



Managing ATM Connections

This chapter describes the ATM connections supported by the Cisco 12000 Manager (C12kM) application and guides you through the creation and configuration of these connections.

The Cisco 12000 series internet routers use both terminating Permanent Virtual Circuits (PVCs) and Switched Virtual Circuits (SVCs). A PVC is modeled in C12kM as an object that is deployed beneath an interface. The interface acts as the endpoint. An SVC is modeled in C12kM as an object that is deployed beneath an interface, but it has two endpoints. The remote endpoint can either be a non-Cisco Element Management Framework (Cisco EMF) endpoint (which means it is outside Cisco EMF) or a Cisco EMF 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.



Note

Fields appear on various windows within the C12kM application that are not applicable. In such cases these fields should be ignored. Information detailing the fields that should be ignored are provided in the appropriate sections.

This chapter contains the following information:

- [ATM Connections Supported by C12kM](#)
- [Launching the ATM Connections Windows](#)
- [ATM PVC Connection Synchronization](#)
- [Creating ATM Connections](#)
- [Uploading Existing ATM Connections and QoS Profiles](#)
- [Managing ATM QoS Profiles](#)
- [Deploying ATM Connection Objects](#)
- [Applying an ATM QoS Profile to an ATM Connection](#)
- [PVC Configuration](#)
- [SVC Configuration](#)
- [PVC Status](#)

ATM Connections Supported by C12kM

ATM connections are modeled in C12kM as objects that are deployed beneath an ATM interface. C12kM supports two types of ATM Connection: Terminating Permanent Virtual Circuits (PVCs), and Switched Virtual Circuits (SVCs).



Note

When you have created an ATM Connection, they can only be viewed in the Component Managed view.

Both types of ATM connection are now discussed in greater detail.

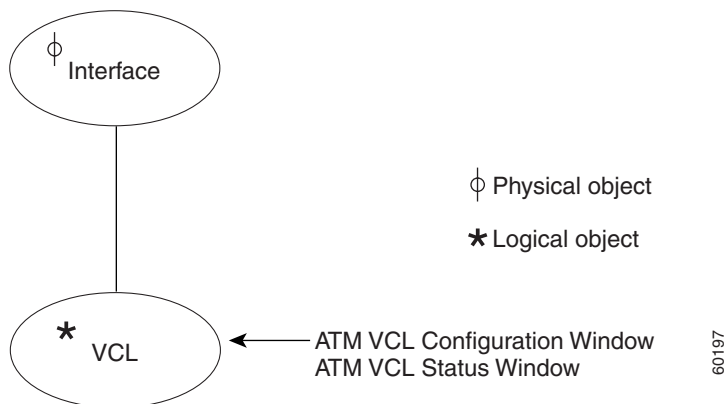
PVC Connections

A PVC is a permanent logical connection that must be configured from source to destination. PVCs save bandwidth associated with establishing a circuit when a virtual circuit must exist all the time. You can deploy a PVC (which creates the PVC within Cisco EMF), apply an ATM Traffic Descriptor to the PVC, then create the connection on the device. Deploying and creating a PVC creates a cross-connection within one device.

Terminating PVC Connections

A terminating PVC connection object is modeled in C12kM as a single object deployed beneath a ATM interface (see [Figure 12-1](#)). The ATM interface acts as the end point.

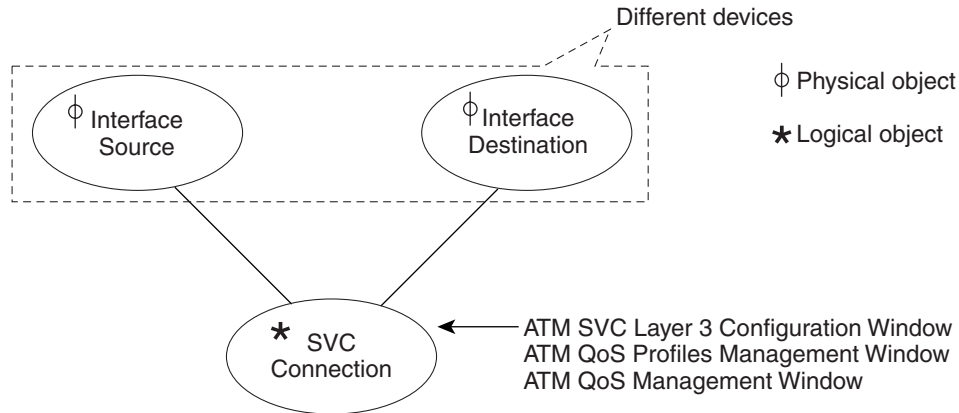
Figure 12-1 Terminating PVC Connection



SVC Connections

An SVC is modeled in C12kM as an object deployed beneath two interfaces (see [Figure 12-2](#)). The remote endpoint can be a non-Cisco EMF endpoint (that is, outside Cisco EMF) or a Cisco EMF-endpoint (that is, within Cisco EMF). Deploying and creating an SVC creates a connection between the outgoing port (or source) on one device and the incoming port (or destination) on a second device.

Figure 12-2 SVC Connection



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. The SVC saves bandwidth as opposed to the PVC, but is generally slower in operation.

Launching the ATM Connections Windows

Table 12-1 displays each object type that can be used to open the C12kM windows that allow you to upload, create and configure ATM connections. For example, the ATM QoS Profiles Configuration window can be launched from a Site, Shelf, Chassis or Module object, but cannot be launched from an Interface object.

Table 12-1 Launching the ATM Connection Windows

C12kM Window/Task	Objects (to select) to Open the Window					Menu Options to Select to Open Window
	Site	Shelf	Chassis	Module	Interface	
ATM Connection Upload	Yes	Yes	Yes	No	No	C12kM Management>Logical>ATM>PVC Management>Upload
ATM QoS Profiles Configuration	Yes	Yes	Yes	Yes	No	C12kM Management>Logical>ATM>QoS>Profile
ATM QoS Profiles Management	Yes	Yes	Yes	Yes	No	C12kM Management>Logical>ATM>QoS>Management
ATM SVC Configuration	Yes	Yes	Yes	Yes	No	C12kM Management>Logical>ATM>SVC Management>Configuration
ATM VCL Configuration	Yes	Yes	Yes	Yes	No	C12kM Management>Logical>ATM>PVC Management>Configuration
ATM VCL Status	Yes	Yes	Yes	Yes	No	C12kM Management>Logical>ATM>PVC Management>Status

ATM PVC Connection Synchronization

The idea behind the ATM PVC Connection Synchronization is to provide a mechanism to update the ATM connection details stored in the Cisco EMF from the current configuration on a device. This is necessary if the device is updated, for e.g., if a new ATM connection is added (or removed) then the Cisco EMF should be able to re-read from the device and update the Cisco EMF by creating new objects if necessary.

The Synchronization process is initiated in the following circumstances:

- Every time the chassis is commissioned
- When the chassis loses connectivity and again establishes connection with the device
- Auto synchronization which is initiated automatically every 30 minutes on the device

The policies that are available for ATM connection synchronization are described in the [Table 12-2](#).

Table 12-2 ATM Connection Synchronization Policies

Policy Name	Value
Normal (default policy with C12kM)	0
Device_is_Master	1
CEMF_is_Master_After_First_Sync	2

Normal Policy

The Normal policy creates new PVC connection objects in the EM, for the connections available on the device. In case connection object that is available in the EM is removed from the device, then the normal policy moves the connection object into the decommissioned state during the next synchronization. If the same object with the same configuration details is again added to the device, the normal policy identifies the object and moves it to the normal state. However if a new connection object is added to the device with different configuration details, then the normal policy creates the connection object in the EM and moves it to the normal state. The ATM Connection synchronization never deletes any ATM connection object.

Syntax for Set:

```
cd <CEMF_ROOT>/bin
```

```
./objectUtilsTestRig setIntValue "ComponentManaged:<absolute-path of the chassis>" ciscoPlatformCon:CiscoChassis-MIB.DeleteConnections 0
```

(for policy information, refer [Table 12-2](#))

```
./objectUtilsTestRig setIntValue "ComponentManaged:<absolute-path of the chassis>" ciscoPlatformCon:CiscoChassis-MIB.DeleteConnections 1 (for policy information, refer Table 12-2)
```

```
./objectUtilsTestRig setIntValue "ComponentManaged:<absolute-path of the chassis>" ciscoPlatformCon:CiscoChassis-MIB.DeleteConnections 2 (for policy information, refer Table 12-2)
```

Syntax for Get:

```
./objectUtilsTestRig getAttrValue "ComponentManaged:<absolute-path of the chassis>" ciscoPlatformCon:CiscoChassis-MIB.DeleteConnections
```

Device_is_Master

This setting specifies that the Cisco device is the reference point for PVC creations and deletions. C12kM will sync up to the device. If a connection is present on the Cisco device but not in C12kM, C12kM will create the connection. If a connection is absent on the Cisco device but present in C12kM, C12kM will delete the connection.

CEMF_is_Master_After_First_Sync

This setting specifies that C12kM is the reference point for PVC creations and deletions, after the first synchronization. The device syncs up to the C12kM for information about PVC settings. If the connection is present in C12kM but not the Cisco device, C12kM creates the connection in the Cisco device. If the connection is absent in C12kM but present in the Cisco device, C12kM deletes the connection from the Cisco device.

