3 Understanding the User Interface

The NMC-RX application provides a graphical user interface (GUI) that allows you to manage and monitor your RX devices.

Overview

The NMC-RX application uses a workshop paradigm for its design. This chapter is a general overview of the NMC-RX GUI. It discusses the graphical layout of the application, shows you how to navigate through the GUI, and explains the workshops used for configuring groups and devices.

Using the NMC-RX Application

The NMC-RX application uses many standard conventions employed in other Microsoft Windows software applications.

Starting the NMC-RX Application

You must start a database and several services before starting the NMC-RX application.

To start the NMC-RX application:

1 Double-click the appropriate NMC-RX Database icon.

This is the Sybase Adaptive Server Anywhere program. It must be running before you start the NMC-RX application.

2 Double-click the Resource Configurator icon, and on the Config Sync Service tab, set the FTP Destination parameters.

3 Double-click the NMC-RX Polling icon.

4 Double-click the NMC-RX ConfigSync icon.

5 Double-click the NMC-RX icon.

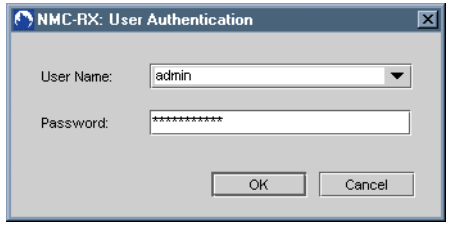
The splash screen and the User Authentication dialog box appear.

6 Enter your username and password, and click OK.

The Network Workshop window appears.

Logging In

When you run the NMC-RX application, the User Authentication dialog box appears.



Your username and password prevent unauthorized users from accessing your device's configuration. Only an administrator can create a new user. Users, however, can change their own passwords.

Users can have various privileges: administration, read-write, or read-only.

Non-Admin Users (Read-Write, Read-Only)

To log in to the NMC-RX application as a nonadmin user:

1 Select your username from the User Name drop-down list.

2 Enter your password.

Note: *Once logged in to the application, you can change your default password. See Creating Group Security in Chapter 8, NMC-RX Security.*

3 Click OK.

The Network Workshop window appears.

Administrators

To log in as the default administrator:

1 If this is your initial login, accept the default username: **`admin`**.

2 Enter the default password: **`nmc-rxadmin`**

3 Click OK.

The Network Workshop window appears.

You can change the default admin password (nmc-rxadmin) delivered with your NMC-RX application, but you cannot change or delete the default username (admin).

Note: *It is strongly suggested that you change the admin password and store it in a secure location. See Chapter 8, NMC-RX Security.*

As the network administrator, you can create a new name and password with admin privileges assigned to yourself or to another user.

Exiting the NMC-RX Application

To exit the application, choose Exit from the File menu, or click in the window title bar.

Understanding the Interface Layout

The NMC-RX application uses two workshops—the Network Workshop and the Device Workshop. Each workshop window is composed of five major areas, illustrated in Figure 3-1 and described in Table 3-1.

