NORTEL NETWORKS

Preside Multiservice Data Manager

Service Provisioning for Frame Relay

User Guide

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Service Provisioning for Frame Relay

User Guide

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Commercial availability except MPE support which will be available in a future release.

Contents

About this document

This document explains how to use the Preside Multiservice Data Manager Frame Relay service provisioning tool.

For more information about this document, see the following sections:

Who should read this document and why

This guide is for personnel who create and manage Frame Relay PVC circuits for Passport, and for personnel responsible for VPN provisioning who need to connect a Frame Relay circuit to an IP VPN.

What you need to know

This document assumes that you have knowledge of Preside Multiservice Data Manager and an understanding of Passport.

How this document is organized

The information in this guide is organized as follows:

- "About Frame Relay service provisioning" (page 17) describes the tool and its advantages.

- "Configuration and setup" (page 21) provides information on setup and system requirements.
- "Frame Relay service provisioning tool user interface" (page 29) describes the tool interface.
- "General procedures" (page 71) provides general procedures for using the Frame Relay service provisioning tool.
- "Frame Relay PVC provisioning" (page 115) describes how you can use the Frame Relay service provisioning tool to provision Frame Relay permanent virtual circuits between two or more network elements.
- "Frame Relay circuits with IP access for 2547 VPNs" (page 123) describes how you can use the tool to connect a frame relay circuit to an IP VPN for RFC 2547 VPNs
- "Frame Relay circuits with IP access for 2764 VPNs" (page 131) describes how you can use the tool to connect a frame relay circuit to an IP VPN for RFC 2764 VPNs
- "Frame Relay Real Time Log Display tool" (page 139) describes how to use the Real Time Log Display tool to display and filter real time log messages generated by the Frame Relay service provisioning tool.
- "Historic Frame Relay Log File Display tool" (page 155)

What's new in this document

Content for the Historic Frame Relay Log Display Tool (MB) was moved from 241-6001-303 *Preside MDM Administrator Guide* to this document.

Text conventions

This document uses the following text conventions:

- `nonproportional spaced plain type`

  Nonproportional spaced plain type represents system generated text or text that appears on your screen.

- **`nonproportional spaced bold type`**

  Nonproportional spaced bold type represents words that you should type or that you should select on the screen.

- *italics*

  Statements that appear in italics in a procedure explain the results of a particular step and appear immediately following the step.

  Words that appear in italics in text are for naming.

- [optional_parameter]

  Words in square brackets represent optional parameters. The command can be entered with or without the words in the square brackets.

- <general_term>

  Words in angle brackets represent variables which are to be replaced with specific values.

- UPPERCASE, lowercase

  Uppercase and lowercase letters that appear in UNIX commands and parameters must be matched exactly. The system matches upper and lowercase characters differently.

- |

  This symbol separates items from which you may select one; for example, ON|OFF indicates that you may specify ON or OFF. If you do not make a choice, a default ON is assumed.

- ...

  Three dots in a command indicate that the parameter may be repeated more than once in succession.

The term absolute pathname refers to the full specification of a path starting from the root directory. Absolute pathnames always begin with the slash (/) symbol. A relative pathname takes the current directory as its starting point, and starts with any alphanumeric character (other than /).

Related documents

See the following documents for related information:

- 241-6001-023 *Preside MDM Configuration Management for Passport User Guide*
- 241-6001-303 *Preside MDM Administrator Guide*
- 241-6001-310 *Preside MDM Server Reference Guide*
- 241-6001-400 *Preside MDM Administration Database User Guide*
- 241-6001-405 *Preside MDM Administration Database Schema*
- 241-6001-801 *Preside MDM Overview*
- NN10600-060 *Nortel Networks Multiservice Switch 7400/15000/20000 Component Reference*
- NN10600-900 *Nortel Networks Multiservice Switch 7400/15000/20000 Frame Relay Technology Fundamentals*
- NN10600-901 *Nortel Networks Multiservice Switch 7400/15000/20000 Frame Relay Configuration Management*
- NN10600-800 *Nortel Networks Multiservice Switch 7400/15000/20000 IP Technology Fundamentals*
- NN10600-905 *Nortel Networks Multiservice Switch 7400/15000/20000 Frame Relay UNI Job Aid*

Chapter 1
About Frame Relay service provisioning

For an introduction to the Preside Multiservice Data Manager (MDM) Frame Relay service provisioning tool, see the following sections:

Frame Relay service provisioning overview

The Frame Relay service provisioning tool lets you provision Frame Relay permanent virtual circuits (PVC) between two nodes.

The Frame Relay service provisioning tool also lets you create Frame Relay circuits with IP Access for RFC 2764 and RFC 2547 VPNs. The types of access circuits are FrDte Backhaul and Direct (2764), and Optimized Local and Optimized Backhaul. These access circuits provide access from a customer site into an IP VPN. For all of these circuits, the access into the network elements on which the VPN Virtual Router resides, is through a Fruni or FrNni Dlci. All of these circuits support multiple IP CoS; provisioning of up to four circuits, one for each IP CoS level 0-3.

You can do your provisioning in one session and from a single user interface. Once you enter all the necessary provisioning data, you can activate the new view on the network element.

The Frame Relay service provisioning tool is integrated with the circuit management application. The circuit management application treats a circuit as a single entity rather than a collection of individual components and attributes. Circuit information is stored in the Administration Database so that

you can retrieve it to view, modify, or delete it. You can also apply the changes or deletions to one ore more network elements, and the Administration Database.

The circuit is stored in the Administration Database after the view is successfully activated on the network element.

Specific Traffic Management parameters are provisioned on the device but are not stored in the Administration Database.

In addition, the following circuit specific fields are stored only in the Administration Database:

- Traffic Management Profile name
- Circuit ID
- Customer
- Access point
- Site

For more details on the Frame Relay service provisioning tool, see

- “Configuration and setup” (page 21)
- “Frame Relay service provisioning tool user interface” (page 29)
- “Frame Relay PVC provisioning” (page 115)
- “Frame Relay circuits with IP access for 2764 VPNs” (page 131)
- “Frame Relay circuits with IP access for 2547 VPNs” (page 123)

For information on the Administration Database, see 241-6001-400 *Preside MDM Administration Database User Guide*.

Frame Relay service provisioning and the Administration Database

If the Preside Multiservice Data Manager (MDM) Administration Database is installed and you use the Frame Relay service provisioning tool to configure and activate on-switch data, the Administration Database is updated to maintain the current view of the network. If you do not activate the

configuration, the Administration Database is not updated because the current network view has not changed. The changes, however, will exist on the switch in either the edit or saved view.

Chapter 2
Configuration and setup

Before using the Frame Relay service provisioning tool, you need to ensure that the network element is configured for service provisioning, and you need to complete some or all of the following configuration tasks:

Network element configuration

Before using the application, ensure that all the network elements to be provisioned are configured for Frame Relay up to the logical connection layer. The following is required:

- physical installation of cards, cabling, and other elements required to interconnect the nodes for service provisioning
- provisioning of cards, logical processors, software, ports, and Fruni or Frnni components on the nodes

For information on configuring network elements, refer to your documentation.

Configuring the end-to-end server

You use the Server Administration tool to edit the entry for the Frame Relay end-to-end server. See 241-6001-310 *Preside MDM Server Reference Guide*.

Note: This is the same server used by the ATM and IP VPN service provisioning tools.

Procedure steps

1. While logged on as root, on the application main window, select **System -> Administration -> Server Administration**.

   The **Server Administration** window opens.

2. From the **Security** menu, select **Authorize**.

   The **SVM Enter Authorization Password** dialog box opens and prompts for a password.

3. If required, type a valid password and click **OK**.

4. From the **Edit** menu, select **Edit-> New**.

   The **Server Administration** dialog box opens.

5. Add the server name in the **Descriptive name** field:

   `end-to-end server`

6. Add the server startup command in the Startup command field:

   `/opt/MagellanNMS/bin/eteserver [-p <portno>]`

7. If you do not want the server to restart automatically when the workstation is rebooted, click **Automatic startup at reboot time**.

8. Click **Save** and **Start**.

   The data you entered is stored and the server is started.

9. From the File menu, select **Refresh server list.**

   An updated server list is displayed, including the end-to-end server.

10. Click on the end-to-end server entry in the server list.

    The **Server Functions** pop-up menu opens.

11. From the pop-up menu, select **Start** to start the end-to-end server.

Variable values

Variable	Value
<portno>	The TCP port number for monitoring incoming requests. The default value is 6600. The port number must not be used by any other process.

Changing the server port number

If your setup runs the end-to-end server on a port other than the default, you need to update the client resource file for the provisioning tool and reconfigure the server.

Procedure steps

1. While logged on as root, edit the Frame Relay provisioning resource file:

   /opt/MagellanNMS/cfg/eteFrameRelayRes.cfg

2. To change the server port number from the default value of 6600, set the port parameter to the appropriate port number:

   port = <portno>

3. Go to the Server Administration tool and edit the server port number option. See “Configuring the end-to-end server” (page 22).

4. Restart the end-to-end server.

Variable values

Variable	Value
<portno>	The TCP port number. The default value is 6600.

Configuring and accessing the server host

By default, the local host is the server host. If you are running the client on a different host than the server, you need to update the resource and host files.

Procedure steps

1 While logged on as root, edit the resource file:

/opt/MagellanNMS/cfg/eteFrameRelayRes.cfg

2 Set the host parameter:

host = <hostname>|<ipaddress>

3 While logged on as root, display the contents of the hosts file:

more /etc/hosts

4 Check that the file contains an entry with the IP address and host name of the end-to-end server.

5 If the entry is not listed, open an edit view of the resource file and add the IP address and host name on a new line:

<ipaddress> <hostname>

Variable values

Variable	Value
<hostname>	The host name of the end-to-end server.
<ipaddress>	The IP address of the end-to-end server.

Configuring the Real Time Log Display

Configure the Real Time Log Display if you wish to turn the log to file to "on" to write log messages to file, to set the maximum size of each log file, or to set the maximum number of log files created by the end-to-end Frame Relay tool for each session.

Procedure steps

Setting the log to file parameter to "on" lets you write log messages to a file. The default is off.

1 While logged on as root, edit the resource file:

```
/opt/MagellanNMS/cfg/eteFrameRelayRes.cfg
```

2 Set the parameter that specifies if log messages will be logged to a file.

```
LogToFile=<on/off>
```

3 Set the maximum log file size:

```
MaxKeptLogFileSize(MB)=<log_file_size>
```

4 Set the maximum number of log files to keep per user session:

```
MaxKeptLogFile=<maximum_log_file>
```

Variable values

Variable	Value
<log_file_size>	The maximum log file size before the log file is rolled over. If this value is less than or equal to zero, the default value, 11 Mbyte, will be used. When the log file reaches its maximum size, a rollover occurs. The old version of <log file name>.log.<nnn> is closed. The nnn extension is a three-digit log file counter. A new log file with the original name (<log file name>.log.<nnn+1>) is then used to continue the logging.
<maximum_log_file>	The maximum number of log files that are generated in a session. If this value is less than or equal to zero, the default value will be used. The default value is 3. When the maximum number of log files is reached, the oldest file is deleted and a new one is created.

(Sheet 1 of 2)

Variable (Continued)	Value
<on>	Specifies that you want to log the log messages to file. When LogToFile in the tool's configuration file is set to "on", all log records are written to a file, regardless of the log filtering criteria.
<off>	Specifies that you do not want to log the log messages to file. Off is the default.
(Sheet 2 of 2)	

Chapter 3
Frame Relay service provisioning tool user interface

For a description of the Frame Relay service provisioning tool main window, see the following sections:

Main window overview

The Frame Relay service provisioning tool consists of a main window from which you do all your provisioning for FR PVC, and FR circuits with IP Access for the 2764 and 2547 VPNs.

The user interface is dynamic and its contents change with the following circumstances:

- the type of circuit you select from the Circuit Type list; FR PVC or FR IP VPN access
- for FR IP VPN access circuits, the circuit configuration that you select:
  - 2547 IP Opt Backhaul
  - 2547 IP Opt Local
  - 2764 IP Opt Backhaul
  - 2764 Opt Local
  - 2764 FrDte Backhaul
  - 2764 FrDte Direct

The window consists of the following elements:

- "Menu bar" (page 31)
- "Provisioning interface for Frame Relay PVC circuits" (page 34) or "Provisioning interface for Frame Relay IP VPN access circuits" (page 37)
- "Command panel" (page 47)

See also

- "General procedures" (page 71)
- "Frame Relay PVC provisioning" (page 115)
- "Frame Relay circuits with IP access for 2547 VPNs" (page 123)
- "Frame Relay circuits with IP access for 2764 VPNs" (page 131)
- "About Frame Relay service provisioning" (page 17)
- "Frame Relay Real Time Log Display tool" (page 139)

Menu bar

The menu bar consists of the following menus:

- "File" (page 31)
- "Edit" (page 32)
- "Options" (page 33)
- "Tools" (page 33)
- "View" (page 33)
- "Help" (page 34)

Note: You can use mnemonics or command accelerator to access menu options. For additional information, see "Using the keyboard commands" (page 69).

File

Note: The Edit Circuit and Delete Circuit commands are only available if the Preside Multiservice Data Manager (MDM) Administration Database is installed.

The File menu contains the following commands:

- **New Circuit** deletes all information in the areas on the main window so you can start over with new connection information.
- **Edit Circuit...** opens the Edit Circuit retrieve dialog box. This dialog box lets you specify the retrieval criteria for the FR PVC or IP VPN access circuit to be edited. For FR PVC circuits, specify the circuit ID of the circuit to be retrieved from the Administration Database. If you know the circuit ID, you can either type it directly in the Circuit Id field, or you can use the Circuit Viewer to select the circuit. If you use Circuit Viewer to identify the circuit that you want to retrieve from the circuit list, the context is set. When the dialog box opens, the Circuit Id field contains the circuit ID which is currently in context. See "Circuit retrieval dialog boxes" (page 54) and "Editing a Frame Relay circuit" (page 85). For IP VPN access circuits, specify the Customer, Site, and Access point.
- **Delete Circuit...** opens the Delete Circuit circuit retrieval dialog box. This dialog box lets you specify the retrieval criteria for the FR PVC or IP VPN access circuit to be deleted. For FR PVC circuits, specify the circuit ID of the circuit to be retrieved from the Administration Database. You can either enter the Circuit ID directly in the Circuit Id field if you know it, or you can use the Circuit Viewer tool to select the circuit. If you use the Circuit Viewer tool to identify the circuit that you want to retrieve from the circuit list, the context is set so that when the dialog box opens, the Circuit Id field contains the circuit ID which is currently in context. See "Circuit retrieval dialog boxes" (page 54) and "Deleting a Frame Relay circuit" (page 89). For IP VPN access circuits, specify the Customer, Site, and Access point.
- **Exit** closes the application window and exits Frame Relay service provisioning.

Edit

The Edit menu contains the following commands:

- **Edit TM...** opens the **Traffic Management Parameters** editing dialog box. See "Traffic Management Parameters dialog box" (page 51).
- **Edit Backup Slave** opens the **Edit Backup Slave** dialog box for Frame Relay PVC circuits. See "Edit Backup Slave dialog box" (page 62). This command is disabled for the Frame Relay IP VPN access circuit type.

Options

The Options menu contains the following command:

- **Set Default Authentication** opens the Set Default Authentication dialog box to set the user ID and password for authenticating access to a node.

Tools

The **Tools** menu contains the following commands.

- **Nodal Provisioning** launches the Nodal Provisioning tool. When you select this command the Preside Multiservice Data Manager (MDM) splash screen appears, followed by the Nodal Provisioning Device Selection dialog. For a description of Nodal Provisioning and procedures to use it, see 241-6001-610 *Preside MDM Nodal Provisioning User Guide*.

  Note: After you launch Nodal Provisioning, you can perform nodal provisioning tasks. However, before you can apply the Frame Relay service, you need to activate the nodal provisioning session and then close Nodal Provisioning. If you try to apply the service before closing the Nodal Provisioning session, an error message appears indicating that a provisioning session cannot be started on the switch. The error message does not inform you that this error is generated because the Nodal Provisioning tool is holding the provisioning session.

- **Circuit Viewer** launches the Circuit Viewer tool. For a description of the Circuit Viewer tool and procedures to use it, see 241-6001-011 *Preside MDM Fault Management User Guide*.
- **MDM Database Administration** launches the Circuit Database Administration tool. For a description of the Circuit Database Administration tool and the procedures to use it, see 241-6001-400 *Preside MDM Administration Database User Guide*.

View

The **View** menu contains the following command:

- **Show Messages** launches the Real Time Log Display. See “Frame Relay Real Time Log Display tool” (page 139).

Help

The **Help** menu contains the following command:

- **Help on Window** displays help information for the Service Provisioning - Frame Relay window.

Provisioning interface for Frame Relay PVC circuits

The main section of the **Service Provisioning - Frame Relay** main window for PVC circuit types contains the following areas:

- "Circuit Type panel" (page 34)
- "Circuit Properties panel" (page 34)
- "PVC Node Properties panel" (page 36)
- "Command panel" (page 47)

Information on valid data entries for the fields in the provisioning panels are provided through tool tips.

Circuit Type panel

The **Circuit Type** list identifies the circuit types that you can provision with the Frame Relay service provisioning tool. This list contains the FR PVC and FR IP VPN Access circuit types. For provisioning a Frame Relay circuit to connect to an IP VPN, you need to select the FR IP VPN Access circuit type.

For provisioning a Frame Relay PVC, you would select the FR PVC circuit type. See "Frame Relay PVC provisioning" (page 115) for provisioning procedures.

Circuit Properties panel

Use the **Circuit Properties** panel to make selections which affect the entire Frame Relay PVC connection. The contents of this panel depends on whether the Preside Multiservice Data Manager (MDM) Administration Database is installed. It may have the following fields and buttons:

> ***Note:*** The Circuit Id and Customer fields appear in the user interface only if you have installed the Administration Database. These fields are mandatory and activation does not proceed if these fields are not filled in.

- If the Administration Database is installed, the **Circuit Id** field lets you enter a meaningful name for the permanent virtual circuit. The Circuit ID lets circuit management applications more easily find and identify circuits based on meaningful customer names. The circuit ID provides a method for operators to link subscriber information with the circuit, providing a unique and meaningful name to assist in the management of the circuit. A suggested format is “Customer Name” plus a unique identifier (for example: BigCustomer00000023). This format provides visibility of the end subscriber, while still allowing the circuit to be uniquely identified.

  The Circuit ID is a 128-byte text field with no restriction or uniqueness checking on the node. If the Use Circuit Id is checked, the circuit ID is stored in the CorrelationTag attribute.

  Note: If you duplicate a circuit ID, both circuits are stored in the Administration Database with the same circuit ID.

- The **Correlation Tag** field is used to set the value of the correlationTag attribute to the entered value for each PVC component in the connection.
- If the Administration Database is installed, the **Customer** field is a mandatory field that lets you specify the customer of the circuit. Type an entry or click the browse button [...] to open the customer search dialog (see “Browsing customers” (page 80)). If you do not specify a customer, Frame Relay service provisioning assigns the default customer and the customer name is set to default in the Administration Database.
- The **Use Circuit Id** check box optionally lets you set the correlationTag equal to the circuit ID. When you check Use Circuit Id, the Correlation Tag field is automatically filled with the same value as the circuit ID. The Correlation Tag field is in read-only mode. The maximum length of the correlationTag attribute is 32 characters. If you enter a circuit ID with more than 32 characters, and you have checked Use Circuit Id, only the first 32 characters are provisioned on the device as the correlationTag. However, the Administration Database stores the entire circuit ID that you entered.
- The **TM Profile** field lets you select a traffic management profile, also known as quality of service (QOS) profile, for the Frame Relay PVC connection. The file name of TM profiles that are not saved to disk have

an asterisk (*) at the end of its name to indicate that the TM Profile has been changed but not saved. Profiles that are modified but not saved are stored in the Administration Database as “Custom”

- The **Edit TM...** button opens a dialog box from which you can create a new traffic management template or edit an existing one. For more information, see “Creating a new Traffic Management profile” (page 93). See also the figure “Traffic Management Parameters dialog box” (page 51).