Creating ATM Connections

To create a PVC or SVC, proceed as follows:

1. Upload any existing ATM connections and QoS (Quality of Service) profiles, if available (for details, refer to the [“Uploading Existing ATM Connections and QoS Profiles”](#) section on page 12-5) or
2. Create an ATM QoS profile, when required (refer to the [“Managing ATM QoS Profiles”](#) section on page 12-9 for further details)
 - a. Deploy (create) the PVC or SVC, using the Deployment Wizard (for details, refer to the [“Deploying a PVC Object”](#) section on page 12-15 or [“Deploying an SVC Object”](#) section on page 12-20). This process creates the PVC or SVC in Cisco EMF only; it does not create the connection on the device
 - b. Apply the QoS profile to the PVC or SVC (for details, refer to the [“Applying an ATM QoS Profile to an ATM Connection”](#) section on page 12-25)
 - c. Configure the fields for the PVC or SVC, including layer 2 and 3 information (for details, refer to the [“PVC Configuration”](#) section on page 12-26 or the [“SVC Configuration”](#) section on page 12-31) You can then create the connection on the device by commissioning the PVC or SVC for management.

Uploading Existing ATM Connections and QoS Profiles

This section describes how to upload existing ATM connections and profiles (previously configured on a Cisco device) into the C12kM application. Uploading saves time and effort re-configuring ATM connections and profiles that already exist on the device.

When you upload PVCs, any corresponding ATM QoS profiles are also uploaded. 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 within C12kM. Existing ATM connections and QoS profiles are uploaded from the ATM Connection Upload window.

**Note**

The processes of uploading ATM connections and synchronizing the connections function in a similar manner to upload the existing ATM connections and QoS profiles. So, any policy set for synchronization (i.e. Normal, Device_is_Master, or CEMF_is_Master_after_first_sync) is applicable to Upload as well. Refer [ATM PVC Connection Synchronization](#) section for details on policy setting for ATM Connection Synchronization.

The Uploading PVCs and ATM QoS Profiles section covers the following areas:

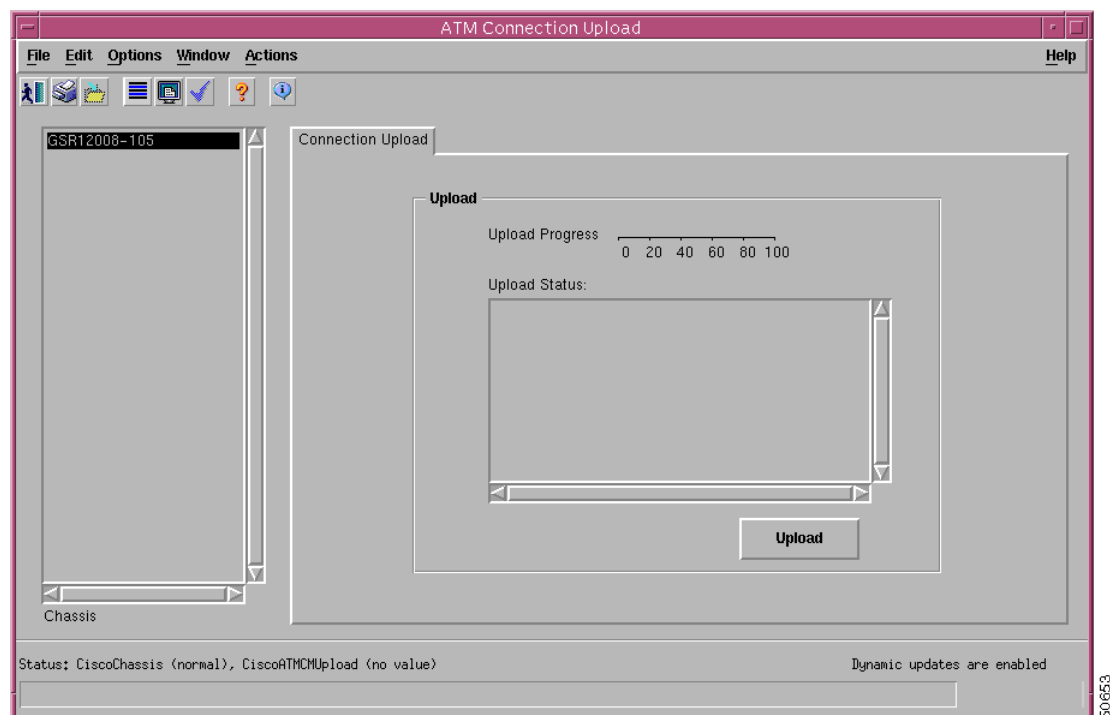
- [Viewing the ATM Connection Upload Window](#)
- [Uploading Existing ATM Connections and ATM QoS Profiles](#)
- [ATM Connection Upload Window—Detailed Description](#)

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 **C12kM Management>Logical>ATM>VCL Management>Upload**. The ATM Connection Upload window appears:

Figure 12-3 ATM Connection Upload Window

**Note**

Refer to the [“ATM Connection Upload Window—Detailed Description”](#) section on [page 12-8](#) for further information on the fields displayed in the ATM Connection Upload window.

Step 2 Choose a **Chassis** from the list displayed at the left of the window.



Note The ATM Connection Upload window displays the values of the attributes for the chassis object selected first when multiple chassis objects are selected in the list at the left of the window.

Uploading Existing ATM Connections and ATM QoS Profiles



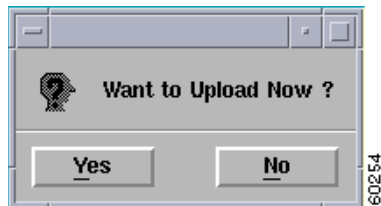
Note Only PVC connections can be uploaded (SVC upload is not available).

ATM connections (PVC only) and ATM QoS profiles can be uploaded using the ATM Connection Upload window. When you upload, existing ATM connections are discovered and placed into the Normal state. This allows management of the connections to begin automatically in the C12kM application. Once these connections/profiles are uploaded, you can view and reconfigure them (if necessary) using the C12kM application.

To upload ATM connections and ATM QoS profiles, proceed as follows:

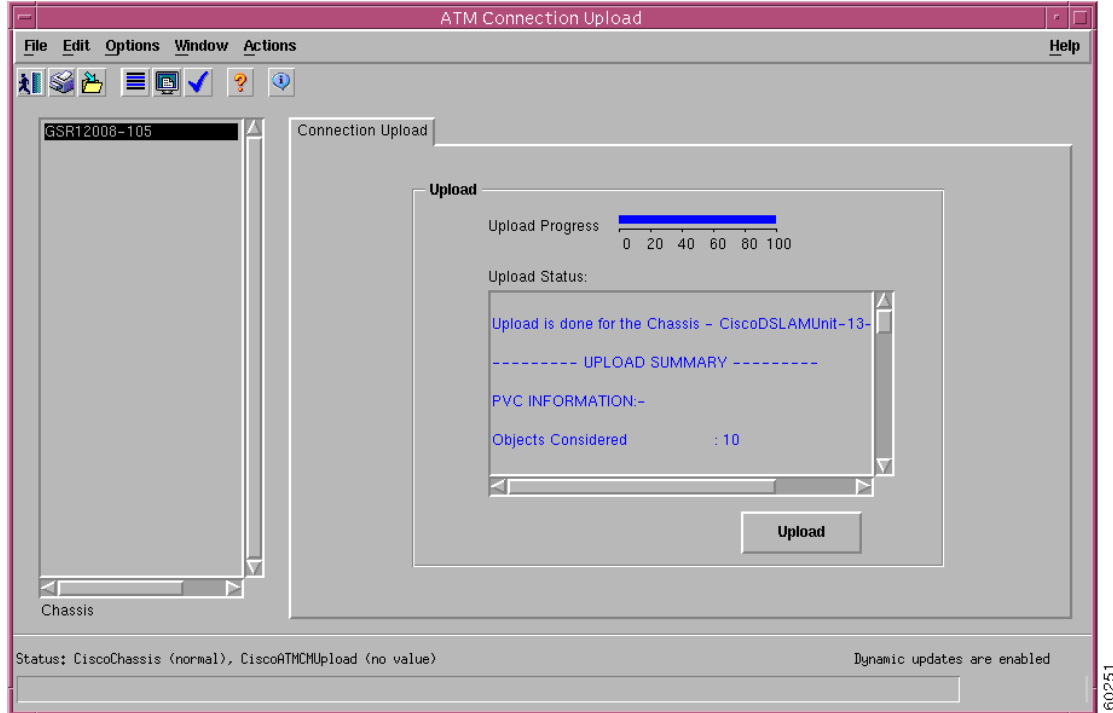
- Step 1** Open the ATM Connection Upload window. Refer to the [“Viewing the ATM Connection Upload Window”](#) section on page 12-6 for further details.
- Step 2** Choose a Chassis from the list displayed at the left of the window.
- Step 3** Choose **Upload**. A pop-up dialog appears asking you to confirm that you wish to upload:

Figure 12-4 Upload Confirmation Window



- Step 4** Choose **Yes** to upload. All ATM connections and ATM QoS profiles currently configured on the selected device are uploaded into C12kM. Upload Progress and Upload Status is displayed in the Upload area:

Figure 12-5 ATM Connection Upload Window (After Upload)



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)*

- Step 5** Choose **Save** from the **File** menu to save your changes.
- Step 6** Choose **Close** from the **File** menu to close the window.