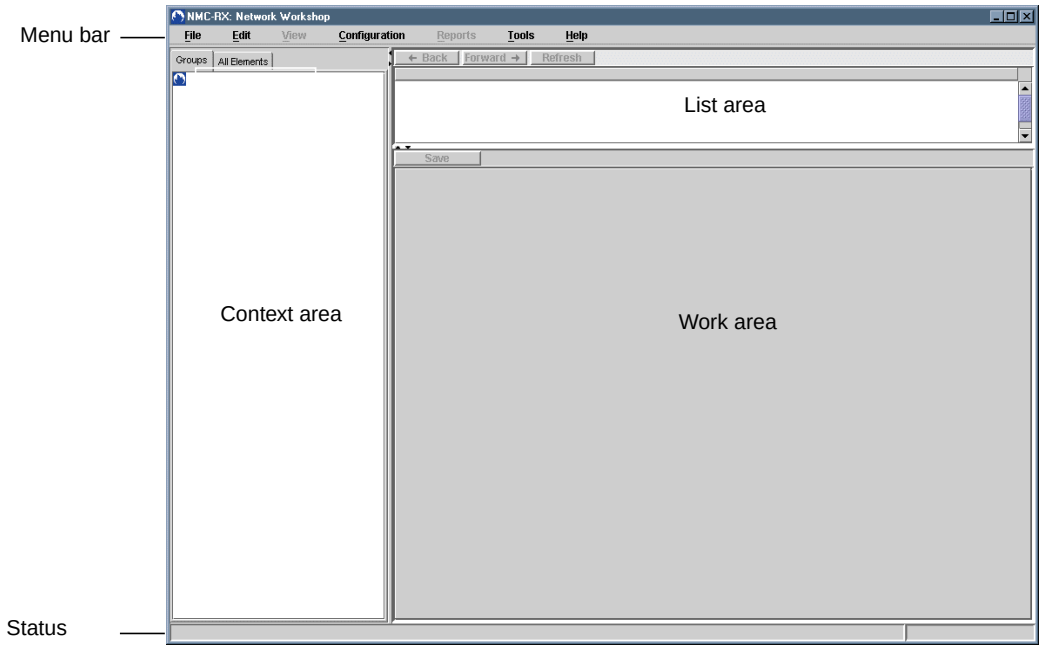


Figure 3-1 Workshop areas

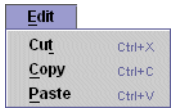
Table 3-1 Workshop areas

Area	Description
Context	Displays all the managed objects; Used to select an object
Menu bar	Displays a menu from which you can select commands
List	Displays a tabular list of one or more objects matching the criteria specified by a query from the context area
Status	Displays the current status of the NMC-RX application
Work	Displays information on a selected object and allows you to modify it, if applicable

Using the Menu Bar

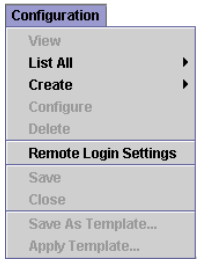
The menu bar allows you to execute commands related to each of the menus. See the following tables for information on each menu command.

Menu	Command	Choose to
File	Exit	Exit the application



Menu	Command	Choose to
Edit	Cut	Delete text
	Copy	Copy text
	Paste	Insert the text from the clipboard that was cut or copied into the place you want it

Menu	Command	Choose to
View	Instance Explorer	Hide and show the tree of the instances of the device in the Device-wide Explorer

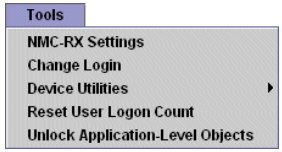


Menu	Command	Choose to
Configuration	View	View an object's configuration; opens the work area for viewing the object's current configuration
	List All	List all objects of a particular type. The following network-wide types are always available: › Accounting Server › Authentication Server › Customer › DHCP Relay Server › IP Tunnel Connection › Profile › SMDS Tunnels Connection › User Profile › Virtual LAN **Note:** Additional objects appear in the list when an object is selected.

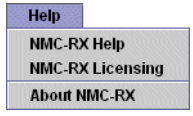
Menu	Command	Choose to
	Create	Create objects of a particular type. The following network-wide types are always available: › Accounting Server › Authentication Server › Customer › DHCP Relay Server › IP Tunnel Connection › Profile › SMDS Tunnels Connection › User Profile › Virtual LAN **Note:** Additional objects appear in the list when an object is selected.
	Configure	Open the appropriate work area and configure an object
	Delete	Delete a selected object
	Remote Login Settings	Configure remote login parameters
	Save	Save an object's configuration
	Close	Close an open work area
	Save As Template...	Save a configuration as a template that you can use to configure new entities
	Apply Template...	Choose to select a template to apply to the object displayed in the work area

Reports

Menu	
Reports	Currently not implemented



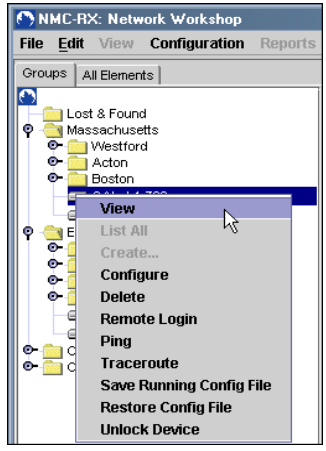
Menu	Command	Choose to
Tools	NMC-RX Settings	Open the Resource Configurator, a standalone application that provides easy access to configuring the NMC-RX database, SNMP, Polling service, or ConfigSync service
	Change Login	Log in as a different user; cannot run this option when any creation dialog boxes or device workshops are open
	Device Utilities	Run the following utilities: • Remote Login • Ping • Traceroute • Save Running Config File • Restore Config File
	Reset User Logon Count	Reset the count to get the database synchronized If the database gets into a state in which it thinks a user is logged in and the user is not (whatever the reason), then the NMC-RX admin user can reset the count
	Unlock Application-Level Objects	Release, or unlock, the reserved status for a device or a network-wide setting Lockups may occur, for example, when a user is configuring, modifying, or deleting a device and the NMC-RX application abnormally terminates **Note:** Only users with golden admin rights have access to the Unlock command To unlock a device: • Select the device you want to unlock, right-click, and choose Unlock from Device Utilities menu To unlock network-wide settings: • From the Tools menu, select Device Utilities, and click Unlock



