect or Disconnect button in the Action area.
Decommissioning or Recommissioning an SVC

When you connect an SVC, it is automatically commissioned as well. Decommissioning does not disconnect the SVC; it simply stops active management on the connection.

To decommission a connected SVC:

1. Make sure that the SVC you want to decommission is selected in the list boxes at left.
2. Click the Decommission button in the Action area. The SVC is placed into the Decommissioned state.

Once you have decommissioned a connected SVC, you might want to recommission it, which re-establishes management on the connection. To recommission a decommissioned SVC, simply click Connect.

SVC Configuration Window—Detailed Description

The ATM SVC Layer 3 Configuration window (see Figure 11-17) contains one tab: Configuration.

Configuration

The Configuration tab contains four areas:

- SVC Parameters
- VC Parameters
- OAM Parameters
- Actions

SVC Parameters

The SVC Parameters area allows you to configure the following fields:

- NSAP Address (Network Service Access Point)—ATM address you need to provide if you are configuring an SVC.

VC Parameters

The VC Parameters area allows you to configure the following fields:

- AAL5 Encapsulation—Configure the ATM adaptation layer (AAL) 5 encapsulation type.
- Destination IP Address—Enter the IP address of the destination interface to which you want to pass traffic.
- Broadcast—Click on if you want to send duplicate broadcast packets for all protocols configured on a SVC.
- Idle Timeout—Specify an interval of inactivity after which any idle SVC on an interface is torn down.
- Minimum Rate—In addition to configuring the interval of inactivity, you can optionally specify the minimum rate in kilobits per second (Kbps). This is the minimum traffic rate required on an ATM SVC to maintain the connection.
OAM Parameters

The OAM Parameters area allows you to configure the following fields:

Manage—If this value is set to yes, then the value in frequency will be considered.

Frequency—Specify the frequency (in seconds) that end-to-end F5 OAM loopback cells should be transmitted when a change in up or down state is being verified.

Retry Down Count—Specify the number of consecutive end-to-end F5 OAM loopback cell responses that are not received in order to tear down a PVC.

Retry Up Count—Specify the number of consecutive end-to-end F5 OAM loopback cell responses that must be received in order to change a PVC connection state to up.

Retry Frequency—If a PVC is up and a loopback cell response is not received after the specified frequency attribute, then loopback cells are sent at the retry frequency to verify whether or not the PVC is down.

Action

The Action area contains three buttons:

Connect—Allows you to connect the selected SVC, creating the connection on the device, making it real and active. Also initiates commissioning activities, including heartbeat polling and alarm reporting on the connection.

Disconnect—Allows you to disconnect the selected SVC, disconnecting the connection on the device, making it inactive. Also stops all commissioning activities, including heartbeat polling and alarm reporting on the selected connection.

Decommission—Allows you to decommission the selected SVC, stopping heartbeat polling and alarm reporting on the selected connection.

PVC Status

Step 1

Right-click on a specified line card, then choose CGM Management>Logical>ATM>VCL Management>Status. The ATM VCL Status window appears.
Choose a Chassis, Module, Interface, and Cisco VCL (PVC) from the list boxes at left. The status information for the selected PVC appears in the tab at right.

**ATM VCL Status Window—Detailed Description**

The Status tab has four areas: PVC Status, Soft PVC Details, Characteristics, and OAM Details.

**PVC Status**

The PVC Status area has the following fields:
- Operational State—Not applicable to CGM.
- Last Change—Time elapsed after the last status change.
- Install Time—Not applicable to CGM.

**Soft PVC Details**

The Soft PVC Details area is not applicable to CGM.
Characteristics

The Characteristics area is not applicable to CGM.

OAM Details

The OAM Details area is not applicable to CGM.