ATM Connection Upload Window—Detailed Description

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



Note

The ATM Connection Upload window displays the values of the attributes for the chassis object selected first when multiple chassis objects are selected in the Chassis list at the left of the window.

Connection Upload Tab

The Connection Upload tab contains a single Upload area.

Upload

Upload Progress—Progress of the upload operation.

Upload Status—Upload status messages for the first selected chassis.

Upload—Select one or more chassis and choose **Upload** to initiate the upload of the ATM connections and QoS profiles from all the selected chassis.

Managing ATM QoS Profiles

The ATM QoS Profile Configuration window allows you to create and save ATM QoS profiles. ATM QoS profiles are stored in C12kM and the associated fields are created on the device when the connection (PVC or SVC) is created.



Note

ATM QoS profiles can only be edited when they are not applied, that is, if any connections are using the profile, you cannot edit the profile. You can view which specific connections are using a certain profile by running a Cisco EMF query against the profile name (refer to the *Cisco Element Management Framework User Guide Release 3.2 (78-12536-01)* for further details).

This section covers the following areas:

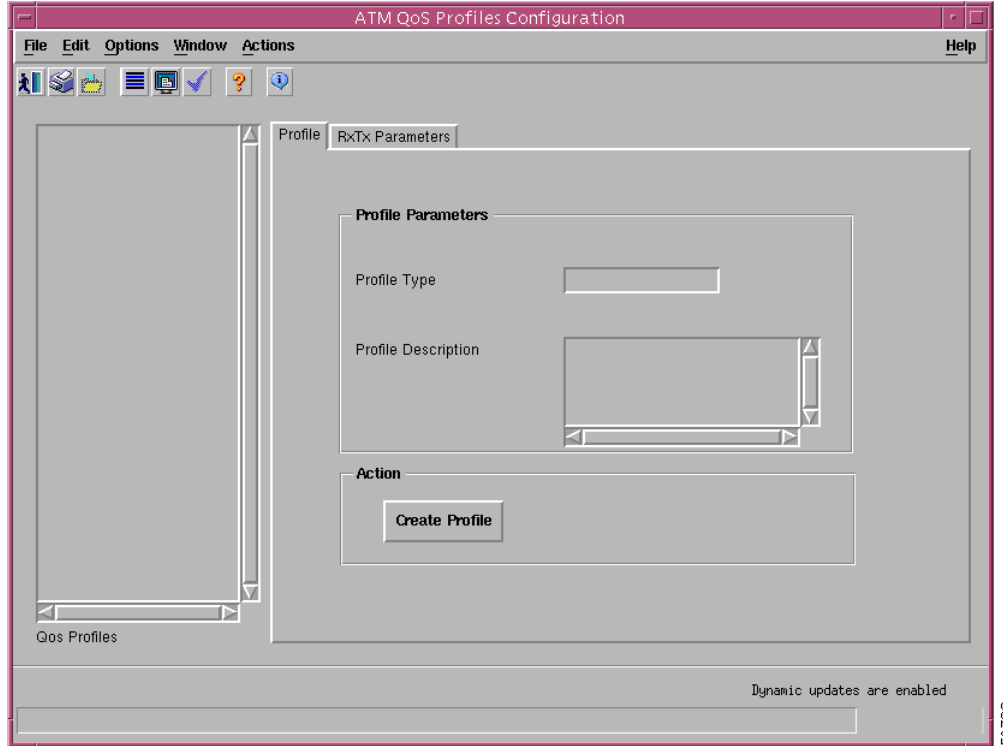
- [Creating ATM QoS Profiles](#)
- [Editing an ATM QoS Profile](#)
- [Deleting an ATM QoS Profile](#)
- [ATM QoS Profiles Configuration Window—Detailed Description](#)

Creating ATM QoS Profiles

To create ATM QoS profiles, proceed as follows:

- Step 1** Right-click on an interface, then choose **C12kM Management>Logical>ATM>QoS>Profile**. Refer to [Table 12-3 on page 12-15](#) for information on the objects that allow you to launch the ATM QoS Profiles window:

Figure 12-6 ATM QoS Profiles Configuration Window—Profile Tab



Refer to the “[ATM QoS Profiles Configuration Window—Detailed Description](#)” section on page 12-13 for further details.



Note To create a profile based on an existing profile, click the profile you want to model from the profile list box at the left of the window.

Step 2 Choose **Create Profile**. A Prompt window appears for you to enter the name of your new profile.

Figure 12-7 Prompt Window



Step 3 Enter a name for the new profile.

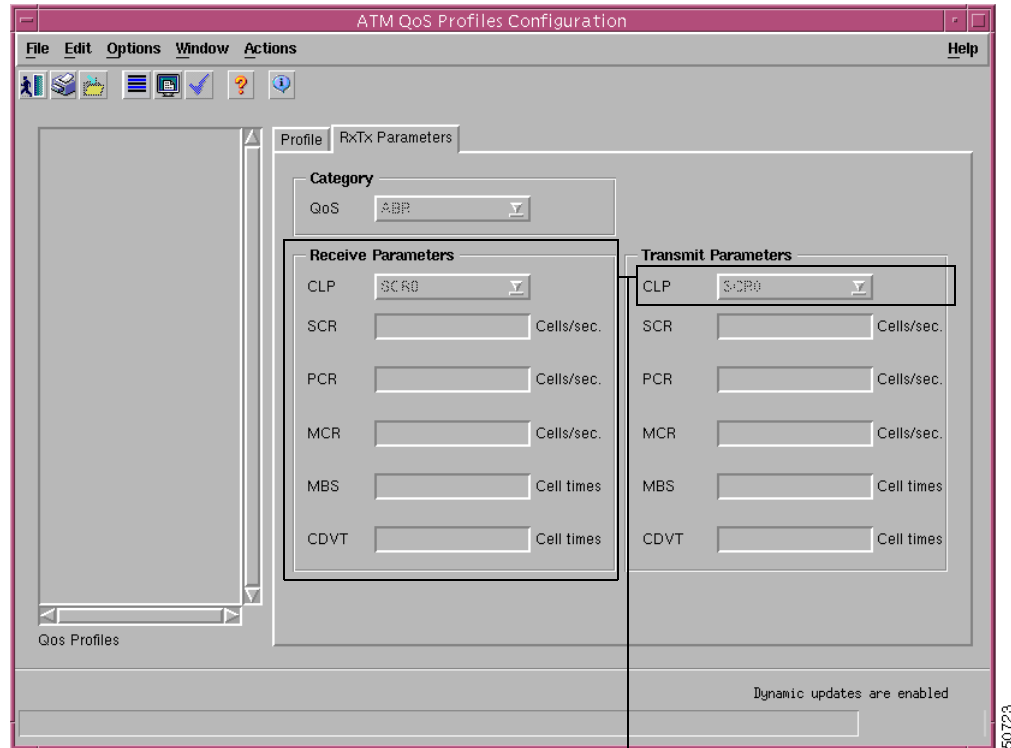


Note Each profile created must have a unique name. Do not insert spaces into a profile name.

Step 4 Choose **Ok**. The ATM QoS Profiles Configuration window reappears with the new profile name displayed in the QoS Profiles list at left-hand-side of the window.

- Step 5** Complete the fields in the Profile tab as required.
- Step 6** Choose the RxTx Parameters tab and configure the fields as applicable.

Figure 12-8 ATM QoS Profiles Configuration Window—RxTx Parameters Tab



Not applicable for PVCs

- Step 7** Choose the **Save** icon to save your changes.
- Step 8** Choose **Close** from the **File** menu to close the window.

Editing an ATM QoS Profile



Note

An existing ATM QoS profile can only be edited if it is not currently applied to an interface. Once you have applied a QoS profile to an interface, you cannot edit it (unless you remove it from the interface first). 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 Element Management Framework User Guide Release 3.2 (78-12536-01)*). 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. Refer to the

To edit an existing ATM QoS Profile, proceed as follows:

-
- Step 1** Right-click on an interface, then choose **C12kM Management>Logical>ATM>QoS>Profile**. Refer to [Table 12-3 on page 12-15](#) for information on the objects that allow you to launch the ATM QoS Profiles window.
 - Step 2** Choose the profile you wish to edit from the list of existing profiles displayed in the list at the left of the window.
 - Step 3** Edit the fields displayed in the tabs, as required.
 - Step 4** Select **Save** from the **File** menu to save the changes made to the profile.
 - Step 5** Select **Close** from the **File** menu to close the window.
-