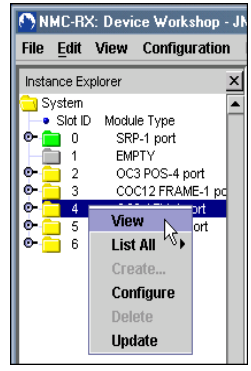
Menu	Command	Choose to
Help	NMC-RX Help	Launch the online help system
	NMC-RX Licensing	Edit license info and review number of devices allowed by license agreement
	About NMC-RX	Display the version number

Using Pop-Up Menus

If you select an instance or object type and then right-click, a pop-up menu appears. Available commands relative to the selected object appear. If the command appears dimmed, it is not available.



Pop-up menu at the system level



Pop-up menu at the module level

Note: *After selecting an object in the context or list area, you can right-click anywhere within the NMC-RX application to display its pop-up menu.*

Note: *For more information on how to use the five action commands, see Using the Network Workshop later in this chapter.*

Using the Network Workshop

The Network Workshop acts as the home base of the application and is the first window displayed when the NMC-RX application opens. It is from here that you can examine all managed elements in your network, create groups and devices, and arrange them in a logical manner.

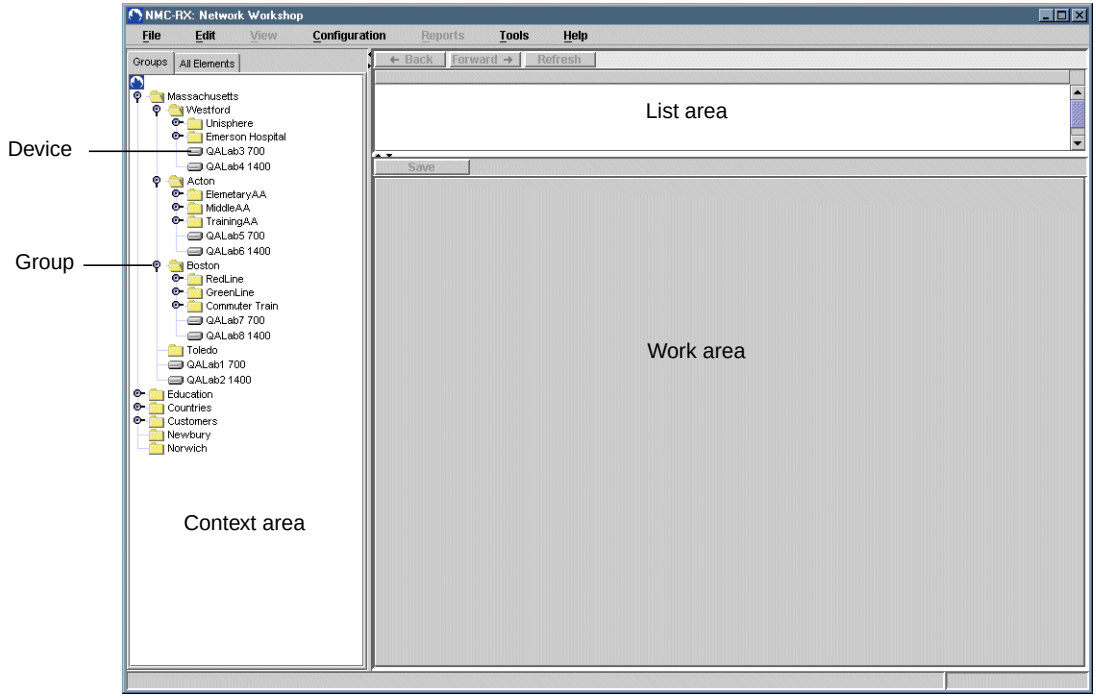


Figure 3-2 Network Workshop

After you establish a meaningful hierarchy, you can easily navigate to any given device. In the context area, you can list the groups and elements to which you have access. Depending on your privilege level, the context area enables you to:

- Create groups
- View and configure groups
- Organize groups into a hierarchy
- Create devices
- Access the Device Workshop

Listing Groups and Elements

The context area in the Network Workshop allows you to display groups or elements to work with. To display all groups or elements in your network, click the corresponding tab in the context area:

- Groups tab – provides a hierarchical listing of all the groups and their associated elements
- All Elements tab – provides a flat, tabular list of all the elements

Creating Objects

If you are an admin user, you can create a number of objects from the Network Workshop, including:

- Group
- ERX device
- Accounting server
- Authentication server
- Customer
- DHCP relay server
- IP Tunnel connection
- Profile
- SMDS tunnel connection
- User profile
- Virtual LAN

Using the Device Workshop

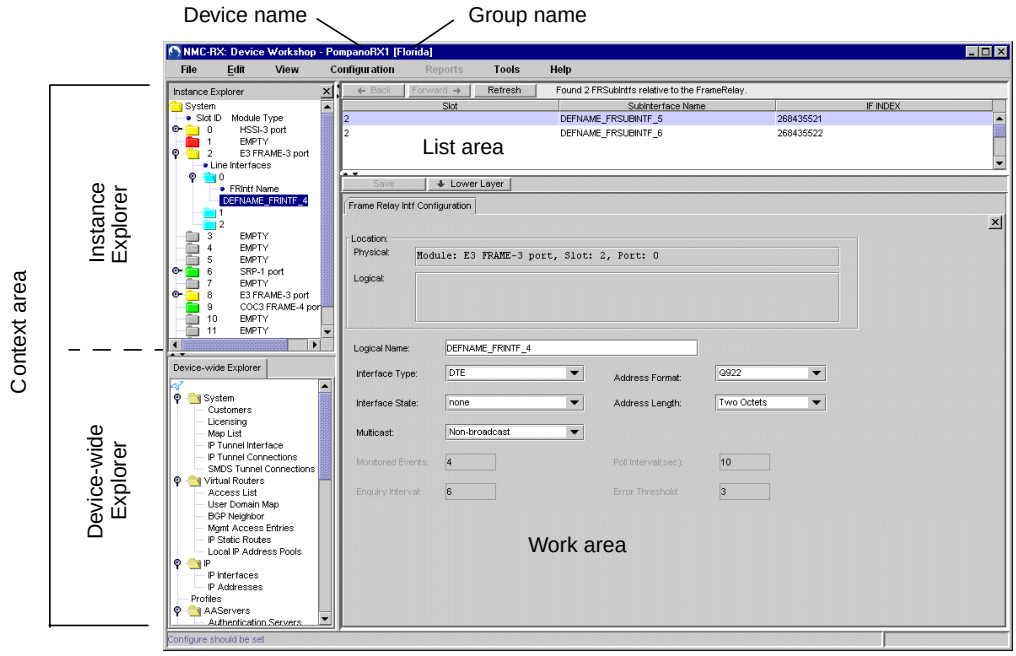
The Device Workshop allows you to create, configure, view, list, and delete all objects associated with the particular device. (Some objects also have statistics.)

You can open a Device Workshop in two ways:

- Double-click a device listed in the Network Workshop's context area.
- Select a device displayed in the Network Workshop's context area, right-click, and click Configure.

Note: *You can open up to three Device Workshops simultaneously.*

Note: *Only protocols related to the type of Juniper Networks device you are working with appear in the context area.*



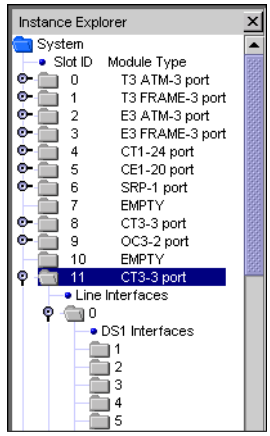
Note: *The name of the device you are configuring is displayed in the Device Workshop title bar, as well as the group it is in.*

Using the Context Area

The context area in the Device Workshop allows you to access an object's configuration. It is divided into two sections—the Instance Explorer (top) and the Device-wide Explorer (bottom).

