

## Chapter 5

# Configuring the System

This chapter describes how to view and modify a device configuration and update system-level attributes.

This chapter contains the following sections:

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### Overview

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The NMC-RX application lets you manage devices on your network by means of a graphical user interface (GUI) and modify a device configuration from the Device Workshop.

## Configuration Tasks

You can perform the following tasks on the device that you want to configure using the NMC-RX application:

- View the current configuration.
- Modify the configuration.
- Update the configuration.

## Viewing a Device Configuration

You can view the current configuration of any device on your network from either the Network Workshop or the Device Workshop.

To view a device configuration from the Network Workshop:

1. In the context area, select the device whose configuration you want to view.
2. Right-click, and select View.

The current configuration appears.

The screenshot displays the configuration window for a device, with tabs for System Info, Boot Config Control, and Timing. The System Info tab is active, showing the following details:

- System Name:** JNPR1400
- Primary Address:** 10.6.129.203
- System Up Time:** 1 day, 1 hours, 59 minutes, 18 seconds.
- System Contact:** Siobhan Tully
- System Location:** swlab
- Default BGP Template:** (empty)
- System Type:** ERX-700
- Software Version:** 5.0.0 beta-1.9 [BuildId 439] Jan ...
- Chassis Revision:** 0
- Fan Tray Status:** OK

Additional configuration sections include:

- System Memory:**
  - Total (M): 536
  - Available (M): 375
  - Usage: 30%
  - High Memory Threshold (%): 85
  - Abated Memory Threshold (%): 75
  - Memory Utilization Trap
- L2TP Parameters:**
  - Admin State: enable
  - IP Checksum
  - Destruct Timeout: 600
- Global Redundancy Revert:**
  - Control: off
  - Time Of Day (hh:mm:ss): 00:00:00
- Non-Volatile Storage (NVS):**
  - Status: OK
  - Total (M): 488
  - Available (M): 195
  - Usage: 60%
- Fabric:**
  - Fabric Speed (Gps): 10
  - Fabric Rev: 8
- Trap Proxy:**
  - Enabled
  - Virtual Router: (empty)

To view the device configuration from the Device Workshop:

1. From either the Instance Explorer or the Device-wide Explorer, select the System folder.
2. Right-click, and select View.

The System Info tab appears in the work area.



**NOTE:** In View mode, you cannot modify the configuration of a device.

## Modifying a Device Configuration

From the Device Workshop, you can modify most system attributes through either the Instance Explorer or the Device-wide Explorer.

To modify a device configuration:


1. From either the Instance Explorer or Device-wide Explorer, select the System folder, right-click, and select Configure.

The System Info tab displays the current configuration of the device and has fields that you can edit.


Parameter	Value
System Name	JNPR1400
System Type	ERX-700
Primary Address	10.6.129.203
Software Version	5.0.0 beta-1.9 [BuildId 439] Jan ...
System Up Time	1 day, 1 hours, 41 minutes, 34 seconds
Chassis Revision	0
System Contact	Siobhan Tully
Fan Tray Status	OK
System Location	swlab
Default BGP Template	[...]
<b>System Memory:</b>	
Total (M)	536
High Memory Threshold (%)	85
Available (M)	375
Abated Memory Threshold (%)	75
Usage	30%
Memory Utilization Trap	<input type="checkbox"/>
<b>L2TP Parameters:</b>	
Admin State	enable
IP Checksum	<input type="checkbox"/>
Destruct Timeout	600
<b>Global Redundancy Revert:</b>	
Control	off
Time Of Day (hh:mm:ss)	00:00:00
<b>Non-Volatile Storage (NVS):</b>	
Status	OK
Total (M)	488
Available (M)	195
Usage	60%
<b>Fabric:</b>	
Fabric Speed (Gps)	10
Fabric Rev.	8
<b>Trap Proxy:</b>	
Enabled	<input type="checkbox"/>
Virtual Router	[...]