Deleting an ATM QoS Profile

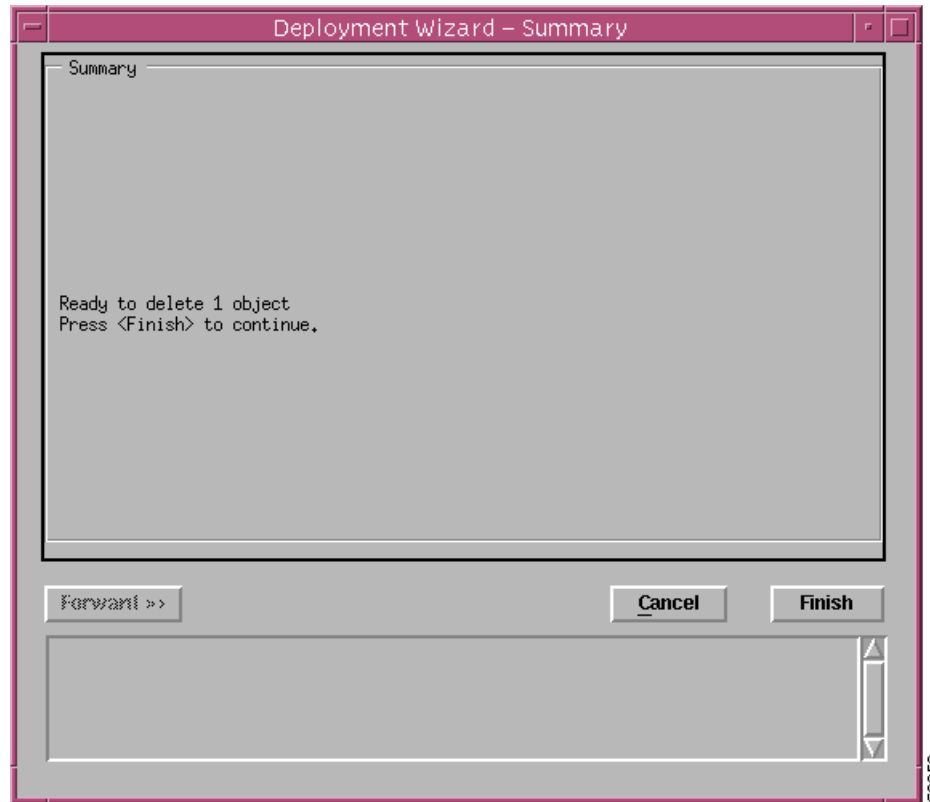


Note An existing ATM QoS profile can only be deleted if it is not currently applied to any interfaces. Once you have applied a QoS profile to a connection, you cannot edit or delete it unless you remove it from the connection. If that QoS profile is being used by any other connections, you will still 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 (refer to the *Cisco Element Management Framework User Guide* for details). Once you have removed a QoS profile from all connections, you can proceed to edit the attributes within the QoS Configuration window or delete the selected QoS profile.

To delete an existing ATM QoS profile, follow these steps:

-
- Step 1** Right-click on an interface, then choose **C12kM Management>Logical>ATM>QoS>Profile**. Refer to [Table 12-3 on page 12-15](#) for information on the objects that allow you to launch the ATM QoS Profiles window.
 - Step 2** Select the profile you wish to delete from the list of existing profiles displayed in the QoS Profiles list at the left-hand-side of the window.
 - Step 3** Right click on the profile and select the **Deployment, Delete Objects** option. The Deployment Wizard - Summary window appears (see [Figure 12-9](#)):

Figure 12-9 Deployment Wizard - Summary Window



- Step 4** Click **Finish** to delete the selected profile. An Information window appears to confirm that the profile has been deleted.

Figure 12-10 Information Window



- Step 5** Click **Ok**.
- When a profile is deleted it disappears from the list of existing profiles displayed in the QoS Profiles list at the left of the window.

ATM QoS Profiles Configuration Window—Detailed Description

The ATM QoS Profiles Configuration window displays 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, for example,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.

The RxTx Parameters tab displays three areas: Category, Receive Parameters (not applicable to C12kM), and 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)—Not applicable to C12kM.

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 ATM Connection Objects

This section describes how to deploy ATM connection objects (that is, PVC and SVC objects).

Table 12-3 Deployment Launch Points

Object Type to be Deployed	Launch Point to Deploy Object(s) From						Menu Options to Launch Deployment Wizard
	C12kM Views	Site	Shelf	Chassis	Module	Interface	
PVC	No	No	No	Yes	Yes	Yes	Deployment>C12kM>Logical>ATM>PVC
SVC	No	No	No	Yes	Yes	No	Deployment>C12kM>Logical>ATM>SVC

Refer to the [“ATM Connections Supported by C12kM”](#) section on page 12-2 for further details on the PVC and SVC connections supported by the C12kM application.

Deploying a PVC Object



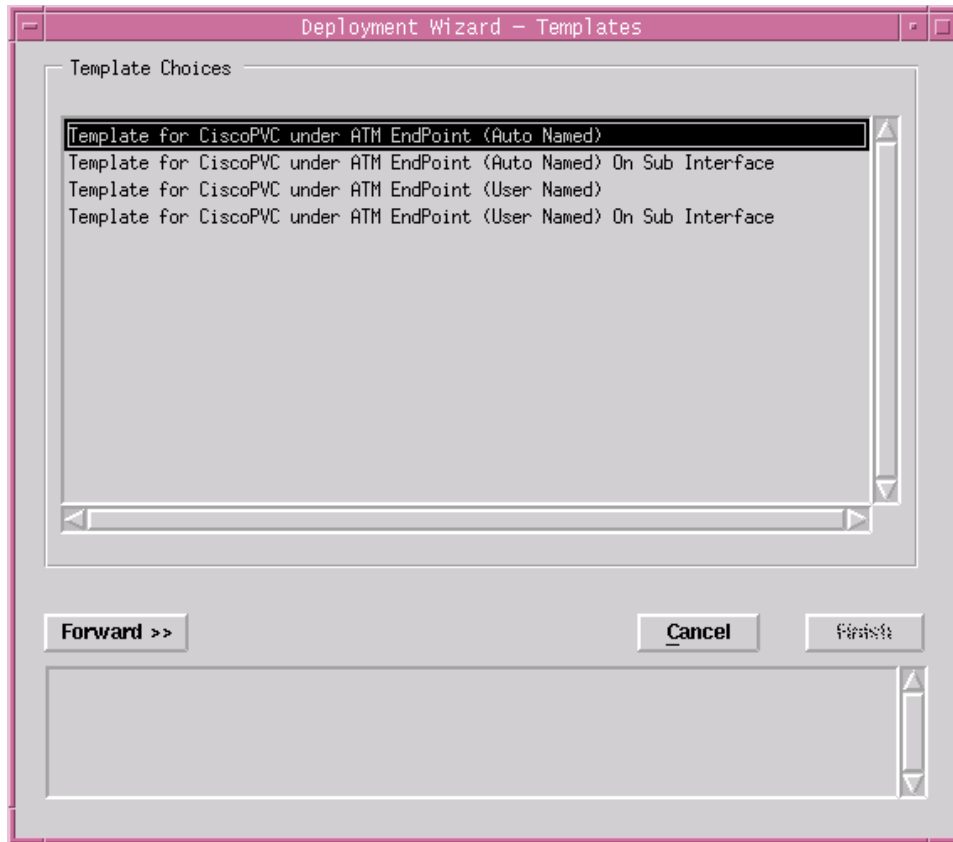
Tip

PVC and VCL are interchangeable terms in C12kM.

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

- Step 1** Right-click on a selected line card or physical interface, then choose **Deployment>C12kM>Logical>ATM>PVC**. The Deployment Wizard appears:

Figure 12-11 Deployment Wizard—Templates



- Step 2** Choose the template you wish 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 the [“Manually Deploying Modules”](#) section on page 3-31). Make sure your selection is highlighted before clicking **Forward**.