Instance Explorer

The Instance Explorer lists instances of the device. From the Instance Explorer, you can navigate a hierarchy based on the physical elements starting at the system level. You can then select a particular module/slot and move through the upper layers (such as interfaces, subinterfaces, and circuits) to fully configure the device.

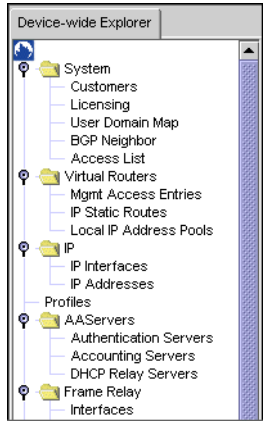


ERX device

Figure 3-3 Instance Explorer

Device-wide Explorer

The Device-wide Explorer lists object types, such as IP interfaces and virtual routers. Select the object, right-click, and click List All to list all instances of the object configured on the ERX device.



ERX device

Figure 3-4 Device-wide Explorer

Using the List Area

The list area displays the results of a List All command. Each entry in the list area is capable of responding to all actions and queries applicable to the particular instance.

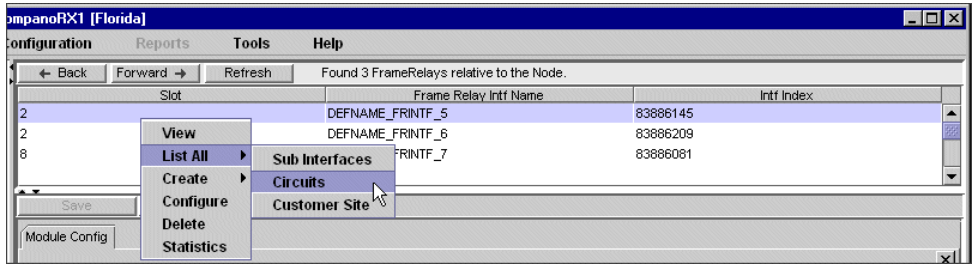
Note: *You can sort objects in the list area alphabetically by clicking the column header. If you click the header a second time, the objects are sorted in reverse order.*

1 Select an instance in the list area, and right-click.

A menu of available commands appears.

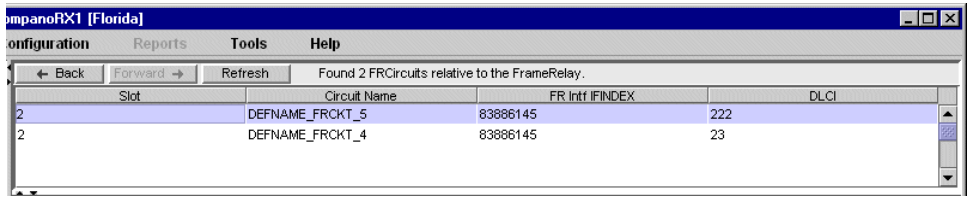
2 Click List All.

A list of the objects that you can display in the list area appears.



3 Click an object type from the list.

The list area displays the list of objects relative to the instance selected. In this example, it is a list of circuits.



Note: *The Back and Forward buttons at the top of the list area allow you to return to the previous list (Back) and move to the next list (Forward). Note that the previous and next lists may not be for the same type of object that the current list displays. You can also click Refresh to update the list.*