2. Modify the parameter settings (Table 8).

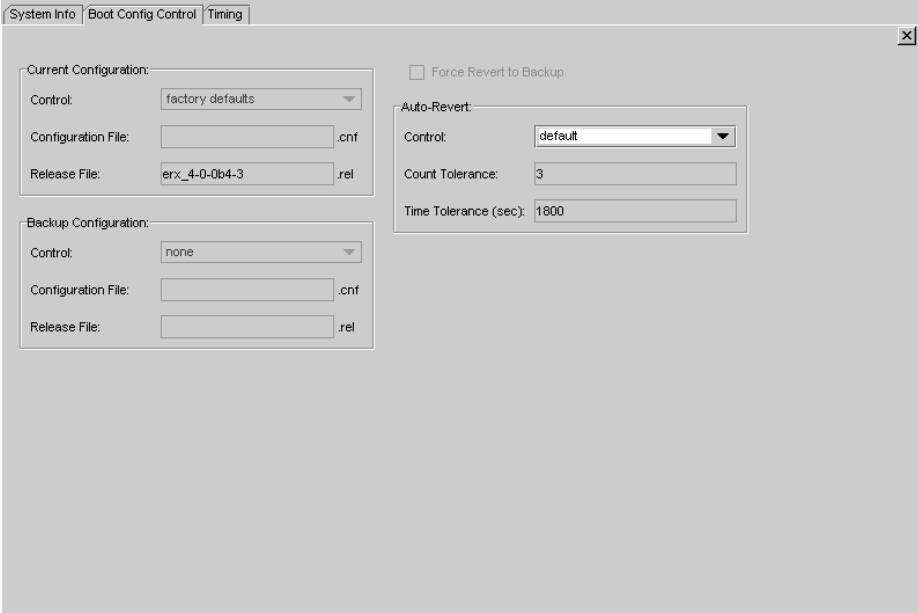
**Table 8: System Configuration Parameters**

Parameter	Description
System Name	Name that you assign to the E-series router
Primary Address	IP address that is used to communicate with the E-series router
System Up Time	Amount of time in hours, minutes, and seconds that the system has run
System Contact	Contact person for the device (optional)
System Location	Location of the device (optional)
Default BGP Template	Click  to select a BGP template from the Apply Template dialog box. See <i>Related Dialog Boxes</i> on page 68.
System Type	E-series router
Software Version	Version of JUNOS software running on the device
Chassis Revision	Chassis revision number
Fan Tray Status	Status of the fan tray; cannot edit; range: Failed, OK
<b>System Memory</b>	
Total (M)	Total memory capacity of the system; cannot edit; range 0–2147483647 bytes
Available (M)	Amount of unused memory; cannot edit; range 0–2147483647 bytes
Usage	Percentage of system memory utilization; cannot edit; range –1 through 100; value of –1 indicates utilization unknown
High Memory Threshold (%)	Value of system memory utilization; if reached for the first time, generates high memory utilization event notification to the management entity on the system; range –1 through 100; default 85
Abated Memory Threshold (%)	Value of system memory utilization used to determine when to generate an abated memory utilization event notification to the management entity on the system; range –1 through 100; default 75
Memory Utilization Trap	Controls sending system memory utilization events; options: On, Off; default: Off
<b>L2TP Parameters</b>	
Admin State	Enable or disable Layer 2 Tunneling Protocol (L2TP) for your E-series router  <b>NOTE:</b> The NMC-RX application offers full support for tunnel server modules.
IP Checksum	Enable or disable (default) checking data integrity
Destruct Timeout	Time period in the range 10–3600 seconds (1 hour) for which the E-series router maintains dynamic destinations, tunnels, and sessions
<b>Global Redundancy Revert</b>	
Control	Global revert control; range: off, immediate, time of day; default: off
Time of Day	Number of seconds past midnight on any given day at which time reversions are allowed to occur. Can edit only if set to time of day; range 00:00:00 to 23.59.59; default 00:00:00

**Table 8: System Configuration Parameters (continued)**

Parameter	Description
<b>Non-Volatile Storage (NVS)</b>	
Status	State of NVS
Total (M)	Percentage of total capacity of NVS
Available (M)	Amount of unallocated NVS
Usage	Total NVS currently allocated
<b>Fabric</b>	
Fabric Speed (GPS)	Either 5 Gbps or 10 Gbps
Fabric Rev	Revision number of the fabric board on the E-series device
<b>Trap Proxy</b>	
Enabled	Configuration setting for SNMP trap proxying. Enabling the trap proxy configures the associated SNMP agent to proxy internally generated traps. Options: Enabled or Disabled; default: Disabled
Virtual Router	Name of the virtual router that is configured for trap proxying. Click  to select a virtual router from the Associated Virtual Router dialog box. See <i>Related Dialog Boxes</i> on page 68.

3. Click Save.
4. Click the Boot Config Control tab.



The screenshot shows the 'Boot Config Control' configuration window. It features three tabs: 'System Info', 'Boot Config Control', and 'Timing'. The 'Boot Config Control' tab is selected. The window contains several configuration sections:

- Current Configuration:**
  - Control: factory defaults (dropdown)
  - Configuration File: [ ] .cnf
  - Release File: erx\_4-0-0b4-3 .rel
- Backup Configuration:**
  - Control: none (dropdown)
  - Configuration File: [ ] .cnf
  - Release File: [ ] .rel
- Auto-Revert:**
  - Control: default (dropdown)
  - Count Tolerance: 3
  - Time Tolerance (sec): 1800
- Force Revert to Backup:** (checkbox, currently unchecked)