Figure 12-12 Deployment Wizard—Object Parameters

Deployment Wizard - Object Parameters

Object Parameters

Number of ciscoPVC objects [1,..100]: 1

Profile Name: Default

Subscriber ID: UNDEFINED

VPI: 0

VCI: 0

Auto Allocate Source [disabled(0),enabled(1)]: 0

Create connection [no(0),yes(1)]: 0

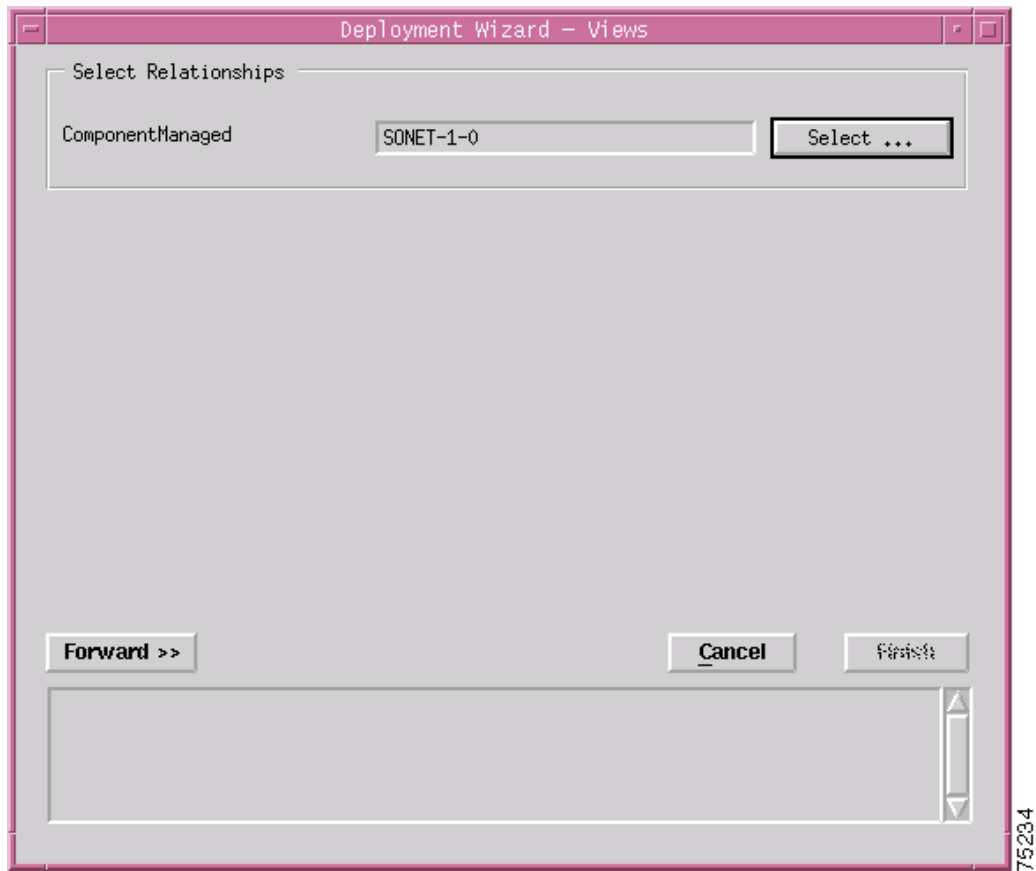
Start Number: 0

Forward >> Cancel Finish

75233

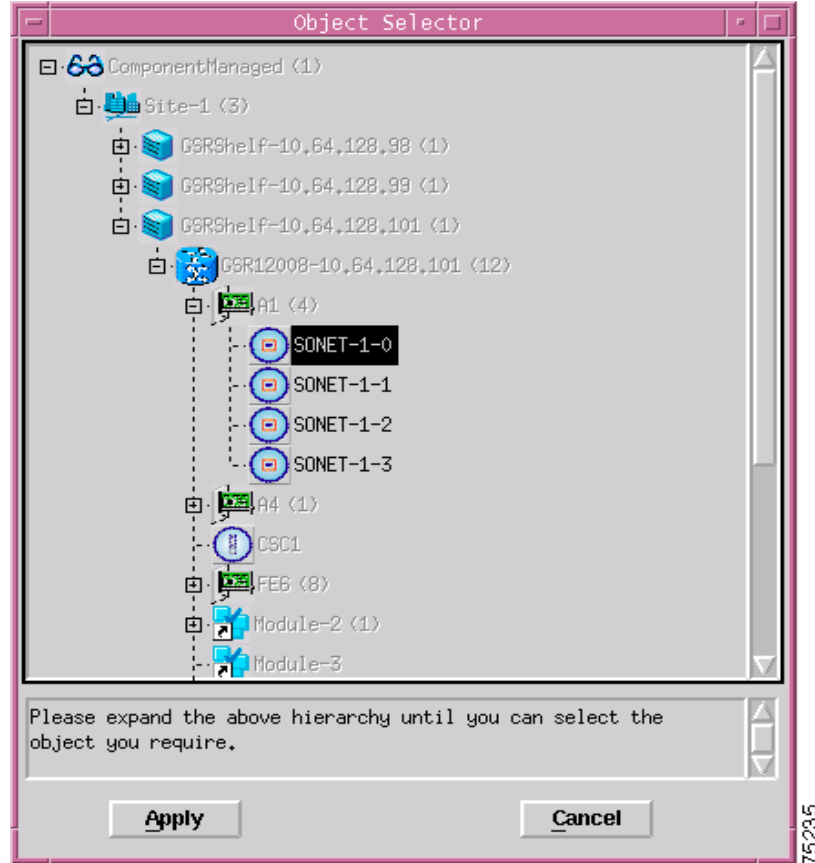
- Step 3 Enter the number of PVC connections you want to create.
- Step 4 Enter a profile name for the PVC object.
- Step 5 Enter the Subscriber ID for the PVC object.
- Step 6 Enter the VPI and VCI values for the PVC object.
- Step 7 Enter either 0 or 1 to disable or enable the Auto Allocate Source for the PVC object.
- Step 8 Enter either 0 (no) or 1 (yes) to auto connect the PVC object to the device.
- Step 9 Enter the start number for the PVC object. This number is included in the PVC name.
- Step 10 Click **Forward** to proceed.

Figure 12-13 Deployment Wizard—Object Parameters



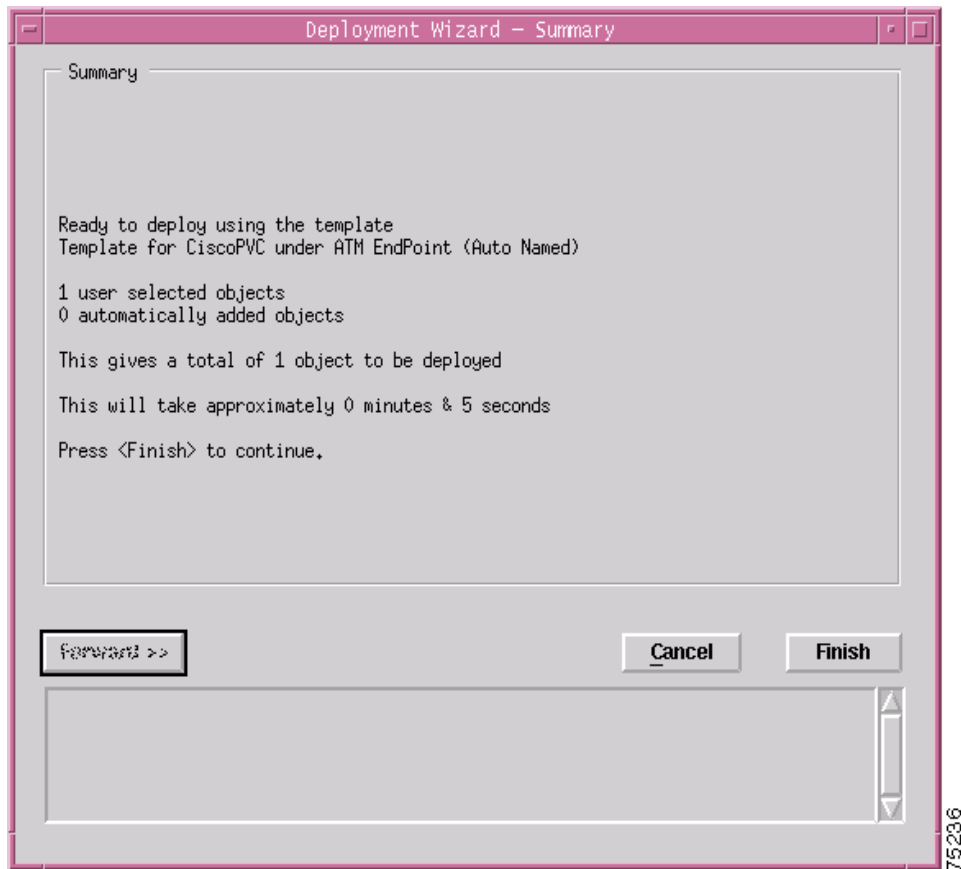
Step 11 Choose **Select**. An Object Selector window appears.

Figure 12-14 Object Selector Window



- Step 12** 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 (Figure 12-13 on page 12-18).

Figure 12-15 Deployment Wizard—Summary

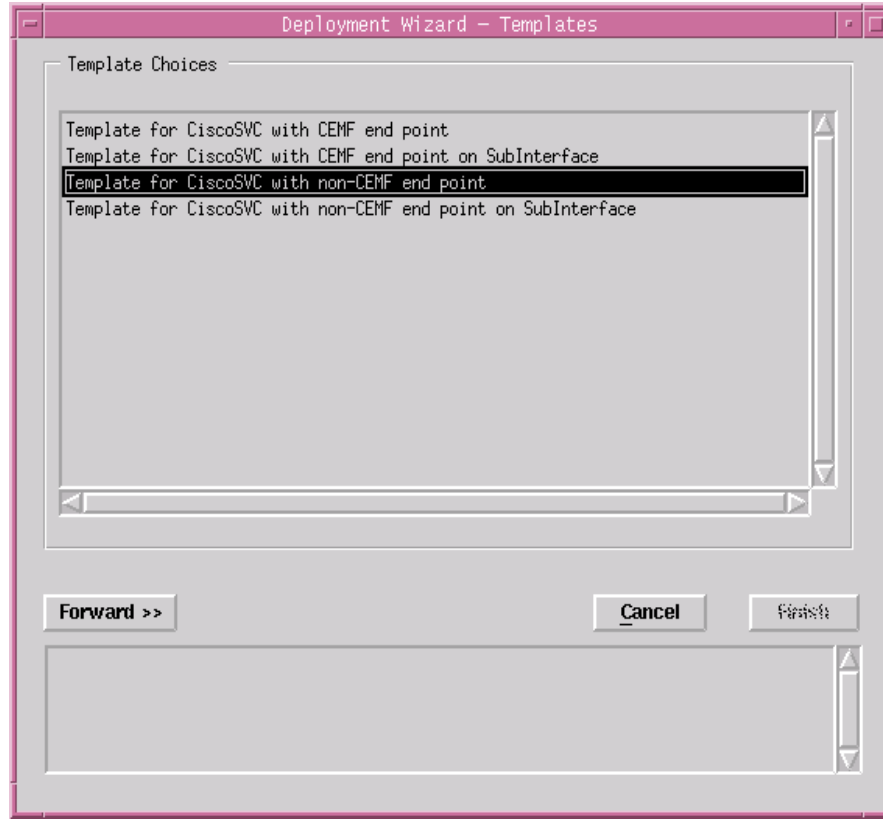


- Step 13 Click **Finish** if the deployment summary information is correct. The Deployment Wizard closes and the object is created under the selected interface.