4 From the list area, click the instance you want to configure.

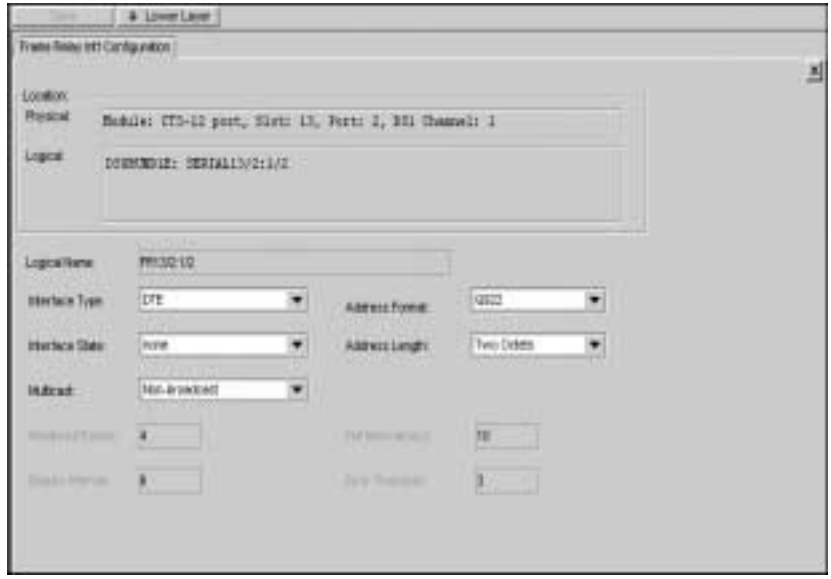
Note: *Read-only users cannot configure objects.*

5 Right-click, and click Configure.

The Config tab for configuring the selected instance appears in the work area.

Using the Work Area

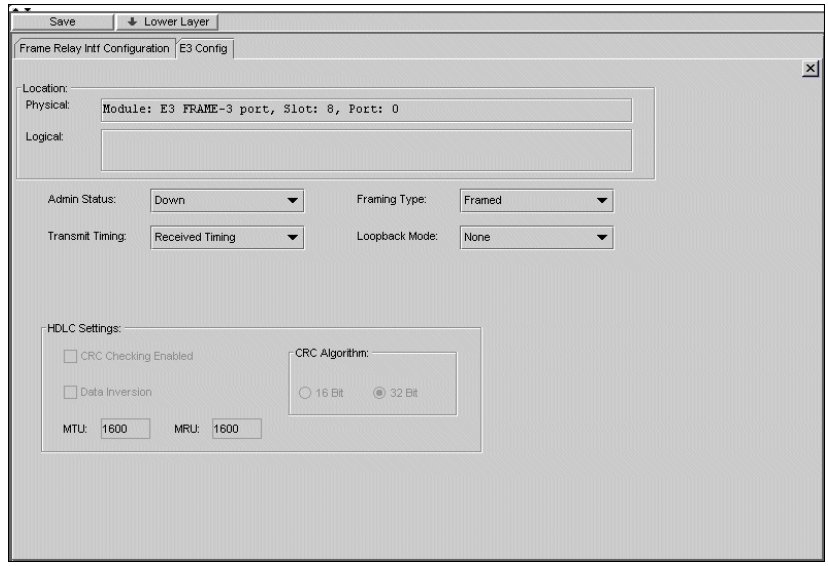
The work area of the Network Workshop and the Device Workshop displays an object's configuration tab in either read-only (view) or read-write (configure) mode.



When you finish editing the parameters (in this case, for a Frame Relay interface), click Save at the top of the area to save the settings.

***Note**: The Save button becomes active only if you have made changes to your original configuration.*

If there is a layer below the one you are configuring (such as a subinterface), the Lower Layer button is enabled. Click the button, and then click the corresponding tab to view the lower layer's configuration.

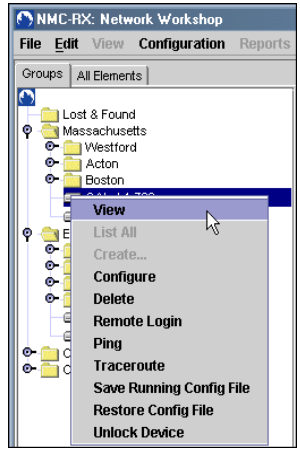


Working with Objects

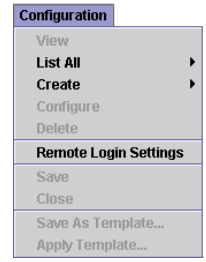
You can access objects from both the Network Workshop and Device Workshop and perform several operations on them: view, list all, create, configure, and delete. These five operations appear in both Configuration menus and all pop-up menus. If the operation appears dimmed, it is not available for the selected object.

You can access these operations from several points in the application:

- **Network Workshop –** You can choose an operation from both the context area and list area pop-up menus. You can also choose the operation from the Configuration menu.



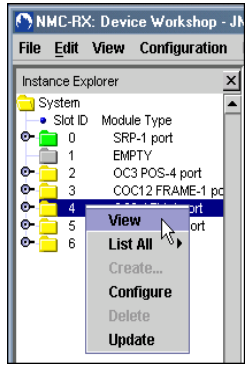
Select an object, right-click, and click an operation.