PVC Node Properties panel

The Node Properties panel for Frame Relay PVC circuits contains the following subpanels:

- “Master panel” (page 36)
- “Slave panel” (page 37)

Master panel

Use the **Master Node** area to configure the master endpoint of the Frame Relay PVC connection. It has the following fields and buttons:

- The **Node Name** field lets you specify the name of the network element for the Frame Relay Access Node. You can select a network element from the drop down list, or as you type the name into the field, the first item in the drop down list that matches the text is automatically selected. Pressing the Enter key sets the selection.
- The browse button (**...**) opens the **Browse Nodes** dialog box; see “Browse Nodes dialog box” (page 50) and “Browsing nodes” (page 83).
- The **Use Defaults** check box lets you specify whether to use the default user ID and password to provision the selected node. If this check box is deselected, the **User Id** and **Password** fields are enabled and you need to enter a user ID and password.
- The **Type** list lets you select a Frame Relay user-to-network interface (Fruni) or a Frame Relay network-to-network interface (Frnni) as the end point.
- The **Fruni Instance | Frnni Instance** list lets you indicate how you want to identify the endpoint: by FruniIFrnni instance, data network address (DNA) value, or Port Interface.

Note: The type of instance depends on the type chosen in the **Type** field.

- The browse button [...] opens a **Browse** dialog box that lets you search for and select a Frame Relay user-to-network interface|network-to-network interface and/or a data link connection identifier (DLCI) from a list of available interfaces and identifiers on a selected node. See "Browse Service Interface dialog box" (page 49) and "Browsing service interfaces" (page 84).
- The **New DLCI** field lets you specify an instance number for the data link connection identifier (DLCI).
- The **Get Next** button automatically fills in the next unassigned DLCI.

Slave panel

Use the **Slave panel** to configure the endpoint of the Frame Relay permanent virtual circuit (PVC) connection. The fields are similar to those in the **Master Node** area but with the addition of the following items:

- An **Edit Backup...** button to configure backup slave endpoints for the PVC connection. For more information, see "Backup slaves configuration" (page 119).
- A **Use as backup** check box to configure the slave node as a permanent backup slave. This check box is available only if backups exist. Otherwise, the check box is unavailable and the slave node is configured as a permanent slave with backups.

Provisioning interface for Frame Relay IP VPN access circuits

The provisioning interface for Frame Relay IP VPN access circuits contain the following panels:

- "Circuit Type panel" (page 38)
- "Circuit Properties panel" (page 34)
- "IP Service Node Properties panel" (page 39)
- "Frame Relay Access Node Properties panel" (page 44)
- "End Points panel" (page 46)

Information about valid data entries for the fields in the provisioning panels are provided through tool tips.

Circuit Type panel

Use the **Circuit Type** panel to make selections which affect the entire Frame Relay IP VPN connection. The panel contains the following items:

- **Circuit Type** list identifies the circuit types that you can provision with the Frame Relay service provisioning tool. This list contains the FR PVC and FR IP VPN Access circuit types. For provisioning a Frame Relay circuit to connect to an IP VPN, you need to select the FR IP VPN Access circuit type.
- **Circuit Configuration** list appears in the Circuit Type panel only when you select the FR IP VPN circuit type. It contains the access scenarios:
  - 2547 IP Opt Backhaul
  - 2547 IP Opt Local
  - 2764 IP Opt Backhaul
  - 2764 IP Opt Local (only in PCR 5.1)
  - 2764 FrDte Backhaul
  - 2764 FrDte Direct

Circuit Properties panel

The circuit properties panel specifies general circuit data. This panel appears only if the Preside Multiservice Data Manager (MDM) Administration Database is installed. This panel contains the following items

- The **Customer** field is a mandatory field that lets you specify the customer of the circuit. If you do not specify a customer, the tool prompts you to use the default customer, and the customer name is set to default in the Administration Database. You can search for and select customers from the Administration Database by using the associated drop-down list or browse button [...] to the right of the Customer field. The drop-down list displays available customers from which you can make a selection. The browse dialogs display the customer list and associated VRs or VRFs, depending on the circuit type. For details about the Browse Customer dialog boxes, see “Browse Customer dialog box” (page 64).

- The **Site** field lets you specify a Customer Site. A Site is where IP access is implemented and represents a collection of IP Access Points. The Site must be unique among all Sites belonging to the Customer. You can create a new Site by typing a Site name in the Site field. Alternatively, you can search for and select from existing Sites in the Administration Database by clicking the browse button [...] to the right of the Site field. For additional information, see “Site Search dialog box” (page 65) and “Browsing Sites” (page 106)
- **Access Point** field lets you specify the IP Access Point. The access point is the gateway from the Customer Site into an IP VPN. It must be unique within the Site.
- **Site Type** field indicates whether the site is an extranet or intranet. For existing circuits, this field is set automatically—2764 circuits are always intranet and 2547 circuits can be either intranet or extranet. When you create a new site, the service provisioning tool sets the field as intranet when all the route targets under the specified VRF are owned by the same customer. Otherwise, the site type is extranet.

IP Service Node Properties panel

This panel lets you enter the IP access information. This information is needed to link the Frame Relay circuit to a VPN. The IP Service Node is where the VR, FrDte, Media, Interface or Logical Interface, and IP Service (master) FrUni/FrNni are located for Fr IP VPN Access circuits.

The following items in the IP Service Node Properties panel are common to all circuit configurations:

- **Node Name** field lets you specify the name of the network element for the Frame Relay Access Node. You can select a node from the dropdown list, or as you type the name of the node into the field, the first item in the drop down list that matches the text is automatically selected. Pressing the Enter key sets the selection.
- **Browse nodes button [...]** opens the Browse Nodes dialog box which search for and select a node. See “Browse Nodes dialog box” (page 50) and “Browsing nodes” (page 83).

- **Use Defaults** check box is selected by default. You can override the default user ID and password by deselecting this button. When Use Defaults is deselected, the User ID and Password fields become enabled and need to be filled in to connect to the node.
- **User Id** field is enabled only if the Use Defaults check box is deselected. You can enter a User ID for the node.
- **Password** field is enabled only if the Use Defaults check box is deselected. You can enter a password for the node.

The remaining contents of the IP Service Node panel are dynamic. That is, the contents change with the circuit configuration that you select. For the description of the contents of the panel for each circuit configuration, see the table "IP Service Node Properties panel contents" (page 40).

Table 1
IP Service Node Properties panel contents

IP VPN	Panel content	Description
2764 FrDte circuits (Backhaul and Direct)		
	VR field	The target Virtual Router instance.
	VR browse button [...]	Opens the Browse VR dialog box to let you search for available VRs on the IP Service Node.
(Sheet 1 of 5)		

Table 1 (Continued)
IP Service Node Properties panel contents

IP VPN	Panel content	Description
	Logical Interface field	The logical interface instance in the form <ip_address>/<mask>, where ip_address is in the form n.n.n.n where n is in the range 0 to 255, and mask is an integer from 0..32. This integer denotes the number of leading consecutive 1's in the mask. The Logical Interface is the access point to the VPN circuit and is created when you apply the provisioning. It will be created under a new or existing ProtocolPort, depending if the Media is new or not. If the Media exists, the ProtocolPort will be associated to it. The VR entered in this panel must have the ProtocolPort associated with the existing media, or an error will occur. If the Media is new, a new ProtocolPort and IPPort is created under the VR.
	FrDte field	The instance of the target FrDte in the 2764 circuit configuration. A StaticDlci is provisioned under the FrDte when you apply the provisioning. The media for these circuit configurations, the remoteGroup, is created under the FrDte.
	FrDte browse button [...]	Opens the Browse FrDte/Remote Group dialog box which lets you browse the IP Service Node for FrDte instances only, or for both FrDte and remoteGroup instances.
	Remote Group field	The instance of the media - remoteGroup.
2764 IP Opt Local circuit		
	VR field	The Virtual Router instance.
	VR browse button [...]	Opens the Browse VR dialog box to let you search for available VRs on the IP Service Node.
(Sheet 2 of 5)		

Table 1 (Continued)
IP Service Node Properties panel contents

IP VPN	Panel content	Description
	Logical Interface field	The logical interface instance in the form <ip_address>/<mask>, where ip_address is in the form n.n.n.n where n is in the range 0 to 255, and mask is an integer from 0..32. This integer denotes the number of leading consecutive 1's in the mask. The Logical Interface is the access point to the VPN circuit and is created when you apply the provisioning. It will be created under a new or existing ProtocolPort, depending if the Media is new or not. If the Media exists, the ProtocolPort will be associated to it. The VR entered in this panel must have the ProtocolPort associated with the existing media, or an error will occur. If the Media is new, a new ProtocolPort and IPPort is created under the VR.
	lpDlciGroup field	The instance of media - lpDlciGroup.
	lpDlciGroup browse button [...]	Opens a browse dialog box which lets you search for lpDlciGroup instances on the IP Service Node and select an instance.
2764 IP Opt Backhaul circuit		
	VR field	The target Virtual Router instance.
	VR browse button [...]	Opens the Browse VR dialog box to let you search for available VRs on the IP Service Node.
(Sheet 3 of 5)		

Table 1 (Continued)
IP Service Node Properties panel contents

IP VPN	Panel content	Description
2764 IP Opt Backhaul circuit (continued)	Logical Interface field	The logical interface instance in the form <ip_address>/<mask>, where ip_address is in the form n.n.n.n where n is in the range 0 to 255, and mask is an integer from 0..32. This integer denotes the number of leading consecutive 1's in the mask. The Logical Interface is the access point to the VPN circuit and is created when you apply the provisioning. It will be created under a new or existing ProtocolPort, depending if the Media is new or not. If the Media exists, the ProtocolPort will be associated to it. The VR entered in this panel must have the ProtocolPort associated with the existing media, or an error will occur. If the Media is new, a new ProtocolPort and IPPort is created under the VR.
	lpDlciGroup field	The instance of media - lpDlciGroup.
	Service Type field	For optimized backhaul circuits, FrUni is the only service type.
	FrUni Instance	You can enter an instance value in this field, or use the associated browse button.
	Fruni Instance browse button [...]	Opens a **Browse Service Interface** dialog box that lists FrUni instances that have other interfaces associated with them (by the VFramer subcomponent). Select a FrUni instance from the list to populate the FrUni Instance field on the service provisioning window.
2547 IP Opt Local		
	Vrf	The target Virtual Routing Function instance.
	Vrf browse button [...]	Opens the VR browse dialog box which lets you browse for Vrf instances on the IP Service Node.
(Sheet 4 of 5)		

Table 1 (Continued)
IP Service Node Properties panel contents

IP VPN	Panel content	Description
	Interface	The interface instance in the form <ip_address>/<mask>, where ip_address is in the form n.n.n.n where n is in the range 0 to 255, and mask is an integer from 0..32. This integer denotes the number of leading consecutive 1's in the mask. The Interface is a direct subcomponent of the VRF, and is created when you apply the provisioning.
2547 IP Opt Backhaul		
	Vrf	The target Virtual Routing Function instance.
	Vrf browse button [...]	Opens the VR browse dialog box which lets you search for Vrf instances on the IP Service Node.
	Interface	The interface instance in the form <ip_address>/<mask>, where ip_address is in the form n.n.n.n where n is in the range 0 to 255, and mask is an integer from 0...32. This integer denotes the number of leading consecutive 1's in the mask.
	Service Type field	For optimized backhaul circuits, FrUni is the only service type.
	FrUni Instance	You can enter an instance value in this field, or use the associated browse button.
	Fruni Instance browse button [...]	Opens a **Browse Service Interface** dialog box that lists FrUni instances that have other interfaces associated with them (by the VFramer subcomponent). Select a FrUni instance from the list to populate the FrUni Instance field on the service provisioning window.
(Sheet 5 of 5)		

Frame Relay Access Node Properties panel

The Frame Relay Access Node Properties panel is dynamic and differs with each configuration of the FR IP VPN Access circuit type.

For local and direct circuit configurations, only the Service Type list, FrUnilFrNni Instance list and browse button [...] are enabled. The following FR IP VPN Access node information is disabled:

- Node Name field
- Browse nodes button [...]
- Use Defaults check box
- User Id and Password fields

For backhaul circuit configurations all the fields and buttons are enabled:

- You specify the name of the node for the Frame Relay Access Node in the **Node Name** field. You can select a node from the dropdown list, or as you type the name of the node into the field, the first item in the drop down list that matches the text is automatically selected. Pressing the Enter key sets the selection. Alternatively, you can use the browse button.
- The browse button [**...**] opens the **Browse Service Interface** dialog box which displays the list of those FrUni/FrNnis that have no interfaces associated with them (no VFramer subcomponents). See “Browse Service Interface dialog box” (page 49) and “Browsing service interfaces” (page 84).
- The **Use Defaults** check box lets you specify whether to use the default user ID and password to provision the selected node. If this check box is deselected, the **User Id** and **Password** fields are enabled and you need to enter a user ID and password.
- The **Type** list lets you select a Frame Relay user-to-network interface (Fruni) or a Frame Relay network-to-network interface (Frnni) as the end point.
- The **Fruni Instance | Frnni Instance** list lets you indicate how you want to identify the endpoint: by FrunilFrnni instance, data network address (DNA) value, or Port Interface.

  Note: The type of instance depends on the type chosen in the **Type** field.

- The browse button [...] opens a **Browse** dialog box that lets you search for and select a Frame Relay user-to-network interface|network-to-network interface and/or a data link connection identifier (DLCI) from a

list of available interfaces and identifiers on a selected node. See "Browse Service Interface dialog box" (page 49) and "Browsing service interfaces" (page 84).

End Points panel

To accommodate multi Class of Service (CoS) circuits, the data for each end of the Frame Relay IP VPN Access circuit are entered in tabular format in the End Points table. The contents of a cell can be updated by right-clicking on it to open a pop-up menu and selecting a menu item, or by editing the cell directly. When you enter data into a cell of a row, you are provisioning the circuit within that CoS. In addition to the end point information, you can select a different correlation tag and a Traffic Management (TM) profile for each CoS.

The End Points table contains the following headings for FrDte Backhaul and Direct circuits:

- CoS Index
- IP Service DLCI
- FR Access DLCI
- Correlation Tag
- TM Profile

Optimized Backhaul and Local Circuits, the End Points table also contains the Media DLCI column. However, Optimized Local circuits do not contain the IP Service DLCI column.

The following pop-up menu commands are available from the various columns:

- The **Clear Row** pop-up menu item is available only from the CoS Index column. Selecting Clear Row blanks out all the fields in the row.
- The **Edit TM...** pop-up menu item is available from the TM Profile column. Selecting this item opens the Frame Relay Traffic Management Profile Editor. For more information on the traffic management editor, "Traffic Management Parameters dialog box" (page 51), and "Traffic Management procedures" (page 92).

- A drop down list of available **TM Profiles** is available from each cell in the TM Profile column. To select a profile, left-click on the cell, then select the profile from the list.
- The **Browse DLCI** pop-up menu command is available from the FR Access DLCI, IP Service DLCI and Media DLCI columns. The Browse DLCI pop-up menu item opens a browse dialog box. For FR Access DLCIs, the values returned depend on the circuit configuration. For more information on the Available DLCI dialog box, see "Available DLCI dialog box" (page 66) and the table "Circuit configurations and values returned by the Browse DLCI pop-up menu item" (page 67) for a description of the Browse DLCI pop-up menu associated with various circuit configurations.

Command panel

The buttons displayed in the command panel depend on whether you are performing a create, edit, or delete operation:

- Circuit creation

  During a circuit creation, only the **Apply** button is displayed. When you click **Apply**, the Frame Relay service provisioning tool checks if you have entered all required configuration information. If mandatory configuration information is missing, a message dialog box opens and informs you what data is missing.

  If you have entered all required data, the **Apply** button opens the **Create Circuit** dialog box so that you can apply the configuration that you have set up. You can specify the apply actions in the **Create Circuit** dialog box and click **OK** to begin provisioning the configured nodes in the Frame Relay PVC connection. See "Create Circuit dialog box" (page 57).

  The circuit information is stored in the Administration Database after the view is successfully activated on the node. You can retrieve, view, modify, or delete this circuit.

- Circuit modifications

  During an edit circuit action, the following buttons are displayed in the Command panel:

— **Validate** validates the circuit configuration data that you have retrieved from the Administration Database against the current node configuration data. If the data matches, the applicable fields are set to read-write and the **Apply** button is enabled.

— **Apply** is disabled until the circuit has been successfully validated. If mandatory data is missing, a message dialog box opens listing the missing configuration data. If any discrepancies exist in the circuit, they need to be resolved before the edit operation can proceed.

The **Apply** button opens the Edit Circuit dialog box, once you have entered all the required configuration data. The **Edit Circuit** dialog lets you specify how to apply the configuration. For additional information, see "Edit Circuit dialog box" (page 59) and "Editing a Frame Relay circuit" (page 85).

— **Reset** resets all configuration data fields to the values currently stored in the Administration Database, replacing any editing changes that you have made, but not yet applied. The **Reset** button is disabled until the circuit has been successfully validated.

- Circuit deletion

  During an delete circuit action, the following button is displayed in the Command panel:

  — **Delete...** opens the **Delete Circuit** dialog. This dialog lets you specify how to apply the circuit deletion. For additional information, see "Delete Circuit dialog box" (page 60), and "Deleting a Frame Relay circuit" (page 89).

Dialog boxes for Frame Relay PVC and IP VPN Access provisioning

For a description of the dialog boxes common to both Frame Relay PVC and Frame Relay IP VPN Access provisioning, see the following sections:

- "Set Default Authentication dialog box" (page 49)
- "Browse Service Interface dialog box" (page 49)
- "Browse Nodes dialog box" (page 50)
- "Traffic Management Parameters dialog box" (page 51)

- “Circuit retrieval dialog boxes” (page 54)
- “Create Circuit dialog box” (page 57)
- “Edit Circuit dialog box” (page 59)
- “Delete Circuit dialog box” (page 60)

Set Default Authentication dialog box

The Set Default Authentication dialog box lets you set the default user ID and password to login to the network element. This dialog box opens when you select Options -> Set Default Login from the menu bar in the Service Provisioning - Frame Relay window. This dialog box also opens the first time you make provisioning changes that require a connection to the network element, and you have not yet set the default user ID and password.

Browse Service Interface dialog box

This dialog box lets you select a Frame Relay user-to-network interface (Fruni), Frame Relay network-to-network interface (Frnni) and/or a data link connection identifier from a list. For the procedure, see “Browsing service interfaces” (page 84).

The Browse Service Interface dialog box that opens differs slightly depending on the circuit type and whether the circuit has a backhaul configuration or not. In a backhaul configuration, the FrUni instance requires a vFramer. In these circumstances, an additional entry for port interfaces displays in the dialog box.