Deploying an SVC Object

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

- Step 1 In the Map Viewer, within the C12kM view, right-click on a selected line card, then choose **Deployment>C12kM>Logical>ATM>SVC**. The Deployment Wizard appears:

Figure 12-16 Deployment Wizard—Templates

- Step 2** Choose a template, either an SVC with a Cisco EMF end point or an SVC with a non-Cisco EMF end point. Click **Forward** to proceed.

Figure 12-17 Deployment Wizard—Object Parameters

Deployment Wizard - Object Parameters

Object Parameters

Number of ciscoSVC objects [1..100]: 1

SVC name: CiscoSVC-

Profile Name: Default

Destination NSAP Address : UNDEFINED

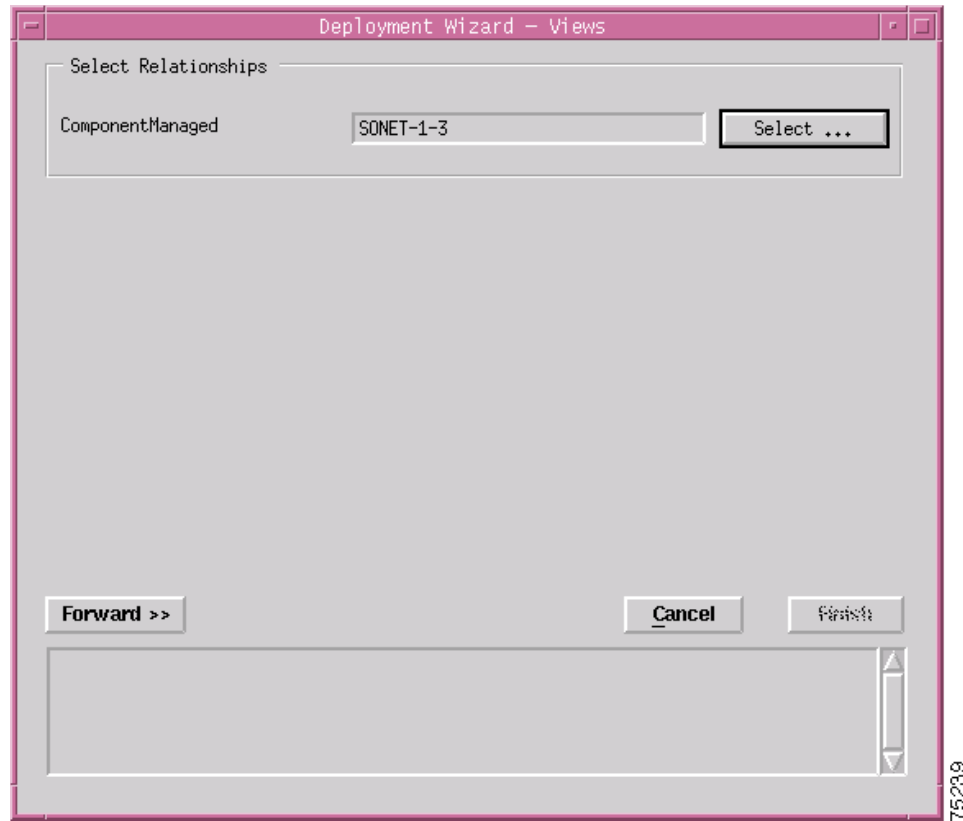
Create connection [no(0),yes(1)]: 1

Forward >> Cancel Finish

75238

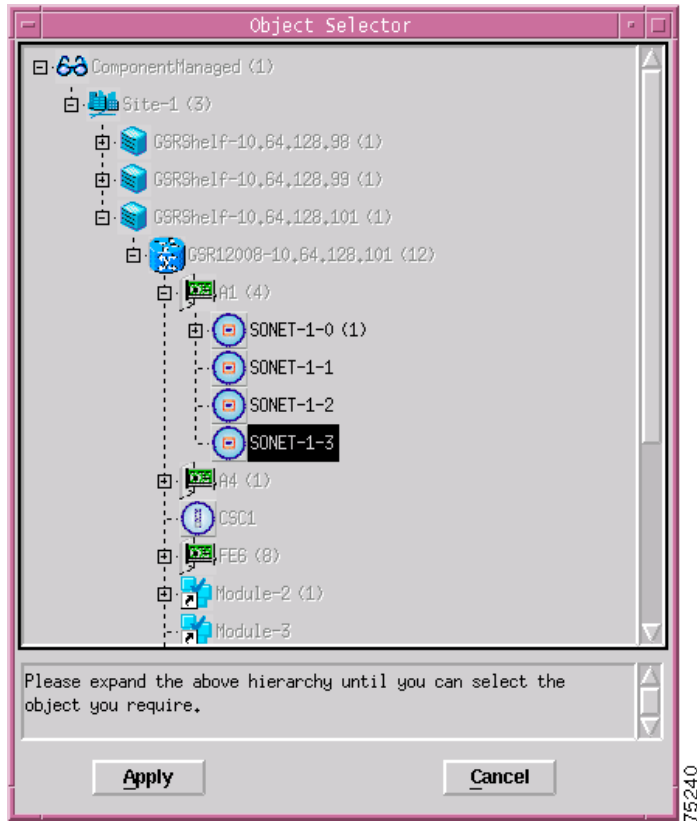
- Step 3 Enter the number of SVC connections you want to deploy.
- Step 4 Enter the name of the SVC object.
- Step 5 Enter a profile name for the SVC object.
- Step 6 Enter either 0 (no) or 1 (yes) to auto connect the SVC object to the device.
- Step 7 Click **Forward** to proceed.

Figure 12-18 Deployment Wizard—Views



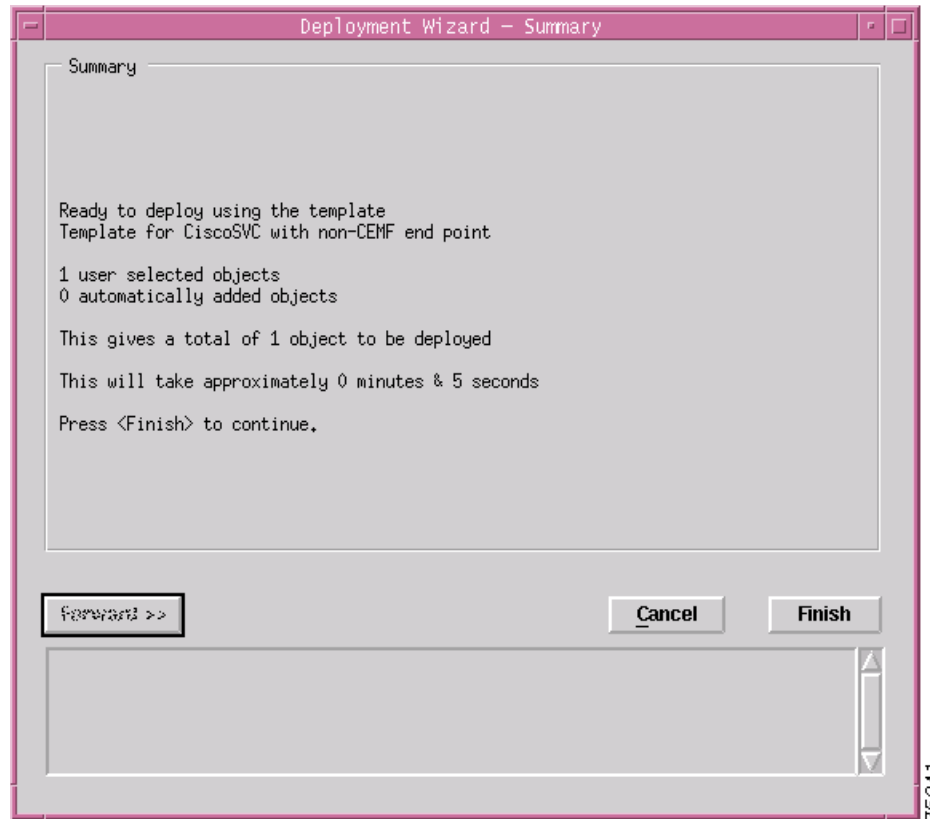
- Step 8** Choose the top **Select** button. A new window appears. Navigate down the hierarchy until you find the interface which will be the local endpoint. Click on the object to select, then click **Apply**. You are returned to the window above. If you have selected the Cisco EMF endpoint option, you need to repeat this process for the second interface (remote endpoint) by clicking the second **Select** button.