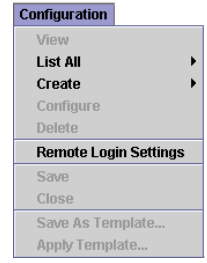
Select an object, and then choose an operation from the Configuration menu.

Figure 3-5 Accessing common operations in the Network Workshop

- **Device Workshop** – You can choose an operation from the Instance Explorer, Device-wide Explorer, and list area pop-up menus. You can also choose the operation from the Configuration menu.



Select an object, right-click, and click an operation.



Select an object, and then choose an operation from the Configuration menu.

Figure 3-6 Accessing common operations in the Device Workshop

Operations

A user's privilege level determines which operations that user can perform. Table 3-2 lists what can be done in each privilege level. See the following sections for more information on each operation.

Table 3-2 Operations supported by user privilege level

Privilege Level	View	List All	Create	Configure	Delete
Admin	Yes	Yes	Yes	Yes	Yes
Read/write	Yes	Yes	Partial[a]	Partial[a]	Partial[a]
Read only	Yes	Yes	No	Partial[a]	No

a. See *Chapter 8, NMC-RX Security*, for additional information

View

Use the View command to display an object's current configuration. There are no user restrictions to use the View option. Viewing allows you to check an object's parameter settings and review detailed information, but does not allow you to change any settings.

To view an object, click the object in the Network Workshop or the Device Workshop. The object's current configuration appears in the work area.

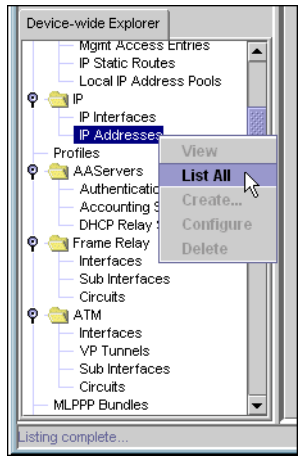
List All

Use the List All command to display all objects of the same type. Whether you use List All from the Network Workshop or Device Workshop, the list of objects always appears in the list area.

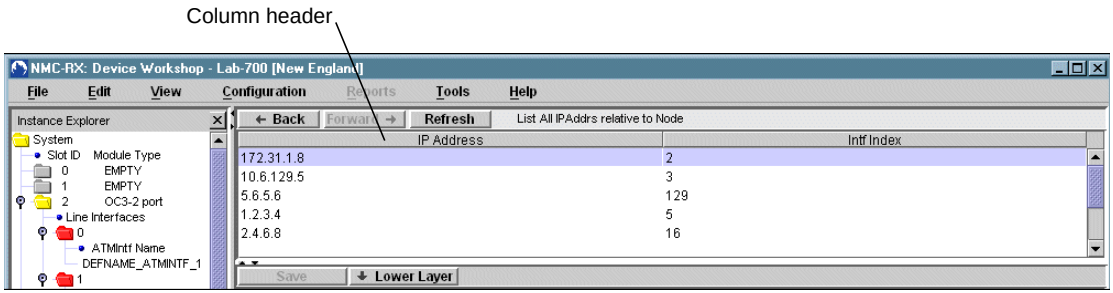
The List All command can be very useful. When you list all objects of one type, you can quickly locate many objects. You can also use List All to display all objects associated with another higher-level object. For example, you can list all subinterfaces associated with a particular interface, or customer sites associated with a certain customer.

- **Device-wide Explorer** – In the Device-wide Explorer, you can use List All to list all the objects of a particular type associated with a particular device.

To list all objects, select the object you want to list, right-click, and click List All. For example:



In this case, all IP addresses associated with the device appear in the list area.



Note: *You can sort objects in the list area alphabetically by clicking the column header. If you click the header a second time, the objects are sorted in reverse order.*

- **Instance Explorer** – In the Instance Explorer, use the List All command to list different types of objects associated with a specific instance.

  To list all objects, first select the instance with which you want to associate the object. Then right-click, select List All, and click the type of object you want to list.

- **Configuration menu** – Use the Configuration menu to access List All for many network-wide objects, such as virtual LANs, profiles, and servers.