The Browse Service Interface dialog box opens when you click the browse button [...] to the right of the Fruni|Frnni field in the following locations:

- in the Master Node panel or the Slave Node panel of a Frame Relay PVC circuit
- in the Frame Relay Access Node Properties panel of a Frame Relay IP VPN Access circuit
- in the IP Service Node Properties panel for the following Frame Relay IP VPN Access circuit configurations:
  - 2764 IP Opt Backhaul
  - 2547 IP Opt Backhaul

The dialog box contains the following elements:

- Browse dialog table contains the following columns:
  - The **Fruni | Frnni Instance** column displays all Frame Relay user-to-network interface (Fruni) or Frame Relay network-to-network interface (Frnni) instances according to your selection.
  - The **DNA Value** column displays the data network address (DNA) value for the corresponding Fruni/Frnni instance in the first column.
  - The **Port Interface** column displays the port interface for the corresponding Fruni/Frnni instance in the first column. This column displays only if the search is for a backhaul configuration where a FrUni requires a vFramer. Otherwise, this column does not display
- The **Show** button, available for FR PVC searches only, populates the **Available DLCIs** area with the existing data link connection identifiers (DLCI) for the selected Frame Relay user-to-network interface (Fruni) or Frame Relay network-to-network interface (Frnni).
- Action buttons
  - **OK** copies the selected node into the **Fruni | Frnni Instance** field in the main window. The **Browse** dialog closes.
  - **Cancel** dismisses the dialog. The **Fruni | Frnni Instance** field is unchanged.
  - **Help** accesses the online help information for the dialog.

Browse Nodes dialog box

The **Browse Nodes** dialog opens when you click **Browse** to the right of the **Node Name** field in the **Master Node** or **Slave Node** area. The **Browse Nodes** dialog lets you select from a list of nodes available from the Host Group Directory Service (HGDS) server.

The Browse Nodes dialog consists of the following elements:

- Search criteria panel. This panel has the following fields
  - **Device Name** specifies the node name for the search. By default, the Device Name field is populated with the wildcard character (*).

  - — **Max Num to Retrieve** restricts the number of instances retrieved. The default value is 100.
- A **Search** button. Clicking Search populates the **Search Results** panel with the node names matching the search criteria.
- The **Search Results** panel provides the results of your search. The **Device Name** section lists the available nodes to select from.
- Command buttons
  - — **OK** copies the selected node into the node field in the main window. The **Browse Nodes** dialog closes.
  - — **Cancel** dismisses the dialog. The node field is unchanged.
  - — **Help** accesses the online help information for the dialog.

Traffic Management Parameters dialog box

The Traffic Management Parameters dialog opens in the following circumstances:

- for both Frame Relay PVC circuits and Frame Relay IP VPN Access circuits, when you select Edit -> Edit TM... from the menu bar
- for Frame Relay PVC circuit types, when you click **Edit TM...** in the Circuit Properties panel
- for Frame Relay IP VPN Access circuit types, when you right click in a cell in the TM Profile column in the End Points table

The Traffic Management Parameters dialog lets you create a new traffic management template or edit or delete an existing one.

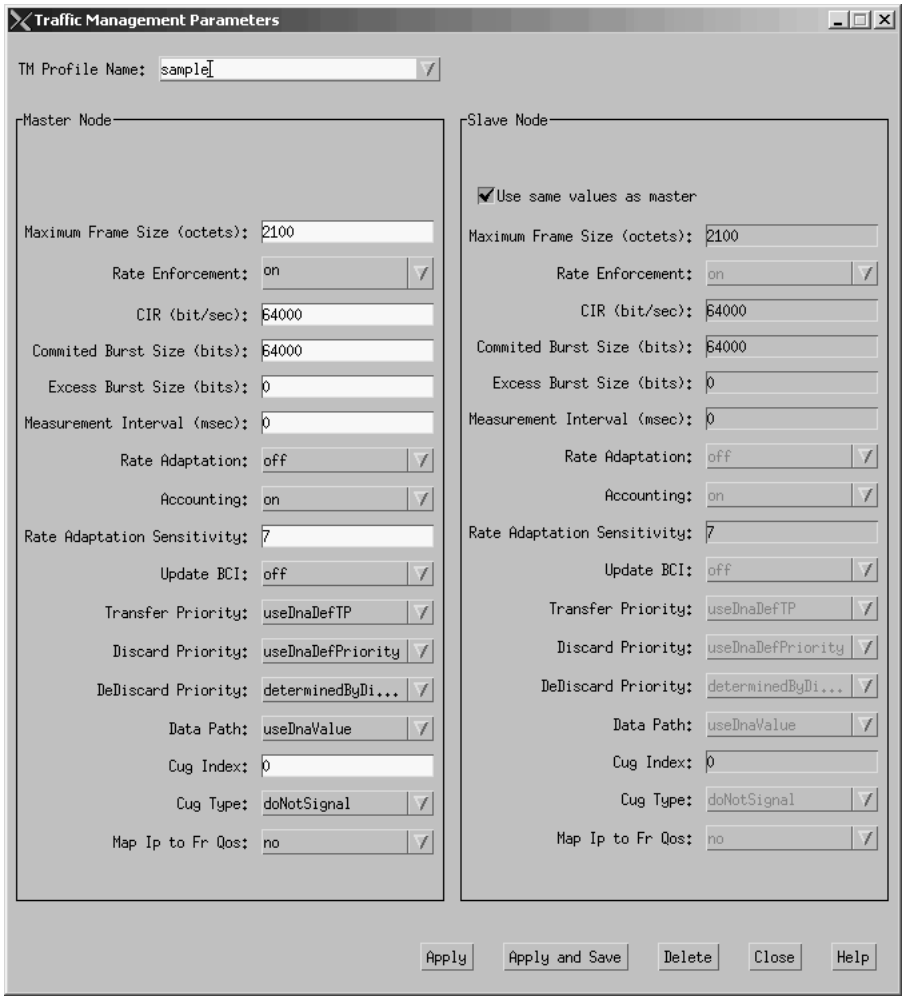
Traffic Management profiles are stored in the Administration Database. Unsaved profiles appear as “Custom” in the database.

See the following sections for related procedures:

- “Creating a new Traffic Management profile” (page 93)
- “Editing a Traffic Management profile” (page 94)
- “Deleting a Traffic Management profile” (page 95)

See the figure “Traffic Management Parameters dialog for a FR PVC circuit type” (page 52).

Figure 1
Traffic Management Parameters dialog for a FR PVC circuit type



The Traffic Management Parameters dialog for PVC circuits consists of the following elements:

- “Master node area” (page 53)
- “Slave node area” (page 53)
- “Command buttons” (page 53)

For Frame Relay IP VPN Access circuits, the dialog only displays the Master Node.

Master node area

For information on the various fields in the **Master Node** area, see NN10600-901 *Nortel Networks Multiservice Switch 7400/15000/20000 Frame Relay Configuration Management*.

Slave node area

To use the same values for both the Master and Slave endpoint, you enable the **Use same values as** master check box in the **Slave Node** area. This sets all fields in the **Slave Node** area to read only and uses the values set in the **Master Node** area for both sides of the permanent virtual circuit connection.

To use different values from the Master endpoint, deselect the Use same value as master check box and enter the appropriate value in each field.

Command buttons

The Traffic Management dialog has the following action buttons:

- **Apply** adds the traffic management profile specified in the TM Profile field to the list of profiles. Because this action does not save the file, the file name will have an asterisk (*) to signify that you must click Apply and Save to save it to file. Profiles that are modified but not saved are stored in the Administration Database as “Custom”.
- **Apply and Save** adds the traffic management profile specified in the **TM Profile** field and save it in the eteFrameRelayProfiles.cfg file.
- **Delete** deletes the traffic management profile specified in the **TM Profile** field.

- **Close** closes the dialog. The **TM Profile** field in the Connection Properties area of the Frame Relay service provisioning window displays the traffic management profile selected in the dialog.
- **Help** accesses the online help information for the dialog.

Circuit retrieval dialog boxes

The Frame Relay service provisioning circuit retrieval dialogs let you specify the circuit to retrieve from the Administration Database. A retrieve dialog opens when you select one of the following commands from the File menu:

- Edit Circuit opens the Edit Circuit retrieve dialog
- Delete Circuit opens the Delete Circuit retrieve dialog

Edit Circuit dialog box

Use the Edit Circuit dialog box to retrieve the Frame Relay PVC or IP VPN Access circuit that you want to modify. The Edit Circuit dialog box contains the following items:

- **FR PVC Circuit** option button to select a Frame Relay circuit and an associated **Circuit Id** field to identify the specific circuit.
- **IP VPN Access Circuit** option button to select an IP VPN circuit and associated fields to identify the specific circuit. You need specify at least one of the following fields:
  - **Customer**
  - **Site**
  - **Access Point**
- a selection of command buttons:
  - **Reset** clears the dialog and resets the values back to the wildcard (*) character.
  - **Retrieve** retrieves the circuit from the Administration Database. If the data is successfully retrieved, the dialog closes and the circuit data displays in the Frame Relay service provisioning tool window. If two or more circuits have the same ID, the first circuit found is

used. If a circuit is not found, a warning message opens and the retrieve dialog remains open.

— **Cancel** closes the dialog box and cancels the retrieval of the circuit data.

If you do not know what values to specify in any of the fields, you can use the wildcard (*) to retrieve all occurrences. If more than one circuit meets the retrieval criteria, a dialog opens from which you can make a selection. You can also use the Circuit Viewer tool to search for the desired circuit data. See 241-6001-011 *Preside MDM Fault Management User Guide* for the procedure to search for a circuit using the Circuit Viewer tool. Selecting a circuit in the Circuit Viewer tool sets the context. You can then retrieve the current context in the Edit Circuit dialog by selecting the Get Context pop-up menu from any of the fields.

The retrieved data displays in the Frame Relay service provisioning window as read-only until you successfully validate the circuit.

The command panel displays the Validate... and Apply... buttons. The Validate... button is enabled. Clicking Validate... validates the circuit configuration against the current node configuration data. If the data matches, the applicable fields are set to read-write and the Apply... button is enabled.

If there are differences in the component data, the differences display in the status window and you can not edit the circuit.

If the stored data is incorrect, you can edit the data using the Circuit Database Administration tool.

You can also verify that the network element is running the correct view. If not, you may load and activate a different view.

When you click the Apply... button, a Confirm Frame Relay Changes dialog box opens and displays all the changes that you have made. The dialog box ask if you wish to continue. If you click Yes, the Edit Circuit dialog box opens. If you click No, you return to the Frame Relay main window. The Apply... button is disabled until the circuit is successfully validated. If any discrepancies exist in the circuit, you need to resolve them before the Frame Relay tool allows the edit action to continue.

Delete Circuit dialog box

Use the Delete Circuit dialog box to retrieve the Frame Relay PVC or IP VPN Access circuit that you want to delete. The Delete Circuit dialog box contains the following items:

- **FR PVC Circuit** option button to select a Frame Relay circuit and an associated **Circuit Id** field to identify the specific circuit.
- **IP VPN Access Circuit** option button to select an IP VPN circuit and associated fields to identify the specific circuit. You need specify at least one of the following fields:
  - **Customer**
  - **Site**
  - **Access Point**
- a selection of command buttons:
  - **Reset** clears the dialog and resets the values back to the wildcard (*) character.
  - **Retrieve** retrieves the circuit from the Administration Database. If the data is successfully retrieved, the dialog closes and the circuit data displays in the Frame Relay service provisioning tool window. If two or more circuits have the same ID, the first circuit found is used. If a circuit is not found, a warning message opens and the retrieve dialog remains open.
  - **Cancel** closes the dialog box and cancels the retrieval of the circuit data.

If you do not know what values to specify in any of the fields, you can use the wildcard (*) to retrieve all occurrences. If more than one circuit meets the retrieval criteria, a dialog opens from which you can make a selection. You can also use the Circuit Viewer tool to search for the desired circuit data. See 241-6001-011 *Preside MDM Fault Management User Guide* for the procedure to search for a circuit using the Circuit Viewer tool. Selecting a circuit in the Circuit Viewer tool sets the context. You can then retrieve the current context in the Edit Circuit dialog by selecting the Get Context pop-up menu from any of the fields.

The retrieved data displays in the Frame Relay service provisioning window as read-only.

The command area displays the Delete... button which is enabled. Clicking Delete... validates the circuit configuration data that was retrieved from the Administration Database against the current node configuration data. If the data matches, the circuit is deleted. If there are differences in the component data, the differences are displayed in the status window and you can not delete the circuit.

If the stored data is incorrect, you can edit the data using the Frame Relay service provisioning tool, or you can repopulate the database.

You can also verify that the network element is running the correct view. If not, you may load and activate a different view. Once the provisioning data is successfully activated, the circuit is deleted from the Administration Database.

Create Circuit dialog box

You use the Create Circuit dialog box to specify how to apply the connection configuration that you have set up in the Frame Relay service provisioning tool.

The Create Circuit dialog box contains the following panels:

- "Open View panel" (page 57)
- "Apply Options panel" (page 58)
- "Command buttons" (page 59)

Open View panel

The Open View panel lets you specify the view to which to apply your configuration changes. The Open View panel contains the following options:

- **Current**
  Current copies the current view to the edit view.
- **Committed**
  Committed copies the committed view to the edit view.

- **Edit**
  Edit uses the edit view.
- **Saved**
  Save loads the specified view. If you select Saved, you need to select one of the following options from the drop down list:
  - **User Specified**. When you select User Specified, you need to enter a view file name.
  - **Dated**. Type the string “today” or enter a date in the format <yymmdd>, where yy is the year, mm is the month and dd is the day. When you enter a date, the service data view with the highest version number (nn) is found. When an exact match does not exist, the most recent service data view, relative to the date is used. That is, the dated service data view with the latest date earlier than the given date, and with the latest version number, is opened. For additional information on dated views, see the section Using dated MCFs in 241-6001-304 *Preside MDM Configuration Management for DPN Administration*. The file must exist on all the network elements being configured.

Apply Options panel

The Apply Options panel lets you specify how to apply the configuration changes. The panel contains the following check boxes.

- **Save**
  Save saves the configuration on the node. The Type dropdown list is enabled and you can select one of the following format options:
  - **portable** saves the view in portable format
  - **delta** saves the view in delta format
  - **ascii** saves the view in ASCII forma

  When you select Save, you need to select one to the following options from the drop down list:
  - **User Specified**. You need to enter a view file name in the adjacent text box.
  - **Dated**. Type the string “today” or enter a date in the format yymmdd. where yy is the year, mm is the month and dd is the day.

When you enter a date, the view is saved with the date followed by the next version number <nn> in the sequence, in the format <yymmdd><nn>. For example, 03012903. The file is created on all nodes that are being provisioned. For additional information on dated views, see the section “Using dated MCFs” in 241-6001-304 *Preside MDM Configuration Management for DPN Administration*.

- **Activate**
  Activate activates the configuration changes. The activation is automatically confirmed. If you have configured the system to use an Administration Database, the database is populated with the circuit data.
- **Commit**
  Commit commits the configuration as the default at startup. Commit is enabled only if you have selected Activate.

Command buttons

The Create dialog box has the following command buttons

- **OK**
  OK begins the provisioning of the configured nodes in the Frame Relay connection and closes the Create Circuit dialog box.
- **Cancel**
  Cancel cancels the creation of the circuit and closes the Create Circuit dialog box.

Edit Circuit dialog box

Use then Edit Circuit dialog box to indicate how to apply the modifications to a configuration. The Edit Circuit dialog opens when you click Apply in the Frame Relay service previsioning tool main window when you are modifying a configuration.

When you click Apply, the service provisioning tool proceeds to activate the changes on the network element, and if successful, stores the provisioning data in the Administration Database.

The Edit Circuit dialog has the following apply options:

- **Save** saves the configuration on the node. When you select the **Save** option, The Type dropdown list is enabled and you can select one of the following format options:

— **portable** saves the view in portable format

— **delta** saves the view in delta format

— **ascii** saves the view in ASCII format

You need to select one of the following options from the drop down list:

— **User Specified**. You need to enter a view file name in the adjacent text box.

— **Dated**. Type the string “today” or enter a date in the format yymmdd. where yy is the year, mm is the month and dd is the day. When you enter a date, the view is saved with the date followed by the next version number <nn> in the sequence, in the format <yymmdd><nn>. For example, 03012903. The file is created on all nodes that are being provisioned. For additional information on dated views, see the section “Using dated MCFs” in 241-6001-304 *Preside MDM Configuration Management for DPN Administration*.

- **Activate** activates the new configuration. The activation is automatically confirmed. If you have installed the Administration Database, the database is populated with the circuit data.
- **Commit** commits the configuration as the default at startup. Commit is disabled until you select Activate so you cannot commit the view without activating the view.

The Edit Circuit dialog has the following command buttons:

- **OK** begins the provisioning of the configured nodes in the Frame Relay connection, and closes the Edit Circuit dialog box.
- **Cancel** cancels the circuit modification action and closes the dialog box.

For the procedure to edit a circuit, see “Editing a Frame Relay circuit” (page 85).

Delete Circuit dialog box

Use the Delete Circuit dialog box to specify how to apply the deletion of a circuit. The Delete Circuit dialog opens when you select Delete... in the command area of the Frame Relay service provisioning window in a delete circuit action.

The Delete Circuit dialog has the following apply options:

- **Save**
  Save saves the configuration on the node. The Type dropdown list is enabled and you can select one of the following format options:
  - **portable** saves the view in portable format
  - **delta** saves the view in delta format
  - **ascii** saves the view in ASCII format

  You need to select one of the following options from the drop down list:
  - **User Specified**. You need to enter a view file name in the adjacent text box.
  - **Dated**. Type the string “today” or enter a date in the format yymmdd. where yy is the year, mm is the month and dd is the day. When you enter a date, the view is saved with the date followed by the next version number <nn> in the sequence, in the format <yymmdd><nn>. For example, 03012903. The file is created on all nodes that are being provisioned. For additional information on dated views, see the section “Using dated MCFs” in 241-6001-304 *Preside MDM Configuration Management for DPN Administration*.
- **Activate** activates the new configuration. The activation is automatically confirmed. If you have installed the Administration Database, the database is populated with the circuit data.
- **Commit** commits the configuration as the default at startup. Commit is disabled until you select Activate so you cannot commit the view without activating the view.

The Delete Circuit dialog has the following command buttons:

- **OK** begins the circuit deletion. The data that is retrieved from the Administration Database is validated against the node configuration data. If the data matches, the deletion proceeds. If the component data differs, the differences are reported in the messages window and the circuit deletion does not proceed, and closes the **Create Circuit** dialog.
- **Cancel** cancels the circuit deletion action and closes the Delete Circuit dialog box.

For the procedure to delete a circuit, see “Deleting a Frame Relay circuit” (page 89).

Dialog boxes for Frame Relay PVCs

The following dialog boxes applies to only Frame Relay PVC circuits:

- “Edit Backup Slave dialog box” (page 62)
- “Customer Search dialog box” (page 63)

Edit Backup Slave dialog box

The **Edit Backup Slave** dialog lets you create backup slave nodes. **Edit Backup Slave** dialog box opens when you click **Edit Backup** in the **Slave Node** area of a Frame Relay PVC circuit.

The Edit Backup Slave dialog consists of the following elements:

- Backup Slaves table which lists all available backup slaves. You select one to configure or delete. New backup slaves created in this dialog display here. The fields and buttons are described in the **Master Node** area. See “Master panel” (page 36).
- The Backup Slave panel which lets you configure backup slave information. The **New DLCI** field is read only because its value cannot be different from the corresponding data link connection identifier (DLCI) in the **Slave Node** area in the main window. The fields and buttons are described in the **Master Node** area; see “Master panel” (page 36).
- Command buttons:
  - **Add** adds the backup slave configured in this dialog. The backup slave appears in the **Backup Slaves** table.
  - **Modify** allows you to specify a user ID and password during a validate action. During an edit action, the Modify button lets you modify the user ID, password, Node Name, and FrUni/Nni instance.
  - **Delete** deletes the backup slave selected in the **Backup Slaves** table.
  - **OK** saves changes and close the dialog.
  - **Cancel** dismisses the dialog without saving changes.