Figure 12-19 Deployment Wizard - Object Selector



- Step 9** When you have selected the appropriate interfaces or sub-interfaces for both endpoints (if applicable), click **Forward** to proceed.

Figure 12-20 Deployment Wizard—Summary



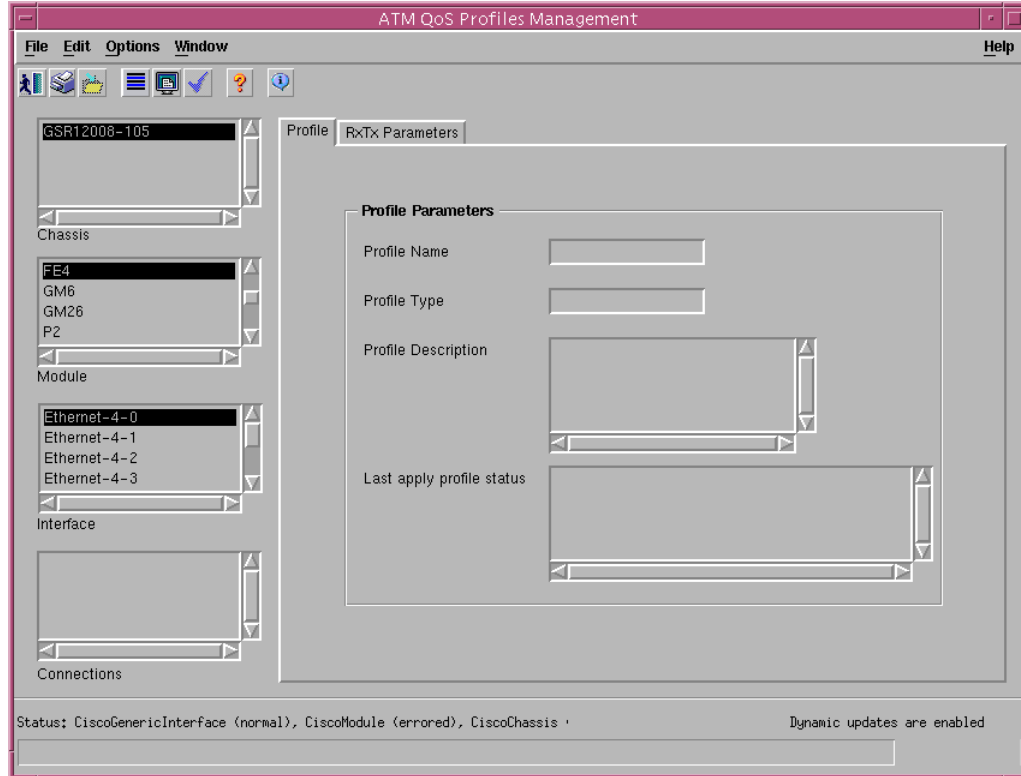
- Step 10** Click **Finish** if the Deployment Summary information is correct. Click **Cancel** to stop the deployment. The Deployment Wizard closes and the object is created under the selected interface.

Applying an ATM QoS Profile to an ATM Connection

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

- Step 1** Right-click the interface that contains the created ATM connection, then choose **C12kM Management > Logical > ATM > PVC** or **SVC > QoS > Management**. The ATM QoS Profiles Management window appears:

Figure 12-21 ATM QoS Profiles Management—Profile Tab



- Step 2** Choose a **Chassis, Module, Interface, and Connections** (PVC or SVC) from the list box at the left of the window. 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.

PVC Configuration

The PVC Configuration section covers the following areas:

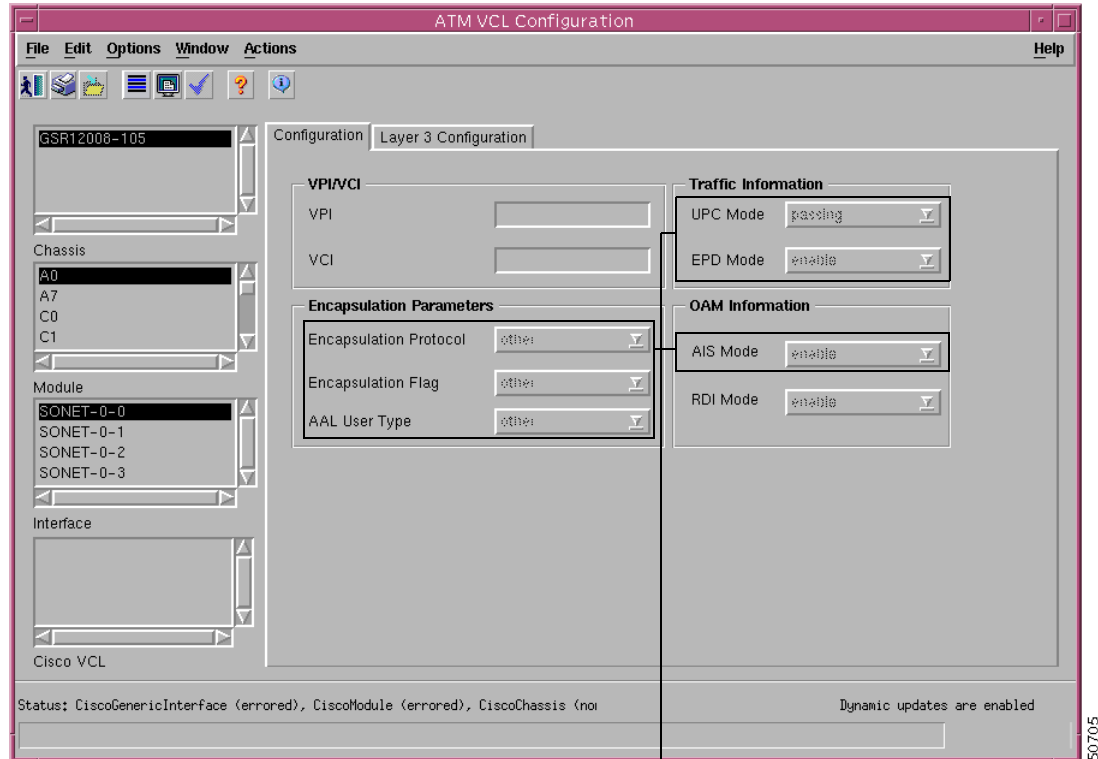
- [Viewing the ATM VCL Configuration Window](#)
- [Connecting or Disconnecting a PVC](#)
- [Decommissioning or Re-Commissioning a PVC](#)
- [ATM VCL Configuration Window—Detailed Description](#)

Viewing the ATM VCL Configuration Window

To view the ATM VCL Configuration window, proceed as follows:

- Step 1** Right-click on a selected interface, then choose **C12kM Management>Logical>ATM>PVC>Configuration**. The ATM VCL Configuration window appears, with the Configuration tab displayed.

Figure 12-22 ATM VCL Configuration Window—Configuration Tab



Not applicable to C12kM

- Step 2** Choose the **Chassis**, **Module**, **Interface**, and **Cisco VCL (PVC)** from the list boxes at the left of the window.
- Step 3** Configure the fields in both tabs, using the drop-down lists and data entry boxes. For a detailed description of the fields within both tabs, refer to the “[ATM VCL Configuration Window—Detailed Description](#)” section on page 12-28.
- Step 4** Click the **Save** icon to save the changes made.

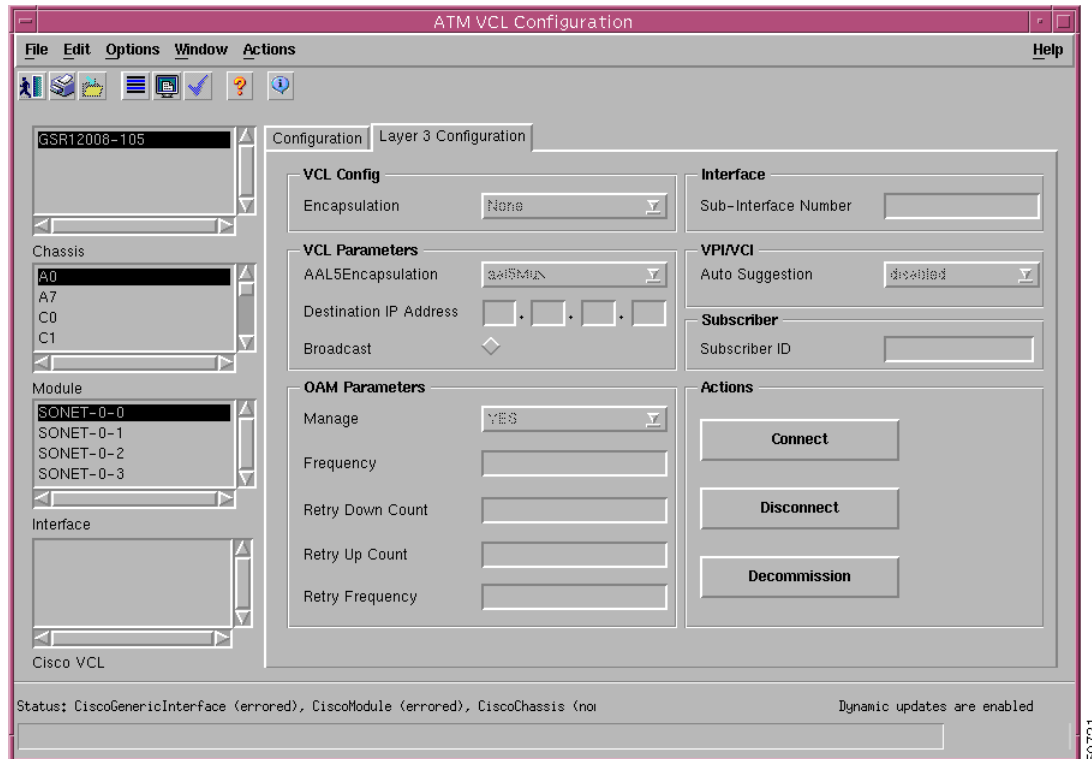
Connecting or Disconnecting a PVC

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.