To list all objects, from the Configuration menu, click List All, and click the object you want to list.

Note: *All the objects that can be associated with the object selected in the Instance Explorer can be listed by selecting List All from the Configuration menu.*

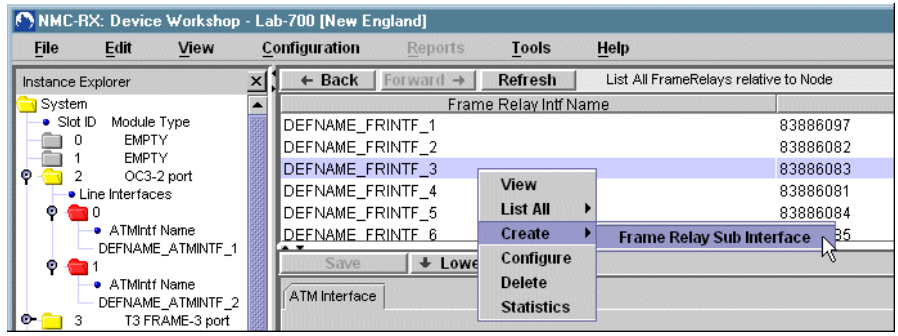
Create

Use the Create command to create a new object, assign a name to it, and set its parameters. For example, depending on your user privilege, you can create an object such as an interface, subinterface, or circuit.

Because every Create dialog box is different, each Create action is described in the chapter that discusses the object type, but the premise is the same:

1 Select the instance with which you want to associate a new object.

2 Right-click, select Create, and click the object type you want to create. For example, you could create a Frame Relay subinterface from a Frame Relay interface instance selected in the list area.



3 Set the parameters, and click OK.

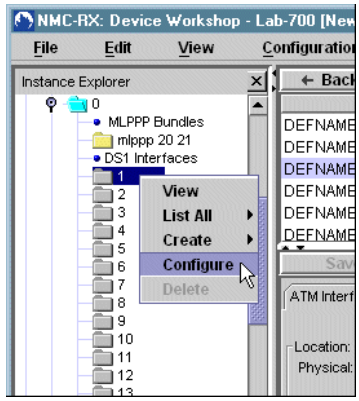
The new object appears in the appropriate area; for example, the Instance Explorer or the list area.

Configure

Use the Configure command to modify an object's parameters. For example, you can rename an object or change its parameter settings.

To configure an object:

1 In the Instance Explorer or the list area, select the object you want to configure, right-click, and click Configure.



The object's Configuration tab appears in the work area.

2 Modify the parameters, and click Save.

Changes are sent to the ERX device and saved in the NMC-RX database. (Some changes, such as to groups and customer profiles, are only sent to the database.)

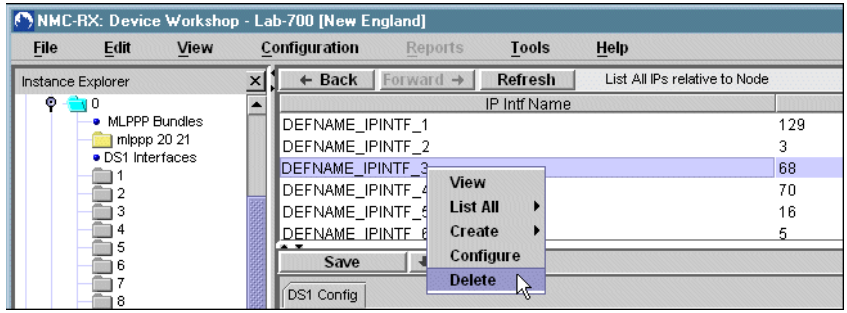
Delete

Use the Delete command to remove an object permanently from the NMC-RX application. Only users with admin privileges can delete an object.

Read-write and read-only users cannot delete groups, devices, or users. If you are a read-write user and do not have access to the device, you cannot delete it, but you may unmap it. Unmapping a device removes it from its place in the hierarchy but leaves it in the NMC-RX database.

To delete an object:

1 In the Instance Explorer or the list area, select the object you want to delete, right-click, and click Delete.



The Confirm Delete dialog box appears.

2 Click OK.

Note: *If you delete an instance in the Device Workshop, the object is deleted from the ERX device and from the database. (Some deletions, such as to groups and customer profiles, are deleted only from the database.)*