— **Help** accesses the online help information for the dialog.

For relevant procedures, see “Backup slaves configuration” (page 119).

Customer Search dialog box

Use the Customer Search dialog box to search for and select a customer for a Frame Relay PVC circuit. You open the Customer Search dialog box by clicking the browse button [...] to the right of the Customer field in the Circuit Properties panel. The dialog box contains the following items:

- The **Filter Customers** panel contains the fields which define the search criteria. By default these fields are populated with the wildcard character (*). You can search on the following items:

  — **Customer Name**

  — **Business Category**

  — **Country**

  Further filtering capabilities are provided by the **default customer** and **ISP customer** check boxes.

  This panel contains two command buttons:

  — **Retrieve** starts the search and retrieves the Customers that meet the search criteria and displays the results in the List Customers panel.

  — **Reset** lets you reset your search criteria.

- The **List Customers** panel displays a list of all the Customers that meet the search criteria. You can select a Customer from the list.

- Command buttons
  The dialog box contains the following command buttons:

  — **OK** closes the dialog box. The Customer field in the Frame Relay service provisioning tool window is populated with the Customer which you selected in the List Customers panel.

  — **Cancel** cancels the search action.

For the procedure to browse for FR PVC customers see “Browsing customers” (page 80).

Dialog boxes for Frame Relay IP VPN Access

The following dialog boxes support FR IP VPN access circuit types:

Browse Customer dialog box

Use the Browse Customer dialog boxes to search for and select a customer for a Frame Relay 2547 IP VPN Access circuit. You open the Browse Customer dialog box by clicking the browse button [...] to the right of the Customer field in the Circuit Properties panel.

The Browse Customers dialog box that opens depends on the circuit type. For 2764 circuits, the Browse Customers/VRs dialog box opens and displays those customers that own VPNs. From this dialog box, you can display the VRs of each customer.

VPN for 2547 circuits the Browse Customers/VRFs dialog box opens and displays those customers that own route targets. From this dialog box, you can display the VRFs that have customer route targets.

This panel contains two command buttons:

- **OK** closes the dialog box and populates the service provisioning window with the selected customer, and if selected any VR or VRF.
- **Cancel** cancels the search action.

For the procedure to browse FR IP VPN Access customers, see "Browsing customers" (page 80).

Site Search dialog box

The Site Search dialog box is used to search for and select a Site for a Frame Relay IP VPN Access circuit. The Site entity is a collection of access points and is stored in the Site table of the Administration Database. You open the Site Search dialog box by clicking the browse button [...] to the right of the Site field in the Circuit Properties panel. The dialog box contains the following items:

- The **Filter Site** panel contains the fields which define the search criteria. By default these fields are populated with the wildcard character (*). If you have entered a Customer in the Frame Relay service provisioning window, it is used as a search criteria. You can search on the following items:

  — **Customer Name**

  — **Site Name**

  — **Extranet enabled**

  This panel contains two command buttons:

  — **Retrieve** starts the search and retrieves the Customers that meet the search criteria and displays the results in the List Customers panel.

  — **Reset** lets you reset your search criteria.

- The **List Site** panel displays a list of all the Sites that meet the search criteria. You can select a Site from this list.

- Command buttons
  The dialog box contains the following command buttons:

  — **OK** closes the dialog box. The Site field in the Frame Relay service provisioning tool window is populated with the name of the Site which you selected in the List Sites panel.

  If the Site that you have selected is not the same as the one which is entered in the Customer field of the Circuit Properties panel, you are prompted to synchronize them by changing the Customer to that of the Site's Customer.

  — **Cancel** cancels the search action.

For the procedure to browse Sites, see “Browsing Sites” (page 106).

Browse VRs/VRFs dialog box

The Browse VRs dialog box is used to list available VRs for a RFC 2764 Frame Relay IP VPN Access circuits and VRFs for a RFC 2547 IP VPN Access circuits. The dialog box opens when you click the browse button [...] to the right of either the VR or Vrf field in the Frame Relay service provisioning window.

The dialog box contains the following items:

- An **Available VR** list to provide a list of available VRs or Vrfs on the IP VPN Access node
- A status message to indicate to status of the search operation
- Command buttons
  The dialog box contains the following command buttons:
  - **OK** closes the dialog box and populates the VR/Vrf field in the Frame Relay - Service Provisioning window with the VR/VRF which you selected.
  - **Cancel** cancels the browse action.
  - **Help** accesses the on-line help for the dialog box

For the procedure to browse for available VRs or VRFs, see “Browsing VRs and VRFs” (page 107).

Available DLCI dialog box

The Available DLCI dialog box is used to list available DLCIs. The dialog box opens when you right click in a cell in the Media DLCI, IP Service DLCI, or FR Access DLCI columns and select Browse DLCI... from the pop-up menu.

For the FR Access DLCI, the values returned depends on the circuit configuration selected. Refer to the table “Circuit configurations and values returned by the Browse DLCI pop-up menu item” (page 67) for a description of the values returned when you browse each column.

Table 2
Circuit configurations and values returned by the Browse DLCI pop-up menu item

Circuit configuration	Column type	Values returned by the Browse DLCI pop-up menu command
FrDte BAckhaul and Direct circuits	IP Service Access DLCI	Unused StaticDlci's of the FrDte.
	FR Access DLCI	Unused Dlcis from the interface selected in the Frame Relay Access Node Properties panel.
Optimized Backhaul	Media DLCI	Unused FrConns of the ipDlciGroup (i.e. Media)
	IP Service DLCI	Unused Dlcis of the interface selected in the IP Service Node Properties.
	Frame Relay Access DLCI	Unused Dlcis of the interface selected in the Frame Relay Access Node Properties panel
Optimized Local*	Media DLCI	Unused FrConn's of the IpDciGroup (i.e. Media).
	Frame Relay Access DLCI	Unused Dlcis of the interface selected in the Frame Relay Access Node Properties panel
* For 2547 circuits, the Browse FrConn popup is not available in the Media DLCI column. Because the parent component (lpoDlci) is unique for each access point, no FrConn instances are used. All valid DLCI instances are available for use.		

The dialog box contains the following items:

- **Fr Interface** identifies the Frame Relay instance being searched
- The **Available DLCI** list provides a list of available DLCIs for the specified instance
- Command buttons
  The dialog box contains the following command buttons:
  - **OK** closes the dialog box and populates the VR/Vrf field in the Frame Relay - Service Provisioning window with the VR/VRF which you selected.

— **Cancel** cancels the action.

— **Help** accesses the on-line help for the dialog box

For the procedure to browse available Dlci's see "Browsing DLCIs" (page 108).

Browse FrDte/Remote Group dialog box

The Browse FrDte/Remote Group dialog box opens when you click the browse button [...] to the right of the FrDte field in the IP Service Node Properties panel for 2764 FrDte Backhaul and FrDte Direct circuit configurations.

The dialog box contains the following elements:

- The **FrDte Instance** panel displays all FrDte instances on the IP Service Node.
- Clicking the **Show** button populates the **RG List** panel with the existing RemoteGroup instances for the selected FrDte instance.
- Command buttons
  - **OK** populates the FrDte field in the IP Service Node Properties panel with the selected FrDte. If you selected the remote group in the RG panel, the RemoteGroup field is also populated. The **Browse** dialog closes.
  - **Cancel** dismisses the dialog. The **FrDte** and **RemoteGroup** fields are unchanged in the main window.
  - **Help** accesses the online help information for the dialog.

For the procedure to browse FrDte and Remote Group instances, see "Browsing FrDte and Remote Group instances for 2764 FrDte circuits" (page 113).

Browse lpDlciGroup dialog box

The Browse lpDlciGroup dialog box displays a list of the instances of lpDlciGroups on the IP service node. This dialog box opens when you click the browse button [...] to the right of the lpDlciGroup field in the IP Service Node Properties panel for 2764 optimized circuit configurations.

The Browse dialog box has the following elements:

- **Existing lpDlciGroups** list which displays all instances of lpDlciGroups on the IP service node
- Command buttons
  - **OK** copies the selected node into the **Fruni | Frnni Instance** field in the main window. The **Browse** dialog closes.
  - **Cancel** dismisses the dialog. The **Fruni | Frnni Instance** field is unchanged.
  - **Help** accesses the online help information for the dialog.

For the procedure to browse for lpDlciGroup instances, see "Browsing lpDlciGroup instances for 2764 IP Optimized circuits" (page 112)

Using the keyboard commands

For Frame Relay service provisioning, you can use the keyboard instead of the mouse to select a menu option. You can also execute a command by using a command accelerator. See the following sections:

- "Mnemonics" (page 69)
- "Command accelerators" (page 70)

Mnemonics

Every menu option in the menu bar has a mnemonic associated with it. Each mnemonics usually consists of the Alt key followed by the first letter of the menu and the first letter of the menu option.

Example
To edit the backup slave using mnemonics, press the Alt key plus the letter E and then the letter Q.

The single character that selects a given menu option is shown by the underscore in the name of the menu's active name. If there are duplicate options in the same menu, the second capital letter is used. If there are duplicates and no other capital letters in the menu option, the second letter is used.

Command accelerators

The Frame Relay service provisioning tool provides command accelerators to execute menu commands. Each accelerator usually consists of the control key followed by the first letter of the menu option. The command accelerator is shown beside each menu option.

Example

To edit the backup slave using a command accelerator, press the Control key plus the letter B.

Chapter 4
General procedures

This section provides general procedures for using the Frame Relay service provisioning tool.

For procedures that apply to both the FR PVC and FR IP VPN access circuit types, see the following sections:

- "Frame Relay service provisioning tool launch points" (page 73)
  - — Starting the Frame Relay service provisioning tool from the toolset window
  - — Starting the Frame Relay service provisioning tool from Nodal Provisioning
  - — Starting the Frame Relay service provisioning tool from the Network Viewer Start Tool menu
  - — Starting the Frame Relay service provisioning tool from the Circuit Viewer Tools menu
  - — Starting the Frame Relay service provisioning tool from the Database Administration tool
- "Connecting to a network element" (page 79)
- "Browsing customers" (page 80)
- "Browsing nodes" (page 83)
- "Browsing service interfaces" (page 84)
- "Editing a Frame Relay circuit" (page 85)

Frame Relay service provisioning tool launch points

You can start the Frame Relay service provisioning tool from various locations in Preside Multiservice Data Manager (MDM). For additional information, see the following sections:

- "Starting the Frame Relay service provisioning tool from the toolset window" (page 74)
- "Starting the Frame Relay service provisioning tool from Nodal Provisioning" (page 75)
- "Starting the Frame Relay service provisioning tool from the Network Viewer Start Tool menu" (page 76)
- "Starting the Frame Relay service provisioning tool from the Circuit Viewer Tools menu" (page 77)

Starting the Frame Relay service provisioning tool from the toolset window

You can launch the Frame Relay service provisioning tool from the Configuration entry in the toolset window.

Prerequisites

- you have started Preside Multiservice Data Manager (MDM) and the toolset window is displayed

Procedure steps

1. In the application main window, select **Configuration-> Passport-> Service Provisioning -> Frame Relay**.
2. If the **Administration Database** is installed, the database authentication dialog box opens.
3. In the **User name** and **Password** fields, enter your database user name and password and click **OK**.

   The **Service Provisioning - Frame Relay** window opens.

Starting the Frame Relay service provisioning tool from Nodal Provisioning

You can access the Frame Relay service provisioning tool from the Nodal Provisioning tool menu bar.

Prerequisites

- you have opened the Nodal Provisioning tool. See 241-6001-610 *Preside MDM Nodal Provisioning User Guide* for start-up procedures.

Procedure steps

1. In the menu bar of the **Nodal Provisioning** tool main window, select **External Tools -> Service Provisioning -> Frame Relay**.

   If the **Administration Database** is installed, the database authentication dialog box opens.

2. In the **User name** and **Password** fields, enter your database user name and password.

3. Click **OK**.

   The **Service Provisioning - Frame Relay** window opens.

Starting the Frame Relay service provisioning tool from the Network Viewer Start Tool menu

You can launch the Frame Relay service provisioning tool from Network Viewer. When you do, the Network Viewer remains open and you can continue to use it.

Prerequisites

- you have started Preside Multiservice Data Manager (MDM) and the toolset window is displayed

Procedure steps

1. In the application main window, select **Fault -> Network Viewer**.

   The **Network Viewer** window opens.

2. In the **Network Viewer** window, select the nodes required to provision the Frame Relay service by doing one of the following:

   - click on the background of the **Network Viewer** window, drag the mouse and release it when the desired nodes are included in the area where you dragged the mouse
   - press the **Shift** key and click on the nodes that you want to use to create the Frame Relay service

3. Click the mouse while holding the **Shift** key and select **Start Tool -> Configuration -> Service Provisioning -> Frame Relay**.

4. If the Administration Database is installed, the **Administration Database** authentication dialog box opens.

5. In the **User name** and **Password** fields, enter your database user name and password and click OK.

   The **Service Provisioning - Frame Relay** main window opens.

   If you have selected only one node when you launch the Frame Relay service provisioning tool, that node is the master node.

   If you select two nodes, the first selected node is the master. The second selected node is the slave. All the other nodes are unused.

Starting the Frame Relay service provisioning tool from the Circuit Viewer Tools menu

You can launch the Frame Relay service provisioning tool from the menu bar in Circuit Viewer or from a selected circuit in Circuit Viewer.

Prerequisites

- you have started Preside Multiservice Data Manager (MDM) and the toolset window is displayed

Procedure steps

1. Open **Circuit Viewer** from the application main window:

   Fault -> **Circuit Viewer**

2. From the Circuit Viewer menu bar, select **Tools** -> **Frame Relay Service Provisioning**, or

   Select a circuit, right click on the selected circuit and from the pop-up menu, select **Launch Frame Relay SP**.

3. If the **Administration Database** is installed, the database authentication dialog box opens.

4. In the **User name** and **Password** fields, enter your database user name and password and click **OK**.

   The **Service Provisioning - Frame Relay** main window opens.

Starting the Frame Relay service provisioning tool from the Database Administration tool

You can launch the Frame Relay service provisioning tool from the Database Administration tool.

Prerequisites

- you have started Preside Multiservice Data Manager (MDM) and the toolset window is displayed
- the MDM Administration Database tool must be installed

Procedure steps

1. Open the **Administration Database** tool from the application window:

   System -> **Administration -> MDM Database Administration**

2. From the **Database Administration** menu bar, select **Tools** -> **Frame Relay Service Provisioning**.

3. In the **User name** and **Password** fields, enter your database user name and password and click **OK**.

   The **Service Provisioning - Frame Relay** main window opens.

Connecting to a network element

To specify a user ID and password to login to the network element, use the Set Default Authentication dialog box.

Prerequisites

- You have launched the Frame Relay service provisioning tool.
- You have opened the Set Default Authentication dialog box. This dialog box opens when you select Options -> Set Default Authentication... from the Service Provisioning-Frame Relay menu bar, or as a prompt the first time you perform an action that requires a connection to the network element.

Procedure steps

1. In the **Set Default Authentication** dialog box, type a user ID and password.
2. Click **OK**.

Browsing customers

You can browse the customer table in the Administration Database to search for and select a customer of a Frame Relay PVC or 2547 IP VPN Access circuit. Use one of the following procedures:

- "Procedure steps for FR PVC" (page 80)
- "Procedure steps for FR IP VPN Access" (page 82)

Prerequisites

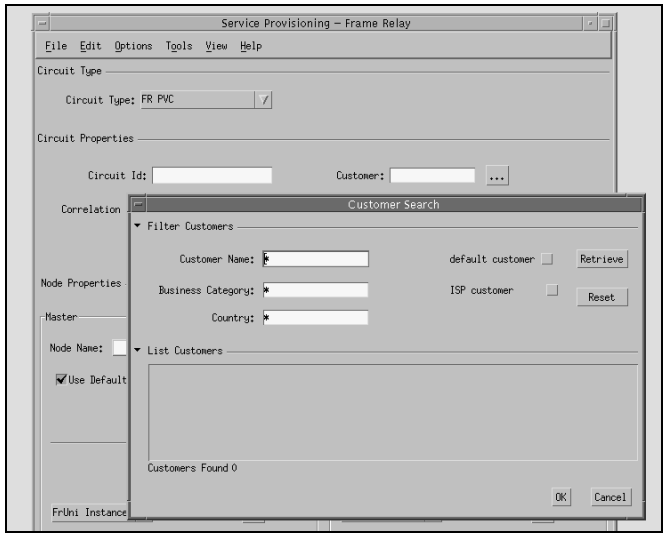
- the Preside Multiservice Data Manager (MDM) Administration Database is installed
- selected circuit type is FR PVC or FR IP VPN Access
- you have clicked the browse button [...] to the right of the Customer field in the Frame Relay service provisioning tool to open the browse dialog box

Procedure steps for FR PVC

1 By default, the fields in the **Filter Customers** panel, are populated with the wild card character [*]. You can limit the scope of the search criteria by entering a value in one or more of the following fields:

- **Customer Name**
- **Business Category**

- **Country**



2 If required, retrieve the single default customer by selecting the **default customer** check box.

3 If required, retrieve the single ISP customer by selecting the **ISP customer** check box.

4 Click **Retrieve**.

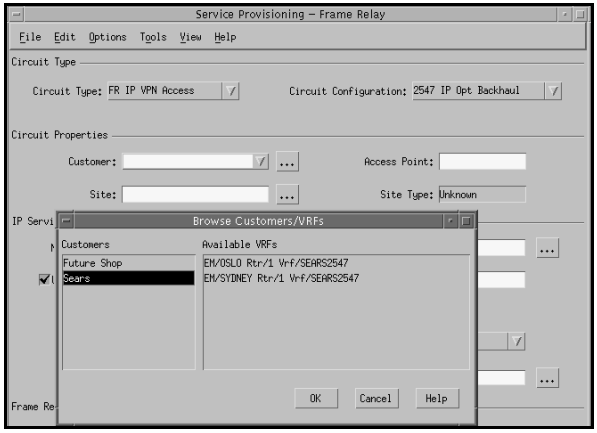
The customers that meet the criteria that you specified display in the **List Customers** panel.

5 From the list, select the customer and click **OK**.

The selected customer appears in the **Customer** field in the **Frame Relay- Service Provisioning** window.

Procedure steps for FR IP VPN Access

1 In the **Browse Customer dialog box,** select the customer.



2 If required, select an available VR or VRF.

3 Click **OK**.

The selected information displays in the **Frame Relay - Service Provisioning** window.

Browsing nodes

You can search for available nodes and select the desired node from a list, using the Browse Nodes dialog box.

Prerequisites

- you have clicked the browse nodes [...] button to the right of the Node Name field.

Procedure steps

1. In the **Browse Nodes** dialog box, enter the search criteria, or use the wild card character (*) to search for all nodes.
2. Optionally, change the number of instances to retrieve. The default is 100.
3. Click **Search**.

   The available nodes that match the search criteria are listed in the **Search Results** panel.
4. Select a node from the list.
5. Click **OK** to populate the **Node Name** field in the **Service Provisioning - Frame Relay** window.

Browsing service interfaces

You can search for and select a Frame Relay user-to-network interface|network-to-network interface and/or a data link connection identifier (DLCI) from a list of available interfaces and identifiers on a selected node.

Prerequisites

- you have specified a node in the Node Name field
- you have logged into the node. See “Connecting to a network element” (page 79)

Procedure steps

1. Click the browse [...] button to the right of the Fruni|Frnni Instance field.

   The **Browse Service Interfaces** dialog box opens and displays a list that contains the following information:

   - all Frame Relay user-to-network interface (Fruni) or Frame Relay network-to-network interface (Frnni) instances
   - the Data Network Address (DNA) value for the corresponding Fruni|Frnni instance
   - the port interface for the corresponding Fruni|Frnni instance (for backhaul configurations only)

2. Select a Fruni|Frnni instance.
3. For FR PVC circuit searches, click **Show** to populate the **Unassigned DLCI** area with the existing Data Link Connection Identifiers for the selected Frame Relay Fruni|Frnni.
4. Click **OK** to populate the Fruni|Frnni Instance field in the Frame Relay - Service Provisioning window.