Figure 12-23 ATM VCL Configuration Window—Layer 3 Configuration Tab



- Make sure that the Cisco VCL (PVC) you want to connect or disconnect is selected in the list box at the left of the window.
- 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.

To decommission a connected PVC:

- Make sure that the PVC you want to decommission is selected in the list boxes at the left of the window. 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-commission a PVC, simply click **Connect** and the connection is commissioned.

ATM VCL Configuration Window—Detailed Description

The ATM VCL Configuration window (see [Figure 12-22](#)) contains two tabs: Configuration and Layer 3 Configuration.

Configuration Tab

The Configuration tab (see [Figure 12-22](#)) 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 is not applicable to C12kM.

Encapsulation Parameters

The Encapsulation Parameters area is not applicable to C12kM.

OAM Information

The OAM Information area is not applicable to C12kM.

Layer 3 Configuration Tab

The Layer 3 Configuration tab (see [Figure 12-23](#)) 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 sub-interfaces.

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, C12kM 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.

Disconnect—Allows you to disconnect the selected PVC, disconnecting the connection on the device, making it inactive.

Decommission—Allows you to decommission the selected PVC.

SVC Configuration

The SVC Configuration section covers the following areas:

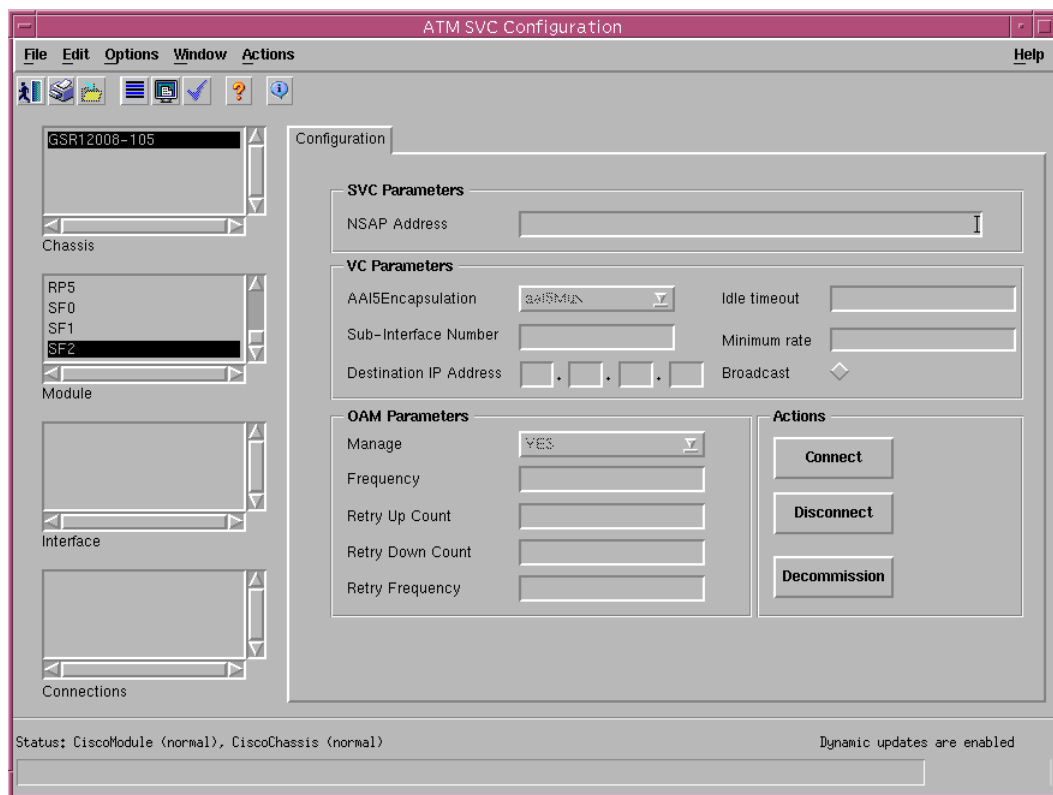
- [Viewing the SVC Configuration Window](#)
- [Connecting or Disconnecting an SVC](#)
- [Decommissioning or Recommissioning an SVC](#)
- [SVC Configuration Window—Detailed Description](#)

Viewing the SVC Configuration Window

To view the SVC Configuration window, proceed as follows:

- Step 1** Right-click on a selected interface, then choose **C12kM Management>Logical>ATM>SVC Management>Configuration**. The ATM SVC Configuration window appears, with the Configuration tab displayed.

Figure 12-24 ATM SVC Configuration Window—Configuration Tab



- Step 2** Choose the **Chassis**, **Module**, **Interface**, and **Connections** (SVC) from the list boxes at the left of the window.

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 the “[SVC Configuration Window—Detailed Description](#)” section on page 12-32.

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 the left of the window.
- 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.

To decommission a connected SVC:

- Make sure that the SVC you want to decommission is selected in the list boxes at the left of the window.
- 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 Configuration window (see [Figure 12-24](#)) 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.

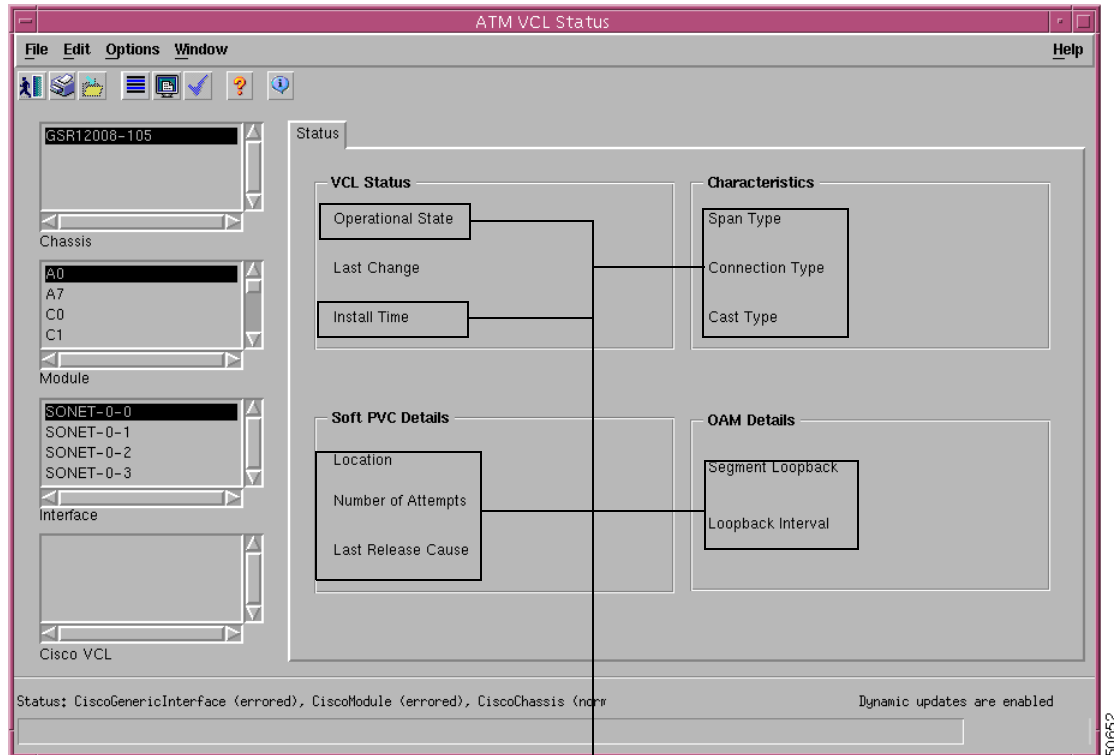
Disconnect—Allows you to disconnect the selected SVC, disconnecting the connection on the device, making it inactive.

Decommission—Allows you to decommission the selected SVC.

PVC Status

- Step 1 Right-click on a specified line card, then choose **C12kM Management>Logical>ATM>VCL Management>Status**. The ATM VCL Status window appears:

Figure 12-25 ATM VCL Status Window—Status Tab



Not applicable to C12kM

- Step 2 Choose a **Chassis, Module, Interface, and Cisco VCL (PVC)** from the list boxes displayed at the left of the window. The status information for the selected PVC appears.

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 C12kM.

Last Change—Time elapsed after the last status change.

Install Time—Not applicable to C12kM.

Soft PVC Details

The Soft PVC Details area is not applicable to C12kM.

Characteristics

The Characteristics area is not applicable to C12kM.

OAM Details

The OAM Details area is not applicable to C12kM.