Editing a Frame Relay circuit

Use this procedure to modify a Frame Relay PVC or IP VPN Access circuit that is stored in the Administration Database.

You can use the Circuit Viewer tool to select the circuit that you want to retrieve. Selecting a circuit in Circuit Viewer puts the circuit in context. The Frame Relay tool gets the circuit from context and populates the relevant fields with circuit data. For IP VPN Access circuits, an access point can have four CoS indexes with each index having one circuit. When you select a CoS circuit in the Circuit Viewer tool, the Frame Relay tool searches for the parent access point and retrieves all circuits belonging to that access point.

Procedure steps

1 You can use the Circuit Viewer tool or the Frame Relay service provisioning tool to specify the circuit that you want to edit. Use one of the following methods:

- From Circuit Viewer, retrieve a circuit from the Administration Database and then start the Frame Relay service provisioning tool in context. For details, see 241-6001-011 *Preside MDM Fault Management User Guide*.
- If you want to use the Frame Relay service provisioning tool, start the procedure at step 2.

2 From the Frame Relay service provisioning **File** menu, select **Edit Circuit...**.

The **Edit Circuit** retrieval dialog box opens.

3 If you used the Circuit Viewer method to specify a circuit, the **Edit Circuit** retrieval dialog box identifies the circuit that you want to edit. Go to step 5.

Note: You can change your selection by selecting another circuit in Circuit Viewer and then right-clicking in any of the fields in the **Edit Circuit** dialog box to open a pop-up menu. From the pop-up menu, select **Get Context**.

4 Specify the Frame Relay circuit that you want to retrieve.
For Frame Relay PVC circuits

- Click **FR PVC Circuit**.
- In the **Circuit Id** box, type the circuit identifier. If you do not know the circuit identifier, you can type an asterisk (*) to retrieve a list of circuits from which you can make a selection.

For Frame Relay IP VPN Access circuits

- Click **FR IP Access Circuit**.
- In the **Customer**, **Site**, and **Access Point** boxes, type the appropriate values. If you do not know the customer, site, or access values, you can type an asterisk (*) in any of these boxes to display a list of circuits from which you can make a selection.

5 Click **Retrieve**.

If the retrieval is successful, the circuit data displays in the Frame Relay service provisioning window. All fields are in read-only mode. The **Validate** button is enabled and the **Apply** button is disabled. The **Edit Circuit** circuit retrieval dialog box closes.

If more than one circuit meets the criteria, a dialog box opens and lists all the circuits that meet the criteria. Select a circuit from the list, and click **OK**.

If the circuit is not found, a message dialog box opens and the **Edit Circuit** retrieve dialog box remains open.

6 If you have not yet authenticated the node, select **Options** -> **Set Default Authentication** to open the **Set Default Authentication** dialog box.

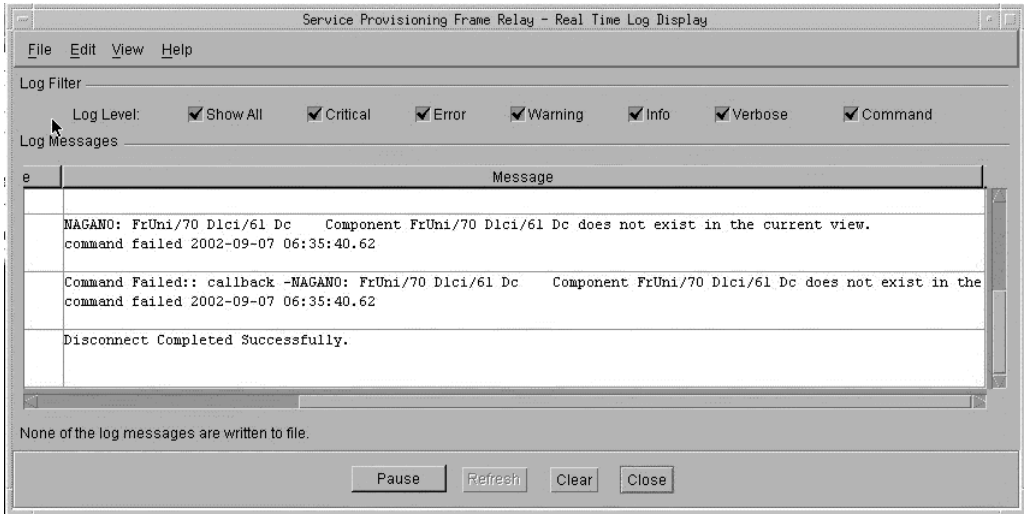
7 In the **Set Default Authentication** dialog, type a user ID and password to connect to the nodes in the PVC or IP VPN path and click **OK**.

8 To validate the data retrieved from the **Administration Database** against the current node configuration data, click **Validate**.

The **Apply** button, and all fields except the **User Id** and **Password** fields are disabled during the validate. If the data matches, the applicable fields and the **Apply** button become enabled (read-write) after which you can proceed to edit the circuit configuration. Proceed to step 9.

If the validation fails because the circuit in the Administration Database is invalid, this information is logged in the **Service Provisioning Frame**

Relay Real Time Log Display window. This indicates that one or more of the provisioned components no longer exist in the network.



The delete action does not proceed.

Refer to “Managing Invalid circuit conditions” (page 101) for the procedure to correct an invalid circuit condition.

9 After a successful validation, you can make the necessary changes to the configuration data from the Frame Relay service provisioning window.

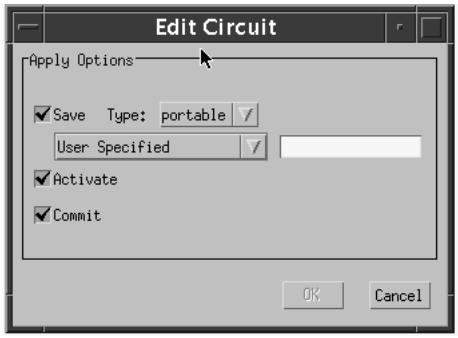
10 When you complete your modifications, click **Apply**.

The Frame Relay service provisioning tool checks if any mandatory configuration data is missing or if discrepancies exist. If so, a dialog opens identifying the missing information or discrepancy. Enter the missing information or correct any discrepancies and click **Apply** again.

If all required data has been entered, a confirmation dialog box opens summarizing the changes made to the circuit.

11 Click **OK** to confirm the circuit changes before they are applied.

12 The **Edit Circuit** dialog box opens.



13 Proceed to apply the configuration, see “Applying the service deletion or modification” (page 99).

Deleting a Frame Relay circuit

Use this procedure to delete an existing Frame Relay PVC or IP VPN Access circuit that is stored it in the Administration Database.

You can use the Circuit Viewer tool to select the circuit that you want to delete. Selecting a circuit in Circuit Viewer puts the circuit in context. The Frame Relay tool gets the circuit from context. For IP VPN Access circuits, an access point can have four CoS indexes with each index having one circuit. When you select a CoS circuit in the Circuit Viewer tool, the Frame Relay tool searches for the parent access point and retrieves all circuits belonging to that access point.

Procedure

1 You can use the Circuit Viewer tool or the Frame Relay service provisioning tool to specify the circuit that you want to delete. Use one of the following methods:

- From Circuit Viewer, retrieve a circuit from the Administration Database and then start the Frame Relay service provisioning tool in context. For details, see 241-6001-011 *Preside MDM Fault Management User Guide*.
- If you want to use the Frame Relay service provisioning tool, start the procedure at step 2.

2 From the Frame Relay service provisioning **File** menu, select **Delete Circuit...**.

The **Delete Circuit** retrieval dialog box opens.

3 If you used the Circuit Viewer method to specify a circuit, the **Delete Circuit** retrieval dialog box identifies the circuit that you want to delete. Go to step 5.

Note: You can change your selection by selecting another circuit in Circuit Viewer and then right-clicking in any of the fields in the **Delete Circuit** dialog box to open a pop-up menu. From the pop-up menu, select **Get Context**.

4 Specify the Frame Relay circuit that you want to retrieve.
For Frame Relay PVC circuits

- Click **FR PVC Circuit**.

- In the **Circuit Id** box, type the circuit identifier. If you do not know the circuit identifier, you can type an asterisk (*) to retrieve a list of circuits from which you can make a selection.

For Frame Relay IP VPN Access circuits

- Click **FR IP Access Circuit**.
- In the **Customer**, **Site**, and **Access Point** boxes, type the appropriate values. If you do not know the customer, site, or access values, you can type an asterisk (*) in any of these boxes to display a list of circuits from which you can make a selection.

5 Click **Retrieve**.

If the retrieval is successful, the circuit data displays in the Frame Relay service provisioning window. All fields are in read-only mode. The **Delete** button is enabled. The **Delete Circuit** circuit retrieval dialog box closes.

If more than one circuit meets the criteria, a dialog box opens and lists all the circuits that meet the criteria. Select a circuit from the list, and click **OK**.

If the circuit is not found, a message dialog box opens and the **Delete Circuit** retrieve dialog box remains open.

6 If you have not yet authenticated the node, select **Options -> Set Default Login** to open the **Set Default Authentication** dialog box.

7 Type a user ID and password to connect to the node in the PVC path and click **OK**.

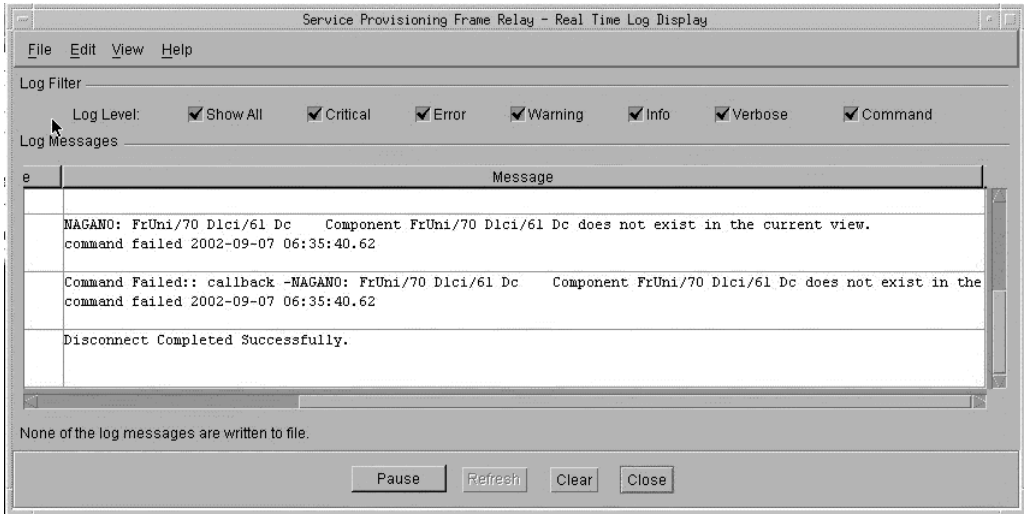
8 Click **Delete**.

The **Delete Circuit** dialog box opens.

Before performing the deletion, the data that was retrieved from the Administration Database is validated against the current view on the node. If successful, proceed to step 6.

If the validation fails because the circuit in the Administration Database is invalid, this information is logged in the **Service Provisioning Frame**

Relay Real Time Log Display window. This indicates that one or more of the provisioned components no longer exist in the network.



The delete action does not proceed.

Refer to “Managing Invalid circuit conditions” (page 101) for the procedure to correct an invalid circuit condition.

9 In the **Delete Circuit** dialog box, specify how to apply the deletion of the circuit. For the procedure to apply a deletion, see “Applying the service deletion or modification” (page 99).

Traffic Management procedures

See the following sections for traffic management (TM) procedures:

- “Creating a new Traffic Management profile” (page 93)
- “Editing a Traffic Management profile” (page 94)
- “Deleting a Traffic Management profile” (page 95)

Creating a new Traffic Management profile

You can create and save a new Traffic Management profile. The default profile, named default, is available as a starting point. It cannot be deleted but it can be modified.

Prerequisites

- the Frame Relay service provisioning tool main window is open

Procedure steps

1. Click **Edit TM...** in the main window of the Frame Relay service provisioning tool for Frame Relay PVC circuits, or select **Edit TM...** from the pop-up menu in the **TM Profile** column of the **End Points** table for Frame Relay IP VPN Access circuits

   The **Traffic Management Parameters** dialog box opens.

2. Type a new Traffic Management Profile name in the **TM Profile** field.

3. Complete all the fields in the Master Node area.

   Note: The default values shown were defined on the node

4. Click the **Use same values** check box to use the same values in the **Slave Node** area as the **Master Node** area. All fields in the **Slave Node** area become read only and the system uses the values set in the **Master Node** area for both sides of the PVC connection.
   To use different values, edit the fields as needed.

5. Click **Apply and Save** to save the profile.

6. Click **Close** to close the dialog.

   The **TMProfile** field on the main window is populated with the new profile name.

Editing a Traffic Management profile

You can edit the Traffic Management profile and apply the changes with or without saving the profile.

Prerequisites

- the Frame Relay service provisioning tool main window is open

Procedure steps

1. Click **Edit TM...** in the main window of the Frame Relay service provisioning tool for Frame Relay PVC circuits, or select **Edit TM...** from the pop-up menu in the **TM Profile** column of the **End Points** table for Frame Relay IP VPN Access circuits

   The **Traffic Management Parameters** dialog box opens.

2. Select a traffic management profile in the **TM Profile** field.

3. Edit the fields as needed. Deselect the **Use same values as** master check box to edit the values in the **Slave Node** area.

4. If you want to apply the changes without saving the profile, click **Apply**.

   Because this action does not save the file, the file name will have an asterisk (*) to signify that you must click Apply and Save to save it to file.The TM profile is stored in the Administration Database as “custom”. These changes will be lost when you exit the application.

   If you want to apply the changes and save the profile, click **Apply** and **Save**.

5. Click **Close** to close the dialog.

   The **TM Profile** field in the main window is populated with the profile name from the dialog. The modified and saved TM profile is stored in the Administration Database.

   If you use the same file name when you save the TM profile, the profile is stored in the Administration Database with the same name as before but the parameters have the new values.

   If you changed the name of the TM profile by typing a new name in the TM Profile List field, the TM profile is stored in the Administration Database with the new name.

Deleting a Traffic Management profile

You can delete any Traffic Management (TM) profile, except the default profile named default.

Prerequisites

- the Frame Relay service provisioning tool main window is open

Procedure steps

1. Click **Edit TM...** in the main window of the Frame Relay service provisioning tool for Frame Relay PVC circuits, or select **Edit TM...** from the pop-up menu in the **TM Profile** column of the **End Points** table for Frame Relay IP VPN Access circuits

   The **Traffic Management Parameters** dialog box opens.

2. Select the TM profile in the **TM Profile** field.

3. Click **Delete** to delete the profile.

Applying provisioning changes

See the following sections to apply provisioning changes:

- “Applying the service creation” (page 97)
- “Applying the service deletion or modification” (page 99)

Applying the service creation

After you create a circuit, you need to apply the configuration changes. The Frame Relay service provisioning tool begins the apply process by provisioning any nodes that have been affected. Following the provisioning, the new provisioning data is stored in the Administration Database. The modified circuit can be monitored from the Circuit Viewer tool.

Prerequisites

- you have entered all mandatary data required to create a circuit
- you have set the default login. See "Connecting to a network element" (page 79)
- you have clicked **Apply...** in the Frame Relay service provisioning tool main window to open the **Create Circuit** dialog box.

Procedure steps

1 In the **Open View** panel of the **Create Circuit** dialog box, select the view to which you want to apply the configuration changes:

- Click **Current** to copy the current view into the edit view.
- Click **Committed** to copy the saved version of the current view into the edit view.
- Click **Edit** to use the existing edit view.
- Click **Saved** and then select either **User Specified** or **Dated** from the drop down list.

  If you select **User Specified**, enter a file name in the adjacent text box.

  If you select **Dated**, type the string "today" or enter a date in the format yymmdd where yy is the year, mm is the month and dd is the day. When you enter a date, the service data view with the highest version number <nn> is found. When an exact match does not exist, the most recent service data view, relative to the date is used. That is. the dated service data view with the latest date earlier that the given date, and with the latest version number, is opened. For additional information on dated views, see the section Using dated MCFs in 241-6001-304 *Preside MDM Configuration Management for DPN Administration*.

2 To save the configuration, in the **Apply Options** panel, select **Save**.

3 From the **Type** dropdown list, select one of the following format options:

- **portable** saves the view in portable format
- **delta** saves the view in delta format
- **ascii** saves the view in ASCII format

4 From the drop down list, select one of the following options:

- **User Specified**. Enter a view file name in the adjacent text box.
- **Dated**. Type the string “today” or enter a date in the format yymmdd. where yy is the year, mm is the month and dd is the day. When you enter a date, the view is saved with the date followed by the next version number <nn> in the sequence, in the format <yymmdd><nn>. For example, 03012903. The file is created on all nodes that are being provisioned. For additional information on dated views, see the section “Using dated MCFs” in 241-6001-304 *Preside MDM Configuration Management for DPN Administration*.

5 To activate the new configuration, select **Activate**.
The activation is automatically confirmed. If you have configured the system to use an Administration Database, the database is populated with the circuit data.

6 To commit the configuration as the default on startup, select **Commit**. You must have selected **Activate** before you can select the **Commit** option.

7 Click **OK to** initiate the provisioning of the configured nodes in the Frame Relay connection, and close the **Create Circuit** dialog.

Provisioning information and error messages, if any, appear in the **Real Time Log Display** window while the connection is being set up.

Applying the service deletion or modification

After you modify or delete a circuit, you need to apply the configuration changes. The Frame Relay service provisioning tool begins the apply process by re-provisioning any nodes that have been affected by the changes. Following the re-provisioning, the new provisioning data is stored in the Administration Database. The modified circuit can be monitored from the Circuit Viewer tool.

Prerequisites

- you have modified the configuration of the circuit or modified node attributes. See “Editing a Frame Relay circuit” (page 85) or “Deleting a Frame Relay circuit” (page 89)
- you have set the default login. See “Connecting to a network element” (page 79)
- you have clicked Apply... to open the Edit Circuit dialog box, or Delete... to open the Delete Circuit dialog box

Procedure steps

1 For an edit circuit action, an **Edit Circuit** dialog box opens after you click Apply.

For a circuit deletion, the **Delete Circuit** dialog box opens.

If mandatory data is missing, a message dialog opens specifying the missing data. Return to step 1 and enter the missing data.

2 In the **Edit Circuit** or **Delete Circuit** dialog box, click **Save**.

3 From the **Type** drop down list, select one of the following format options:

- **portable s**aves the view in portable format.
- **delta** saves the view in delta format
- **ascii** saves the view in ASCII format

4 From the drop down list, select one of the following options:

- **User Specified**. Enter a view file name in the adjacent text box.
- **Dated**. Type the string “today” or enter a date in the adjacent text field. Use the format yymmdd. where yy is the year, mm is the month and dd is the day. When you enter a date, the view is saved with the date followed by the next version number <nn> in the sequence, in

the format <yymmdd><nn>. For example, 03012903. The file is created on all nodes that are being provisioned. For additional information on dated views, see the section “Using dated MCFs” in 241-6001-304 *Preside MDM Configuration Management for DPN Administration*.

5 Select **Activate** to activate the new configuration.

The activation is automatically confirmed. If you have configured the system to use an **Administration Database**, the database is populated with the circuit data.

The new configuration view is activated on the node and after it is successfully activated, it is saved to the **Administration Database**.

6 To commit the configuration as the default at startup, select **Commit**. You need to select the **Activate** option before you can select the **Commit** option.

7 Click **OK**.

Managing Invalid circuit conditions

Use the following procedures to resolve an invalid circuit condition. An invalid circuit condition may occur in the following circumstances:

- the Administration Database is not synchronized with the network
- erroneous provisioning changes have occurred in the network

To resolve an invalid circuit condition, you can take the following actions:

- remove the circuit from both the database and the network by using one of the following procedures:
  - — reload the affected nodes into the Administration Database. For the relevant procedure, refer to 241-6001-400 *Preside MDM Administration Database User Guide*.
  - — manually remove the circuit from both the Administration Database and the network. See “Manually deleting a circuit from the network and Administration Database” (page 102).
- resolve the circuit in the network so that it aligns with the Administration Database. This is achieved by provisioning the missing pieces in the network. See “Correcting the circuit in the network” (page 103).

Manually deleting a circuit from the network and Administration Database

You can manually remove an invalid circuit from both the Administration Database and the network.

Procedure steps

1 Before deleting the circuit from the Administration Database, determine if there are any components of the circuit still provisioned in the network.

To identify data still provisioned in the network, you need to locate the invalid circuit using the **Circuit Viewer** tool. Refer to the Circuit Viewer section in 241-6001-011 *Preside MDM Fault Management User Guide* for procedures to use the **Circuit Viewer** tool.

a. Open **Circuit Viewer** and locate the invalid circuit using the **Circuit Retrieval Criteria** panel.

b. From the **Circuit(s) found** list, select the circuit.

c. Right-click on the circuit and from the pop-up menu, select **Start State Polling**.

d. In the **Circuit details** panel, select the **Circuit components** tab.

The state of all components is displayed in the **State** column. Components that are marked “purple” no longer exist in the network. All other components, independent of the state reported, exist in the network.

2 Manually delete all DLCI components using one of the following methods:

Note: You need to log into each node on which components for the circuit exist, check for the presence of the components, and delete each component found. Once all necessary components on a given node are deleted, you need to activate the view

- the delete component capability of the Nodal Provisioning tool. Refer to 241-6001-610 *Preside MDM Nodal Provisioning User Guide* for the relevant procedure.
- the node command line interface via telnet

3 Once the circuit is completely removed from the network, use the Database Administration tool to delete the circuit from the Administration Database. For the relevant procedure, refer to 241-6001-400 *Preside MDM Administration Database User Guide*.

Correcting the circuit in the network

You can resolve an invalid circuit condition by aligning the circuit in the network with the Administration Database. This is achieved by provisioning the missing pieces in the network.

Procedure steps

1 Before correcting the circuit in the network to align with the Administration Database, determine which components are missing and if there are any components of the circuit still provisioned in the network.

To identify data still provisioned in the network, you need to do the following tasks:

- Open the Frame Relay service provisioning tool to view the components of the circuit (for instance, its interfaces and circuit pieces). These components can span several nodes.
- log into each participating node and check for the presence of the components. This can be done using either the Nodal Provisioning tool (see 241-6001-610 *Preside MDM Nodal Provisioning User Guide*) or the node command line interface via telenet.

2 Once you have determine which components are missing, use one of the following methods to correct the circuit in the network:

- reload views onto the nodes that are improperly configured. You can only use this approach if the provisioning error was a result of an incorrect view being loaded onto a node. Preside Multiservice Data Manager (MDM) does not provide a system that provides history of views loaded onto the nodes, however there are several tools that can assist in this process, including the Configuration Repository and the Network Reporting System. For information on these tools, see 241-6001-400 *Preside MDM Administration Database User Guide* and 241-6001-022 *Preside MDM Network Reporting System User Guide*. After you have made the network corrections, you can use the service provisioning tool to validate the circuit. It will mark the circuit as “Normal” in the Administration Database so it becomes manageable.
- delete the circuit from both the Administration Database and the network and reprovision the entire circuit. You need to use this approach when the provisioning cannot be corrected by reloading the views onto the nodes. First record the nodes, interfaces, connection components (VPC/VCC, DLCI), customer, and traffic management profiles using the procedures described in step 1. Then follow the

procedure “Manually deleting a circuit from the network and Administration Database” (page 102) to delete the circuit. Once the circuit is deleted, you can use the service provisioning tool to provision the circuit, using the information that you recorded.

General procedures for Frame Relay IP VPN Access circuits

The following procedures apply to all circuit configurations for Frame Relay IP VPN access.

- "Browsing Sites" (page 106)
- "Browsing VRs and VRFs" (page 107)
- "Browsing DLCIs" (page 108)
- "Browsing lpDlciGroup instances for 2764 IP Optimized circuits" (page 112)
- "Browsing FrDte and Remote Group instances for 2764 FrDte circuits" (page 113)
- "Clearing a row in the End Points table" (page 110)
- "Selecting a Traffic Management profile" (page 111)
- "Launching Embedded Nodal Provisioning" (page 114)

See also "Frame Relay circuits with IP access for 2547 VPNs" (page 123) for procedures specific to provisioning RFC 2547 Frame Relay with IP access, and "Frame Relay circuits with IP access for 2764 VPNs" (page 131) for procedures specific to provisioning RFC 2764 Frame Relay with IP access.

Browsing Sites

You can browse the site table in the Administration Database to search for and select a Site for a Frame Relay IP VPN Access circuit.

Prerequisites

- the Preside Multiservice Data Manager (MDM) Administration Database is installed
- you have clicked the browse button [...] to the right of the Site field in the Frame Relay service provisioning tool to open the Site Search dialog box

Procedure steps

1 In the **Filter Site** panel, enter the search criteria by completing one or more of the following fields:

- **Customer Name,** if required. If you entered a customer on the service provisioning window, the Site Search dialog opens with the selected customer in the Customer Name field.
- **Site Name**. The site name must be unique for the customer. To add a description for the site, use the Administration Database tool.

By default these fields are populated with the wild card character [*].

2 Click **Retrieve**.

3 The sites that meet the criteria that you specified are listed in the **List Sites** panel.

4 Select the Site and click **OK**.

The selected Site appears in the **Site** field in the **Service Provisioning - Frame Relay** window.

Browsing VRs and VRFs

On the 2764 VPN circuit configurations, you can browse for Virtual Routers (VRs) available on the IP Service Node. Similarly, for 2547 VPNs you can search for available Virtual Routing Functions (VRFs) available on the IP Service Node.

Prerequisites

- you have clicked the browse button [...] to the right of the VR/Vrf field in the IP Service Node Properties panel
- the VR or VRF must be present on the node. If the VR or VRF is not present an error will occur at apply time.

Procedure steps

1. The **Browse VRs** dialog box opens with a list of available VRs or Vrfs.
2. Select a VR or Vrf from the list and click **OK**.

   The VR/Vrf field in the Frame Relay - Service Provisioning window is populated with the selected VR/Vrf.

Browsing DLCIs

You can browse for available DLCIs from the Frame Relay Access DLCI, the IP Service DLCI, or Media DLCI columns in the End Points table of Frame Relay IP VPN Access circuits.

When browsing for unassigned DLCIs, the DLCI's already entered are considered used and, therefore, do not appear in the unassigned list.

The following values are returned when browsing DLCIs from various columns:

- For FrDte circuit configurations:
  - — browsing the IP Service DLCI column, unused StaticDlci's of the FrDte
  - — browsing the FR Access DLCI column, unused Dlci's from the interface selected in the Frame Relay Access Node Properties panel
- Optimized Backhaul
  - — browsing the Media DLCI column, unused FrConn's of the ipDlciGroup (i.e. the Media)
  - — browsing the IP Service DLCI column, unused Dlci's of the interface selected in the IP Service Node Properties panel
  - — browsing the FR Access DLCI column, unused Dlci's from the interface selected in the Frame Relay Access Node Properties panel
- Optimized Local
  - — browsing the Media DLCI column, unused FrConn's of the ipDlciGroup (i.e. the Media)
  - — browsing the FR Access DLCI column, unused Dlci's from the interface selected in the Frame Relay Access Node Properties panel

Procedure steps

1. Right-click an entry in a DLCI column and select the **Browse DLCI...** pop-up menu item.

   The **Browse DLCI** dialog box opens with a list of available DLCIs.

2. Select a DLCI from the list, and click **OK**.

The column field in the End Points table, is populated with the selected DLCI.

Clearing a row in the End Points table

Clearing a row in the End Points table of Frame Relay IP VPN Access circuits removes the content from the row.

Procedure steps

1. Right-click in a cell in the **CoS Index** column of the **End Points** table.
2. Select **Clear Row** from the pop-up menu.

   All the fields in the row are cleared.

Selecting a Traffic Management profile

You can select a Traffic Management (TM) Profile from the TM Profile column in the End Points table of Frame Relay IP VPN Access circuits.

Procedure steps

1. Left-click in a cell in the **TM Profile** column of the **End Points** table.

   A drop down list of available TM profiles opens.

2. Select a TM profile from the list.

Browsing lpDlciGroup instances for 2764 IP Optimized circuits

You can browse for available media on the IP Service Node for the 2764 IP Optimized Local and IP Optimized Backhaul circuit configurations. The media for the 2764 IP Optimized circuits is the lpDlciGroup component.

Prerequisites

- you have clicked the browse button [...] to the right of the lpDlciGroup field in the IP Service Node panel to open the browse dialog box

Procedure steps

1. The browse dialog box, shows a list of the instances of the lpDlciGroup that are on the IP Service Node.
2. Select an instance, and click OK.

   The lpDlciGroup field in the IP Service Node panel is populated with the selected lpDlciGroup instance.

Browsing FrDte and Remote Group instances for 2764 FrDte circuits

You can browse for the FrDte instance and/or available media on the IP Service Node for the 2764 FrDte Direct and FrDte Backhaul circuit configurations using the Browse FrDte/Remote Group dialog box. The media for 2764 FrDte circuits is the remoteGroup component and it is created under the FrDte when you apply the provisioning.

Prerequisites

- you have clicked the browse button [...] to the right of the FrDte field in the IP Service Node panel to open the Browse FrDte/Remote Group dialog box

Procedure steps

1. The **Browse FrDte/Remote Group** dialog box, is populated with a list of FrDte instances that are on the IP Service Node.
2. If only a FrDte is desired, select an instance from the **FrDte Instance** list, and click **OK** to populate the **FrDte** field in the **IP Service Node** panel with the selected FrDte instance.

   If both a FrDte instance and media are desired, proceed to step 3.
3. Select the FrDte instance from the **FrDte Instance** list and click **Show** to retrieve a list of remoteGroup instances. They are listed in the **RG List.**
4. Select an entry from the **RG List**.
5. Click **OK** to populate the **FrDte** and **Remote Group** fields in the **IP Service Node** panel with the selected FrDte instance and Remote Group.

Launching Embedded Nodal Provisioning

After provisioning a circuit, you can launch Embedded Nodal Provisioning (ENP) from the Frame Relay service provisioning tool, in context of the Interface or Logical Interface which you have created. This enables you to edit the interface.

Prerequisites

- you have successfully applied the provisioning and the Logical Interface or Interface component has been created. Clearing or changing the Logical Interface field after a successful apply will disable the launch point.

Procedure steps

1 Use one of the following methods to start Embedded Nodal Provisioning from the Frame Relay service provisioning tool:

- From the **Edit** menu, select **Edit Interface**.
- In the **IP Service Node Properties** panel, right-click the **Interface** or **Logical Interface** field to open a pop-up menu. From the pop-up menu, select **Edit Interface**.

Chapter 5
Frame Relay PVC provisioning

This section provides procedures to provision a Frame Relay permanent virtual circuit (PVC) user-to-network interface or network-to-network interface between two or more nodes. See the following sections:

- "Prerequisites" (page 115)
- "Provisioning a Frame Relay PVC path" (page 116)
- "Backup slaves configuration" (page 119)
  - — "Adding a backup slave" (page 120)
  - — "Editing a backup slave" (page 121)
  - — "Deleting a backup slave" (page 122)

Prerequisites

- the nodes to be provisioned are configured for Frame Relay up to the logical connection layer. For more information, see "Network element configuration" (page 21).

Provisioning a Frame Relay PVC path

Use this procedure to provision a Frame Relay permanent virtual circuit (PVC) path. If the Preside Multiservice Data Manager (MDM) Administration Database is installed, completing this procedure stores the following information in the database:

- circuit ID
- customer name
- TM profile
- source and destination nodes
- frunis or frnnis, depending on settings for master and slave instance type
- port identifiers
- DNA values
- DLCIs
- multiple slave backups, if backups are added

Prerequisites

- you are familiar with the Frame Relay service provisioning tool interface. See “Frame Relay service provisioning tool user interface” (page 29).
- you have read the section “General procedures” (page 71) describing general procedures for using the Frame Relay service provisioning tool
- you have started the Frame Relay service provisioning tool. See “Frame Relay service provisioning tool launch points” (page 73).
- if the Administration Database is installed, you have logged into the database

Procedure steps

1 On the **File** menu, click **New Circuit…**.

2 Ensure that **Circuit Type** is **FR PVC**.

3 On the **Options** menu, click **Set Default Authentication...** to set the default login to connect to the nodes:

The **Set Default Authentication** dialog box opens.

4 In the **Set Default Authentication** dialog box, type a user ID and password and click **OK**.

5 From the **TM Profile** list, select a profile in the TM Profile to be used in the Frame Relay PVC.

Note: To create or edit a TM, see “Creating a new Traffic Management profile” (page 93), or “Editing a Traffic Management profile” (page 94).

6 In the **Correlation Tag** field, type a correlationTag. If you have installed the Administration Database you can select the **Use Circuit Id** option to set the value of the correlationTag to the value of the circuit ID. The correlation tag is only 32 bytes, so if you use the circuit ID, you need to limit the allowed 128 byte circuit ID to 32 bytes. If you have selected **Use Circuit Id** and more than 32 characters are entered in the **Circuit Id** field, the correlation tag on the node is set to the first 32 characters.

7 If you have installed the Administration Database, also complete the following fields:

- In the **Circuit ID** field, type a circuit ID number. The maximum length of a circuit ID is 32 characters.
- In the **Correlation Tag** field, type a correlationTag, or
- In the **Customer** field, enter a customer name or click the browse [...] button to select a customer.

8 In the **Master** panel, provide a value in the **Node Name** field by one of the following methods:

- type a node name
- select a node name from the drop-down list
- click the browse […] button and use the Browse Nodes dialog box to search for and select a node. See “Browsing nodes” (page 83).

9 Provide a value in the **User Id** and **Password** fields by one of the following methods:

- Clear the Use Defaults check box and type a user ID and password.
- Select the Use Defaults check box to use the default user ID and password.

10 In the **Type** field drop-down list, select the desired type of Frame Relay service: user-to-network (FR UNI) or network-to-network (FR NNI).

11 In the **Fruni | Frnni Instance** field, select either Fruni, data network address (DNA) or port interface and provide a value by one of the following methods:

- Enter the value.
- Click **Browse** to select from a list. For more information, see “Browsing service interfaces” (page 84).

12 In the **Slave** panel Repeat steps 8-11in the **Slave Node** panel.

- If required, click the **Use as backup** check box to configure the slave node as a permanent backup slave. This check box is available only if backups exist. Otherwise, the check box is unavailable and the slave node is configured as a permanent slave with backups.
- Repeat steps step 8 tostep 11

13 To create a backup for the Frame Relay connection, click **Edit Backup** in the **Slave Node** area.

See “Edit Backup Slave dialog box” (page 62) for more information.

14 When you have entered all of the required information, click **Apply...** to open the **Create Circuit** dialog box. See “Applying the service creation” (page 97).

If you have not filled in all the mandatory fields, or have entered incorrect information, a message dialog opens identifying the missing information, or errors. Enter or correct the information, and click **Apply**... again.

Backup slaves configuration

This section provides procedures to create or edit a backup slave node. See the following:

- “Adding a backup slave” (page 120)
- “Editing a backup slave” (page 121)
- “Deleting a backup slave” (page 122)

Adding a backup slave

You can add a maximum number of seven backup slaves to a permanent virtual circuit path.

Prerequisites

- you have launched the Frame Relay service provisioning tool and the Service Provisioning - Frame Relay window is open

Procedure steps

1. Click **Edit Backup** in the **Service Provisioning - Frame Relay** window.

   The **Edit Backup Slave** dialog box opens.

2. Complete all the fields in the **Backup Slave** area.

3. Click **Add** to save the backup slave.

   The backup slave appears in the **Backup Slaves** table.

Editing a backup slave

You can edit the backup slave.

Prerequisites

- you have launched the Frame Relay service provisioning tool and the Service Provisioning - Frame Relay window is open

Procedure steps

1. Click **Edit Backup** in the main window.

   The **Edit Backup Slave** dialog box opens.

2. Select a backup slave in the **Backup Slaves** table.
3. Edit the fields as needed.
4. To save the changes without dismissing the dialog, click **Add**.
5. To save the changes and dismiss the dialog, click **OK**.

Deleting a backup slave

You can delete a backup slave.

Prerequisites

- you have launched the Frame Relay service provisioning tool and the Service Provisioning - Frame Relay window is open

Procedure steps

1. Click **Edit Backup** in the **Service Provisioning - Frame Relay** window.

   The **Edit Backup Slave** dialog box opens.

2. Select the backup slave in the **Backup Slaves** table.

3. Click **Delete**.

Chapter 6
Frame Relay circuits with IP access for 2547 VPNs

This section describes how to create a Frame Relay (FR) circuit with Internet Protocol (IP) access for a 2547 IP Virtual Private Network (VPN). The Frame Relay service provisioning tool achieves this by creating Frame Relay access to a Virtual Router component. This enables a frame relay circuit to connect to an IP VPN. The tool supports the following types of access circuits for 2547 VPNs:

- IP Optimized Backhaul
- IP Optimized Local

Configuring the Frame Relay IP access circuits involves identifying the type of access circuit, connecting the IP access to the master side of the Frame Relay circuit, and then connecting the master side to the slave side of the circuit.

For more information, see the following sections

- "Prerequisites for provisioning Frame Relay circuits with IP access for 2547 VPNs" (page 124)
- "Configuring circuit properties" (page 125)
- "Configuring IP Access for a 2547 VPN" (page 127)
- "Configuring Frame Relay Access node properties" (page 129)
- "Configuring end points" (page 130)

Prerequisites for provisioning Frame Relay circuits with IP access for 2547 VPNs

- all the nodes to be provisioned have a FrUni or FrNni on the slave and a FrUni or FrNni, and Virtual Routing Function (VRF) on the IP Service node
- physical installation of cards, cabling, and other elements needed to interconnect the nodes for End-to-End provisioning
- provisioning of cards, logical processors, software, ports, Fruni or Frnni components
- Preside Multiservice Data Manager (MDM) Administration Database is installed

Network elements to be provisioned are configured for Frame Relay up to the logical connection layer.

Configuring circuit properties

Use this procedure to provide circuit identifiers and to select the circuit configuration for Frame Relay IP VPN access.

Prerequisites

- You are familiar with the Frame Relay service provisioning tool user interface. For information on the user interface, see “Frame Relay service provisioning tool user interface” (page 29).
- You have launched the Frame Relay service provisioning tool
- You have logged into the database

Procedure steps

1. From the **Circuit Type** list in the Frame Relay service provisioning tool window, select **FR IP VPN Access**.

   The **Circuit Configuration** list appears to the right of the **Circuit Type** list.

2. From the **Circuit Configuration** list, select the type of 2547 IP VPN circuit you wish to create:

   - **IP Optimized Backhaul**
   - **IP Optimized Local**

   Based on the selected circuit configuration, the Site Type field displays a value of Intranet, Extranet, or Unknown.

3. Choose a Customer.

   - For a new customer, in the **Customer** field, type a unique name for the new customer.
   - To select an existing customer, click the browse button **[...]** to the right of the **Customer** field to open the **Browse Customer** dialog box. See the procedure “Browsing customers” (page 80). You can search for and select a customer from the available customers in the **Administration Database**. If you do not specify a customer, the default customer is used when the circuit is created.

4. Choose a Site.

   - For a new site, in the **Site** field, type a unique name for the site.
   - To select an existing Site, click the browse button **[...]** to the right of the **Site** field, to open the **Site Search** dialog box. See the procedure

"Browsing Sites" (page 106).This dialog box lets you search for and select a site from the **Administration Database**. The Site must be unique for the Customer. If you select a site that does not have the same customer in the customer field, you will be prompted to synchronize them by changing the customer to that of the Site's customer. Click Yes to synchronize them.

5 Choose an access point

- In the **Access Poin**t field, type an Access Point. This field must be unique within the Site.

6 Optionally, if you wish to provide descriptions of the Site and/or the Access Point, you can do this through the **Administration Database** tool.

Application main window -> **Administration**-> **MDM Administration Database**

7 Enter descriptions for the site and Access Point. For procedures relating to managing customer and site data, see 241-6001-400 *Preside MDM Administration Database User Guide*.

8 Proceed to "Configuring IP Access for a 2547 VPN" (page 127).

Configuring IP Access for a 2547 VPN

Use the IP Service Node Properties panel to configure the IP service node. You provide input which is required to link the FR PVC to a VPN circuit. The IP Service Node is where the 2547 VRF, Media, Interface, and IP Service (master) FrUni/FrNni is located for Frame Relay IP VPN Access circuits.

Prerequisites

- the Virtual Routing Function (VRF) must already exist on the device
- You have completed the procedure "Configuring circuit properties" (page 125)

Procedure steps

1. Select an IP Service Node from the **Node Name** list, or click the browse button (...) to open the **Browse Nodes** dialog box. This dialog box allows you to specify search criteria and select a node. For the procedure to browse nodes, see "Browsing nodes" (page 83).
2. Optionally, deselect the **Use Defaults** check box to override the default login, and in the **User Id** and **Password** fields, type a user ID and password.
3. Click the browse button [...] to the right of the VRF field to open the **Browse VR** dialog box.
4. If you have not already logged into the node, the **Set Default Authentication** dialog box opens.
5. Type in a **User Id** and **Password**, and click **OK**.

   The **Browse VR** dialog box opens with a list of VRFs on the IP Service Node.
6. Select a VRF from the list of available VRFs and click **OK**. See the procedure "Browsing VRs and VRFs" (page 107).
7. Select an interface address. The address must be unique within the VRF for each circuit. In the **Interface** field, type an interface address in the form of <ip_address>/<network_mask> where ip_address is an IP Address and mask number of consecutive 1's in the mask.
8. For optimized backhaul circuit only, choose a service interface. The only available service type is FrUni. See "Browsing service interfaces" (page 84).

9 Proceed to “Configuring Frame Relay Access node properties” (page 129)

Configuring Frame Relay Access node properties

Configure the Frame Relay Access node properties panel. For the backhaul circuit configurations, the Node Name, browse nodes button [...], and default login fields are enabled. For the local circuit configuration they are disabled since the node is the same as the IP Service Node.

Prerequisites

- You have completed the following procedures:
  - — “Configuring circuit properties” (page 125)
  - — “Configuring IP Access for a 2547 VPN” (page 127)

Procedure steps

1. If configuring a backhaul circuit configuration, select a Node Name or click browse button to open the Browse Nodes dialog box. See the procedure “Browsing nodes” (page 83).
2. Select a service interface. From the **Service Type** list, select the type of Frame Relay service.

Configuring end points

You can configure the end points for each end of the frame relay circuit through the End Points table.

Prerequisites

- you have decided on the CoS index(s) to be provisioned

Procedure steps

1 Fill in the relevant columns.

- for the IP Optimized Backhaul circuit configuration, fill in the **Media DLCI** column with the FrConn, the **IP Service DLCI**, and the **FR Access DLCI** columns. You can retrieve the unused FrConn by right-clicking the cell an selecting **Browse Frconn**.
- for the IP Optimized Local circuit configuration, fill in the **Media DLCI** column with the FrConn and the **FR Access DLCI** column. You can retrieve unused FrConn by right-clicking the cell and selecting **Browse DLCI**.

You can right click in each of these columns and select the **Browse DLCIs** command to retrieve a list of available DLCIs. See the procedure “Browsing DLCIs” (page 108).

2 Optionally enter the correlation tag in the **Correlation Tag** column.

3 Click the **TM Profile** cell, and select a profile from the drop down list of available profiles.

4 Repeat these steps for each index to be provisioned.

5 Click **Apply...** to apply the provisioning. See the procedure “Applying the service creation” (page 97).

If a row in a table has some or all of the columns filled in, Frame Relay service provisioning will try to add the information under the given index. An error will occur if some information is missing from a partially completed row.

Chapter 7
Frame Relay circuits with IP access for 2764 VPNs

This section describes how to create a Frame Relay (FR) circuit to an Internet Protocol (IP) access for a 2764 IP VPN. The Frame Relay service provisioning tool achieves this by creating Frame Relay access to a Virtual Router component. This enables a frame relay circuit to connect to an IP VPN. The tool supports the following types of access circuits for 2764 VPNs:

- IP Optimized Backhaul
- IP Optimized Local
- FrDte Backhaul
- FrDte Direct

The tool will provision the node when you apply the provisioning. The circuits are available with, or without being connected to the database. However, if you are connected to the Preside Multiservice Data Manager (MDM) Administration Database, the tool will populate the database with the information and components for these circuits when you apply the provisioning.

Configuring the Frame Relay IP access circuits involves identifying the type of access circuit, connecting the IP access to the master side of the Frame Relay circuit, and then connecting the master side to the slave side of the circuit.

For more information, see the following sections

- "Prerequisites for provisioning Frame Relay circuits with IP access for 2764 VPNs" (page 132)
- "Configuring circuit properties" (page 133)
- "Configuring IP Access for 2764 VPN" (page 135)
- "Configuring Frame Relay Access node properties" (page 137)

Prerequisites for provisioning Frame Relay circuits with IP access for 2764 VPNs

- all the nodes to be provisioned have a FrUni or FrNni on the slave and a FrUni or FrNni, a FrDte, and VR on the IP Service node
- physical installation of cards, cabling, and other elements needed to interconnect the nodes for End-to-End provisioning
- provisioning of cards, logical processors, software, ports, Fruni or Frnni components
- Preside Multiservice Data Manager (MDM) Administration Database is installed
- Network elements to be provisioned are configured for Frame Relay up to the logical connection layer.

Configuring circuit properties

Use this procedure to provide circuit identifiers and to select the circuit configuration for Frame Relay IP VPN access.

Prerequisites

- You are familiar with the Frame Relay service provisioning tool user interface. For information on the user interface, see "Frame Relay service provisioning tool user interface" (page 29).
- You have launched the Frame Relay service provisioning tool
- You have logged into the Administration Database

Procedure steps

1. From the **Circuit Type** list in the Frame Relay service provisioning tool window, select **FR IP VPN Access**.

   The **Circuit Configuration** list appears to the right of the **Circuit Type** list.

2. From the **Circuit Configuration** list, select one of the following types of access circuits:

   - 2764 IP Opt Backhaul
   - 2764 IP Opt Local
   - 2764 FrDte Backhaul
   - 2764 FrDte Direct

   The Site Type field displays a value of Intranet.

3. Choose a customer

   - For a new customer, in the **Customer** field, type a unique name for the new customer.
   - To select an existing customer, select a customer from the drop-down menu or click the browse button **[...]** to the right of the **Customer** field to open the **Browse Customer** dialog box. See the procedure "Browsing customers" (page 80). You can search for and select a customer from the available customers in the **Administration Database**. If you do not specify a customer, the default customer is used when the circuit is created.

4. Choose a Site.

- For a new site, in the **Site** field, type a unique name for the site.
- To select an existing Site, click the browse button **[...]** to the right of the **Site** field, to open the **Site Search** dialog box. See the procedure "Browsing Sites" (page 106).This dialog box lets you search for and select a site from the **Administration Database**. The Site must be unique for the Customer. If you select a site that does not have the same customer in the customer field, you will be prompted to synchronize them by changing the customer to that of the Site's customer. Click **Yes** to sychronize them.
- In the **Access Point** field, type an Access Point. This field must be unique within the Site.

5 Optionally, if you wish to provide descriptions of the Site and/or the Access Point, you can do this through the **Administration Database** tool.

Application main window -> **Administration**-> **MDM Administration Database**

6 Enter descriptions for the site and Access Point. For the procedure to enter a site or access point description, see 241-6001-400 *Preside MDM Administration Database User Guide*.

7 Proceed to "Configuring IP Access for 2764 VPN" (page 135).

Configuring IP Access for 2764 VPN

Use the IP Service Node Properties panel to configure the IP service node. This procedure links the FR PVC to a VPN circuit. The IP Service Node is where the 2764 VR, FrDte, Media, Logical Interface, and IP Service (master) FrUni/FrNni is located for FR IP VPN Access circuits.

Note: The data fields that appear in the Frame Relay service provisioning interface are determined by the circuit configuration.

Prerequisites

- the VR must already exist on the device
- You have completed the procedure "Configuring circuit properties" (page 133)

Procedure steps

1. Select an IP Service Node from the **Node Name** list, or click the browse button (...) to open the **Browse Nodes** dialog box. This dialog box allows you to specify search criteria and select a node. For the procedure to browse nodes, see "Browsing nodes" (page 83).
2. Optionally, deselect the **Use Defaults** check box to override the default login, and in the **User Id** and **Password** fields, type a user ID and password.
3. Click the browse button [...] to the right of the VR field to open the **Browse VR** dialog box.
4. If you have not already logged into the node, the **Set Default Authentication** dialog box opens.
5. Type in a **User Id** and **Password**, and click **OK**.

   The **Browse VR** dialog box opens with a list of VRs on the IP Service Node.
6. Select a VR from the list of available VRs and click **OK**. See the procedure "Browsing VRs and VRFs" (page 107).
7. In the **Logical Interface** (2764) field, type an interface address. The interface address is in the form of <ip_address>/<network_mask> where ip_address is an IP Address and mask number of consecutive 1's in the mask.

8 For 2764 FrDte Direct or 2764 FrDte Backhaul circuit configurations only, select the FrDte. In the FrDte field, type the instance number of the target FrDte, or click the browse button [...] to open the Browse FrDte/Remote Group dialog box. This dialog box lets you select either a FrDte or remoteGroup instance, or both. See the procedure “Browsing FrDte and Remote Group instances for 2764 FrDte circuits” (page 113).

When you apply the provisioning, a StaticDlci is provisioned and the media remoteGroup is created under the FrDte.

9 Choose the media. It can be an existing media or new:

- For FrDte circuit configurations, the media is Remote Group. You can type a Remote Group in the RemoteGroup field, or select it as part of the browse FrDte procedure. See step 8.
- For the IP Optimized circuit configurations, enter an instance in the lpDlciGroup field, or click the browse button [...] to browse available lpDlciGroups and select one from the list. See the procedure “Browsing lpDlciGroup instances for 2764 IP Optimized circuits” (page 112).

10 Choose an interface address. The address must be unique within the VR for each circuit.

- In the **Logical Interface** field, type an interface address in the form of <ip_address>/<network_mask> where ip_address is an IP Address and mask number of consecutive 1’s in the mask.

11 For optimized backhaul circuit only, choose a service interface. The only available service type is FrUni. See “Browsing service interfaces” (page 84).

12 Proceed to “Configuring Frame Relay Access node properties” (page 137)

Configuring Frame Relay Access node properties

Configure the Frame Relay Access node properties panel. For the backhaul circuit configurations, the Node Name, browse nodes button [...], and default login fields are enabled. For the local circuit configuration they are disabled since the node is the same as the IP Service Node.

Prerequisites

- You have completed the following procedures:
  - — “Configuring circuit properties” (page 133)
  - — “Configuring IP Access for 2764 VPN” (page 135)

Procedure steps

1. If configuring a backhaul circuit configuration, select a Node Name or click browse button to open the Browse Nodes dialog box. See the procedure “Browsing nodes” (page 83).
2. Select a service interface. From the **Service Type** list, select the type of Frame Relay service.

Configuring end points

You can configure the end points for each end of the Frame Relay circuit through the End Points table.

Prerequisites

- you have decided on the CoS index(s) to be provisioned

Procedure steps

1. Fill in the relevant columns.
   - for FrDte circuit configurations, fill in the **IP Service DLCI** and **FR Access DLCI** columns. You can retrieve unused DLCIs by right-clicking the cell and selecting **Browse DLCI**.
   - for the IP Optimized Backhaul circuit configuration, fill in the **Media DLCI** column with the FrConn, the **IP Service DLCI**, and the **FR Access DLCI** columns. You can retrieve the unused FrConn by right-clicking the cell an selecting **Browse Frconn**.
   - for the IP Optimized Local circuit configuration, fill in the **Media DLCI** column with the FrConn and the **FR Access DLCI** column. You can retrieve unused FrConn by right-clicking the cell and selecting **Browse DLCI**.
2. Optionally enter the correlation tag in the **Correlation Tag** column.
3. Click the **TM Profile** cell, and select a profile from the drop down list of available profiles.
4. Repeat steps 1 to 3 for each index to be provisioned.
5. Click **Apply...** to apply the provisioning. See the procedure “Applying the service creation” (page 97).

   If a row in a table has some or all of the columns filled in, Frame Relay service provisioning will try to add the information under the given index. An error will occur if some information is missing from a partially completed row.

Chapter 8
Frame Relay Real Time Log Display tool

This section explains the purpose of the Real Time Log File Display tool and describes how to use this tool. The RealTime Log Display tool lets you display and filter real time log messages generated by the Frame Relay service provisioning tool. Log messages may also be logged to a file.

See the following sections for more information:

- “Procedures” (page 140)
- “Real Time Log Display window” (page 150)
- “Menu shortcuts” (page 154)

Note: To view log files already logged to a file, use the Historic Frame Relay Log File Display tool, as described in “Historic Frame Relay Log File Display tool” (page 155).

Procedures

See the following sections for procedures you can perform with the Real Time Log Display tool:

Starting the Real Time Log Display tool

You can start the Real Time Log Display tool from the View menu in the Frame Relay service provisioning main window.

Procedure steps

1 From the **Service Provisioning - Frame Relay** window, select **View -> Show Messages...**.

The **Real Time Log Display** window opens.

Filtering log reports

You can specify filtering criteria to display only a subset of the available log records.

Procedure steps

1. If required, start the **Real Time Log Display** tool.
2. From the **Log Filter** section, select the log level you wish to display by checking one or more of the following check boxes:
   - **Show All**
   - **Critical**
   - **Error**
   - **Warning**
   - **Info**
   - **Verbose**
   - **Command**
3. Provision a frame relay permanent virtual circuit path between two nodes. See “Frame Relay PVC provisioning” (page 115).
4. If desired, click **Refresh** to display the **Refresh** dialog. If you do not click on the **Refresh** button, only new log records coming in will be filtered according to the new filtering criteria.
5. Specify the number of last log records, between 1 and all, that you want to filter with the new filtering criteria.
6. Click **OK.**

   The log report is cleared and previous and new log records are displayed according to the new filtering criteria.

Clearing the contents of a log report

Procedure steps

1 From the **Real Time Log Display** window, click **Clear.**

The contents of the log report are erased.

Stopping incoming log messages

You can temporarily stop the display of log records and then resume the display.

Procedure steps

1. From the **Real Time Log Display** window, click **Pause**.

   New log records are no longer displayed.

2. To restart the display of new log records, click **Resume**.

   Log records that were generated while the pause was on are not displayed.

Deleting log files

Run the CleanLog script to delete log files after the specified retention period has expired. This script uses the log file's last modification date to determine if the retention period has been reached or exceeded. In both cases, the log file is deleted. You can also schedule this script to run as a cron job.

Procedure steps

1 From the UNIX command line, type

```
/opt/MagellanMDM/bin/mdmcleanlog
[-keep | -k <day[s]>]
[-tool | -t <tool_name>]
```

where:

<tool_name> is the name of the tool that generates the log files. For Service Provisioning Frame Relay, specify sp_fr. The tool name is mandatory.

<day[s]> is the number of days from today for the log files that you do not want to be deleted. The default value is 30.

Saving Real Time Log Display content

Procedure steps

1. From the **File** menu, select **Save**.

   The **Save** dialog opens.

2. Enter a file name in the text field.

   Note: You can also change the file path. The default is /${HOME}/.

3. Click **Save**.

Printing Real Time Log Display content

You can print a log report to a printer or a file.

Procedure steps

1. From the File menu, select **Print.**

   The **Print** dialog box opens.

2. Complete the applicable information in the **Print** dialog box.

   Note: If you do not specify a printer, the default printer is used.

3. Click **Print**.

Searching a word in the Real Time Log Display

Procedure steps

1. From the **Edit** menu, select **Find**.

   The **Find** dialog box opens.

2. In the text field, enter the word you are looking for.

3. Click **Find,** as required.

Resizing a column

1 Place the mouse at the right end of a column.

The mouse changes to a double-sided arrow.

2 Left-click the mouse and drag the column to the desired width.

Hiding a column

1 From the **View** menu, uncheck the column you wish to hide.

Adding a column

1 From the **View** menu, check the column you wish to add.

Note: Any column added to the log report is added to the right side of the table.

Moving a column

1 Click on a column header.

2 Drag it and release it to the desired location.

Sorting a log report

1 To sort the log report in ascending order, click on a column header.

2 To sort the log report in descending order, click on a column header twice.

Real Time Log Display window

The Real Time Log Display window consists of menu bar, and two sections: Log Filter and Log Messages.

The window consists of the following elements:

- “Menu bar” (page 150)
- “Log filtering” (page 151)
- “Log messages” (page 152)
- “Buttons” (page 154)
- “Procedures” (page 140)

Menu bar

The menu bar consists of the following menu items:

- “File” (page 150)
- “Edit” (page 150)
- “View” (page 151)
- “Help” (page 151)

File

The **File** menu contains the following commands:

- **Save** displays a dialog that lets you save the content of the log report. The default path that the log report is saved in is ${HOME}/.
- **Print** displays a dialog that lets you print a log report or print it to a file. Clicking the print button displays the content of the log report.
- **Close** closes the Real Time Log Display window.

Edit

The Edit menu contains the following commands:

- **Clear** empties the log report.
- **Copy** copies the selected log records into a buffer.
- **Find** displays a dialog that lets you do a key word search in the log report.

- **Select All** selects all the contents of the log report.

View

The **View** menu contains check boxes that represent a column in the log report. These check boxes let you customize the log report by hiding or adding a column. The following columns are selected by default:

- **Date**
- **Log Level**
- **Node Name**
- **Message**

Note: Any column added to the log report is added to the right side of the table.

Help

The **Help** menu contains the following command:

- **Help on Window** displays on-line help information on the Real Time Log Display window.

Log filtering

You can filter logs from the Real Time Log Display window. This window contains check boxes consisting of the following levels:

- **Show All** filters logs on all levels.
- **Critical** indicates that an operation cannot be performed. This failure compromises the integrity of the process results. Processing may stop.
- **Error** indicates that an operation cannot be performed. This failure does not compromise the integrity of the process results. Processing continues.
- **Warning** indicates that an operation has completed without errors. The integrity of the process results are questionable.
- **Info** indicates there is an information message about the current process operation.
- **Verbose** indicates a verbose form of an information message.
- **Command** indicates a network element command.

Click **Refresh** when you change the filtering criteria. If you do not click **Refresh**, only new log messages coming in will be filtered according to the new criteria.

> ***Note:*** No matter what filtering criteria you choose, all log records are written to a file when the entry **LogToFile=on** in the Service Provisioning Frame Relay configuration file.

Log messages

The log messages section of the Real Time Log Display window contain columns for the date, log level, node name, and message. These columns are displayed by default.

You can customize the log report by resizing the columns or by hiding columns. You can also sort log reports by column heading, and scroll through the log list. When log records are logged to file, the field text box displays the log file name in which all log messages are written regardless of the log filter. The path of the file is displayed in a tool tip that displays when you put the mouse over that field.

The log messages are logged in the directory /opt/MagellanNMS/data/log/sp_fr/<user>/<display>, where:
<user> is your UNIX userid
<display> is the IP address or the hostname of the machine displaying the Real Time Log Display tool

Log files name

The name of a log file is the tool's name and a timestamp of when the file was created. The format of a log file name is

<tool_name><YYYMMDD>T<HHMMSS>.log[nnn>[<nnn>]

where:
<tool_name> is the name of the tool that generates the log files. For Service Provisioning Frame Relay, the entry is sp_fr.

<nnn> is the value of the file counter. A three-digit counter is added to the rolled log file name when a log reaches its limit defined in the tool's configuration file.

An example of a log file is: sp_fr20011120T143244.log.001.

Log files header

To trace what was provisioned and by whom, a log file header is provided at the beginning of each log. The format of the log file header is

<FH><user>^\<host>^\<display>^\<file_name></FH>

where:
<FH> is the XML tag for file header

<user> is your UNIX userid

<host> is the host name that created the log file

<display> is the IP address or host name of the machine displaying the Real Time Log Display tool

An example of a log file header is:
<FH>black^\wcars0nr^\47.123.45.678:0.0^\sp_fr20011120T143244.log.001</FH>

Log records format

Log records have the following format:

<LOG><timestamp>^\<log_level>^\<node_name>^\<message></LOG>

where:
<LOG> is the XML tag for a log record

<timestamp> is the date and time in the format:
<YYYMMDD>T<HHMMSS>

<log_level> is the message's priority level: critical, error, warning, info, verbose, command. See "Log filtering" (page 151) for definitions of the log levels.

An example of a log records format is:
<LOG>20011101T152232^\COMMAND^\EM/ROME^\set fruni/6000 Dlci/26 Dc ci 0.</LOG>.

Buttons

The Real Time Log Display window consists of the following buttons:

- **Pause/Resume** is a toggle button that lets you stop and resume the display of new messages. When you click **Pause**, the label changes to **Resume** and vice versa. **Pause** stops new log messages from appearing in the viewer to help you analyze log messages without new messages coming in. Clicking **Resume** restarts the display of new log messages. The logged messages that were generated while **Pause** was on are not displayed when you click **Resume**.
- **Refresh** lets you apply new log filtering criteria against previous and new log records. When the **Refresh** dialog opens, it prompts you to specify how many previous log records you want to filter with the new criteria. The log report is cleared and the previous and new log records are displayed according to the new filtering criteria.

  When the refresh is finished, a dialog displays the amount of parsed log records. If the available amount of saved log records is less than what you requested, the dialog specifies that all log records have been parsed. The default value for the number of last records to be filtered is All. The allowable range is 1 to All.

  Refresh is greyed out if the LogToFile entry is set to off in the Service Provisioning Frame Relay configuration file.

- **Clear** erases all the log records in the log report.
- **Close** closes the Real Time Log Display window.

Menu shortcuts

You can use the keyboard instead of the mouse to select a menu option. You can also execute a command by using a command accelerator.

Chapter 9
Historic Frame Relay Log File Display tool

This section explains the purpose of the Preside Multiservice Data Manager (MDM) Historic Frame Relay Log File Display tool and provides instructions for using the tool. This tool lets you view the content of historic log files based upon the filtering criteria that you specify.

See the following sections for more information:

- "Historic Frame Relay Log File Display window" (page 155)
- "Using the keyboard commands" (page 162)
- "Procedures" (page 162)

Note: You can also view logs in real time using the Service Provisioning Frame Relay tool. For more information on the Real Time Log Display tool, see "Frame Relay Real Time Log Display tool" on page 139.

Historic Frame Relay Log File Display window

The **Historic Frame Relay Log File Display** window consists of a menu bar and three sections: **Log Retrieval Criteria**, **Log Filtering Criteria**, and **Log Retrieval Results**. The **Log Retrieval Criteria** and the **Log Filtering Criteria** sections are collapsible.

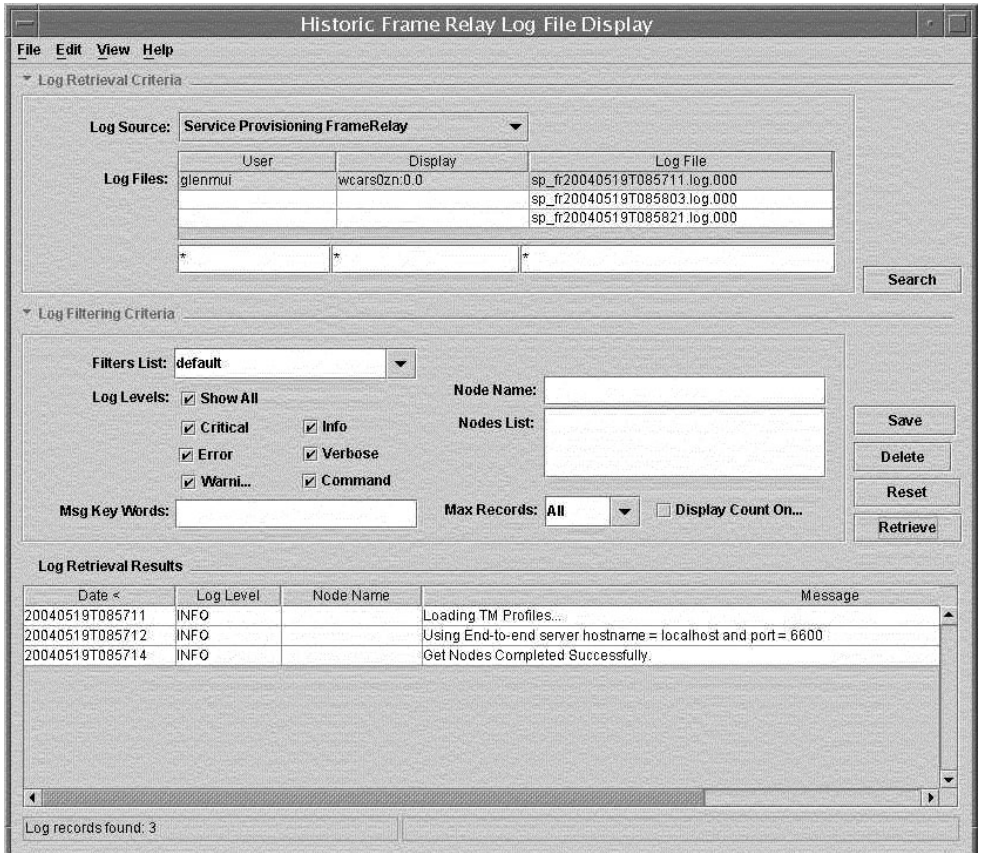
The window consists of the following elements:

- "Menu bar" (page 156)
- "Log Retrieval Criteria" (page 158)
- "Log Filtering Criteria" (page 159)

- "Log Retrieval Results" (page 161)

See the figure "Historic Log File Display window" (page 156).

Figure 2
Historic Log File Display window



Menu bar

The menu bar consists of the following menu items:

- "File" (page 157)
- "Edit" (page 157)
- "View" (page 157)

• "Help" (page 158)

File

The **File** menu contains the following commands:

- **Save** `saves the log report to a file with the specified file name and location.`
- **Print** displays a dialog. When you click **Print**, the log report is printed. to cancel the print job, click **Cancel**.
- **Exit** closes the **Historic Log** File Display window.

Edit

The **Edit** menu contains the following commands:

- **Clear** `empties the log report.`
- **Copy** copies the current selection of the log report into the buffer.
- **Find** displays a dialog that lets you do a key word search in the log report.
- **Select All** selects all log report's text.

View

The **View** menu contains the following commands:

- **Log Retrieval Criteria**
  When you check this box, the **Log Retrieval Criteria** section uncollapses.
- **Filtering Criteria**
  When you check this box, the **Log Filtering Criteria** section uncollapses.
- **Report Columns**
  This sub menu contains check boxes that let you customize your report by choosing which log record's fields are shown or hidden. These fields are
  - **Date**
  - **Log Level**
  - **Node Name**

— **Message**

Help

The **Help** menu contains the following command:

- **Help on Window** displays online help information on the **Historic Log File** window.

Log Retrieval Criteria

You use the **Log Retrieval Criteria** section to specify which logs file you wish to use to generate the log report. You can collapse this section by one of the following methods:

- From the **View** menu unselect **Log Retrieval Criteria**.
- Click the arrow at the left end of the header section.

When you collapse this section, the free space is used by the **Log Retrieval Results** section.

When you launch the tool, the **User**, **Display** and **Log File** fields contain asterisks. You can click **Search** to do a search for all log directories and all files. You can also refine your search by entering values and/or asterisks in the **User**, **Display** and **Log File** fields. The tool searches in the directory /opt/MagellanNMS/data/log/<tool_name>/<user>/<display>/.

The search results are displayed in the **Log Files** scroll table. You must do a log file selection. You can do multi selections.

Log Source

The **Log Source** combo box contains the entry Service Provisioning Frame Relay. You need to select the tool name so that related log files for the tool are used when a log file search is performed.

Log Files

The **Log Files** section contains the columns: **User**, **Display** and **Log File**. Use the **User** and **Display** fields to enter directory names. You can also use wild cards. Use the **Log File** field to enter a log file name. You can also use wild cards on all these fields. Validation of these field values occurs when you click **Search**.

You must select log files to use to generate the log report. The **Log Files** table is populated through the search based on the **Log Source** selected, and on the criteria you enter in the **User**, **Display** and **Log File** fields. You can change the log files you have selected.

Search button

You can search for the retrieval of log files based upon the **Log Source** selected, and the **User**, **Display** and **Log File** fields.

Log Filtering Criteria

Use the **Log Filtering Criteria** section to define the filter you want to use to parse the log files selected in the **Log Retrieval** section. You can save and reuse filters. When you launch the Historic Log File Display tool, the filter's file is parsed and the **Filters** List is populated. The default filter name is provided. This filter sets the **Log Level** to **Show All**. The default filter is always selected when you launch the tool. You can also modify and save the default filter, but you cannot delete it.

Filter List

The **Filter List** is an editable combo box that contains the saved filters and the default filter when you launch the Historic Log File Display tool. You can select a filter from the combo box. You can also enter a new filter's name in the combo box field to save a filter or to use it without saving it.

Log Levels

The log level attribute is the only mandatory attribute when you create a filter. You can choose the log level you want to be shown in the log report by clicking the appropriate check box. There are four levels of filtering logs:

- **Show All** selects all log levels. **Show All** is the default value when you launch the Historic Log Display tool.
- **Critical** indicates that an operation cannot be performed. This failure compromises the integrity of the process results. Processing may stop.
- **Error** indicates that an operation cannot be performed. This failure does not compromise the integrity of the process results. Processing continues.
- **Warning** indicates that an operation has completed without errors. The integrity of the process results are questionable.

- **Info** indicates that there is an information message about the current process operation.
- **Verbose** indicates a verbose form of an information message.
- **Command** indicates a Passport command.

Msg Key Words

Enter key words that you want to be present in all log messages in the **Msg Key Words** field. By default, only log messages that include all searched terms are selected. Do not include "and" or "AND" between the terms. This word is not considered a logical word, and is treated as any other word. Msg Key Words are not case sensitive.

Node Name

The **Node Name** field populates the **Nodes List**.

Nodes List

The nodes in the **Nodes List** are used as the filtering criteria. Only the log records related to those nodes are displayed in the log report. The list is populated by using the **Node Name** field.

Max Records

You can specify the maximum number of log records to include in the log report in the **Max Records** combo box. You can enter a value or choose a predefined one. The default is to include all log records when left empty.

Display Count Only

The **Display Count Only** checkbox lets you prevent the display of log records in the log report. Only the number of log records found from the search is displayed by **Records Found** in the status area.

Save button

Save lets you save the current filter criteria with the filter's name displayed in the filter name field. All filters are saved in the file $<HOME>/MagellanNMS/LogFilters.cfg, where $<HOME> is your home directory.

Delete button

Delete lets you delete the current filter.

Reset button

Reset reloads the filter with the last saved attribute values.

Retrieve button

Retrieve lets you start the log records retrieval to generate the log report in the Log Retrieval Results section. If you do not specify a filter name in the filter list when the Retrieve button is pressed, a dialog opens. The dialog prompts you to continue without using a filter to parse the selected log files.

Log Retrieval Results

The Log Retrieval Results section consists of the following:

- `Log Report Table`
- Status area
- File Header Information field

Log Report Table

The **Log Report Table** displays the log records that meet the **Log Retrieval Criteria** and **Log Filtering Criteria**. You can scroll through the table, which contains the following columns;

- **Date**
- **Log Level**
- **Node Name**
- **Message**

You can customize your Log Report by resizing, hiding or reordering the columns. You can also use the column heading to sort the report. All columns are displayed by default.

Status area

The status area shows the number of records found.

File Header Information Field

The File Header Information field shows the corresponding file header of a log record when you click on a log record in the **Log Report Table**.

Using the keyboard commands

For the Historic Log File Display tool, you can use the keyboard instead of the mouse to select a menu option. You can also execute a command by using a command accelerator. See the following sections:

- "Mnemonics" (page 162)
- "Command accelerators" (page 162)

Mnemonics

Every menu option in the menu bar has a mnemonic associated with it. Each mnemonics usually consists of the Alt key followed by the first letter of the menu and the first letter of the menu option.

Example: To print the log report using mnemonics, press the **Alt** key plus the letter **F** and then the letter **P**.

The single character that selects a given menu option is shown by the underscore in the name of the menu's active name. If there are duplicate options in the same menu, the second capital letter is used. If there are duplicates and no other capital letters in the menu option, the second letter is used.

Command accelerators

The Historic Log File Display tool provides command accelerators to execute menu commands. Each accelerator usually consists of the control key followed by the first letter of the menu option. The command accelerator is shown beside each menu option.

Example: To save a log report using a command accelerator, press the **Control** key plus the letter **S**.

Procedures

See the following sections for procedures you can perform with the Historic Log File Display tool:

- "Starting the Historic Log File Display tool" (page 163)
- "Selecting log files" (page 163)
- "Creating a filter" (page 164)

Starting the Historic Log File Display tool

1 You can start the Historic Log File Display tool by one of the following methods:

- From the application main window select **Configuration -> Passport -> Administration-> Historic Frame Relay Log File Display**.
- From a UNIX shell, enter the command **/opt/MagellanNMS/bin/historicLogDisplay**.

The **Historic Log File Display** window opens.

Selecting log files

1 From the **Log Source** combo box, ensure that the entry **Service Provisioning Frame Relay** is selected.

2 Enter a directory name or a wild card in the following fields:

- **User**
- **Display**

The directory name maps to the path /opt/MagellanNMS/data/log/<tool>/<user>/<display>/ where:

<user> is your UNIX user ID
<display> is the IP address or the host name of the machine that is displaying the Historic Log File Display application.

<tool> is the tool name that you are running the Historic Log File Display on. The only value for this is sp_fr for Service Provisioning Frame Relay.

3 Enter the file name or a wild card in the **Log Files** field.

4 Click **Search**. You must have a value in the **User**, **Display** and **Log File** fields for the search to launch.

The log files contained in the paths are displayed in the scroll table. Select the files that you want to be filtered.

Note: To select a group of files that appear consecutively in the listing, select the first one, and then select the last one while holding the **shift** key. If the logs do not appear consecutively, select the first one, and hold the **Control** key to select the others.

Creating a filter

The log level attribute is mandatory.

1 From the **Historic Log File Display** window, enter a filter name in the **Filters List** field.

2 Select the desired log level(s) by checking the required check boxes.

3 In the **Node Name** field, enter a node name, and press the return key to populate the **Node List.** Repeat this step, if necessary.

Note: To remove an entry in the **Nodes List**, select the node, then press the delete key on your keyboard.

4 From the **Max Records** combo box, specify the maximum number of records you want to display in the **Log Report**. You can type one or select a predefined value.

5 To have only the number of log records that meet the filter criteria and not their content, check the **Display Count Only** box.

Saving a filter

1 From the **Historic Log File Display** window, enter the filter name in the **Filter List** combo box.

2 Set your filter attributes.

3 Click **Save**.

Note: All filters are saved in the file /$<HOME>/MagellanNMS/LogFilters.cfg, where $<HOME> is your home directory.

Deleting a filter

1 From the **Historic Log File Display** window, enter a filter name in the **Filter List** combo box. You can also select a filter from the **Filter List** combo box.

2 Click **Delete**.

Resetting the filter's criteria

1 From the **Historic Log File Display** window, click **Reset** to reload the filter with the last saved values.

Using the filter

1 From the **Historic Log File Display** window, click **Retrieve** to generate the log report.

Saving a log report

1 From the **File** menu, select **Save Report**.

2 In the **File name** field, enter a file name.

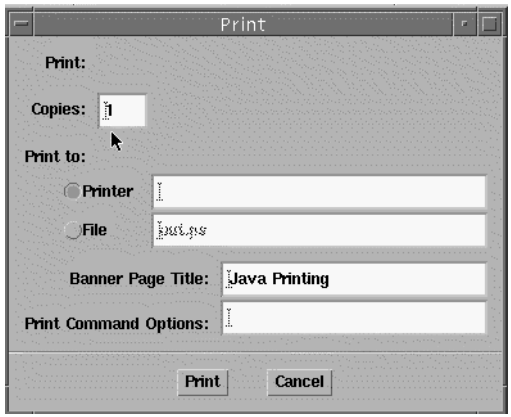
Note: You can also change the file path. The default path is ${HOME}/.

3 Click **Save**.

Printing the log report

1 From the **File** menu, select **Print**.

The **Print** dialog opens.



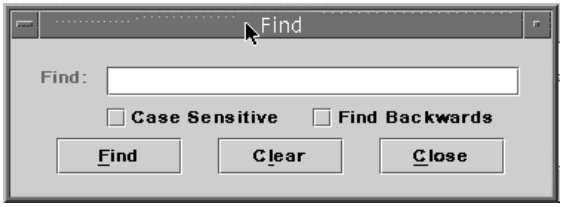
By default, the printer that you set in your environment is set as the current printer. You can change the printer by writing its name in the **Printer** field.

2 Click **Print**.

Searching for a word in the log report

1 From the **Edit** menu, select **Find**.

The **Find** dialog opens.



2 In the text field, enter the word you are searching for.

3 Click **Find**, as required.

Resizing a column

1 Place the mouse at the right end of a column.

The mouse changes to a single-sided arrow.

2 Left-click the mouse and drag the column to the desired width.

Hiding a column

1 From the View menu, select **Report Columns**.

2 Uncheck the column you wish to hide.

Adding a column

1 From the View menu, select Report Columns.

2 Check the column you wish to add.

Moving a column

1 Click on a column header.

2 Drag it and release it to the desired location.

Sorting a log report

1 To sort the log report in ascending order, click on a column header.

Preside Multiservice Data Manager

Service Provisioning for Frame Relay

User Guide

Release R15.1

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