5. Modify the parameter settings (Table 9).

**Table 9: System Boot Parameters**

<b>Parameter</b>	<b>Description</b>
Force Revert: to Backup	Forces the system to revert to the backup configuration the next time the system is rebooted regardless of the Auto-Revert parameter settings
<b>Current Configuration</b>	
Control	Current system boot configuration control; default: running configuration; cannot edit in Release 4.0
Configuration File	Current local boot configuration filename, with extension .cnf; default: blank; cannot edit in Release 4.0
Release File	Current local boot release filename, with extension .rel; default blank; cannot edit in Release 4.0
<b>Backup Configuration</b>	
Control	Backup system boot configuration control; default running configuration; default: none; cannot edit in Release 4.0
Configuration File	Local backup boot configuration filename, with extension .cnf; default: blank; cannot edit in Release 4.0
Release File	Local backup boot release filename, with extension .rel; default: blank; cannot edit in Release 4.0
<b>Auto-Revert</b>	
Control	Forces the system to revert to the backup configuration if the primary configuration fails beyond the configured tolerance values; default: default
Count Tolerance	Can edit only if Auto-Revert Control is set to "set"; default 3
Time Tolerance	Time tolerance in seconds; can edit only if Auto Revert Control is set to "set"; default 1800

6. Click Save.
7. Click the Timing tab.


8. Modify the parameter settings (Table 10).

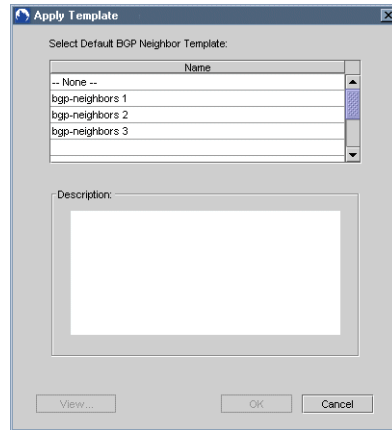
**Table 10: System Timing Parameters**

Parameter	Description
Operations Timing Source	If the current time source for the E-series router fails, the system automatically downgrades to the next timing source. Cannot edit; default: primary
Administrative Timing Source	If Auto Upgrade is enabled, the system never attempts to upgrade to a source higher than the selected administrative timing source. Default: primary
Auto Upgrade	Controls the automatic timing selector upgrade. If the current timing source for the system fails, the E-series router automatically downgrades to the next timing source. When you enable this parameter, the E-series router automatically switches back to a higher timing source when that source becomes available. When you disable this parameter, the E-series router prevents automatic upgrade to the next highest timing selector.
<b>Timing Source (Primary/Secondary/Tertiary)</b>	
Status	Status associated with the timing selector; cannot edit; default: Unknown
Type	System timing source type; can edit only for JUNOS versions 4.1.0 and later
Interface IF Index	Can edit only if the timing source type is Interface IF Index

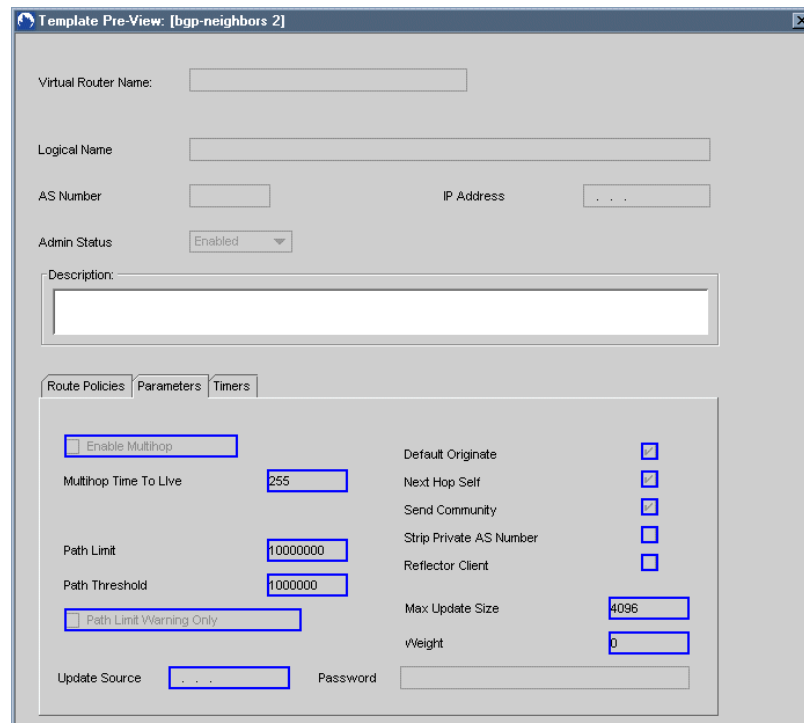
9. Click Save.

## Related Dialog Boxes

**Apply Template** The Apply Template dialog box appears when you click  in the description column next to Default BGP Template on the System Info tab. Use it to select a template.




1. Click a template.
2. (Optional) Click View to display the full configuration of the template.

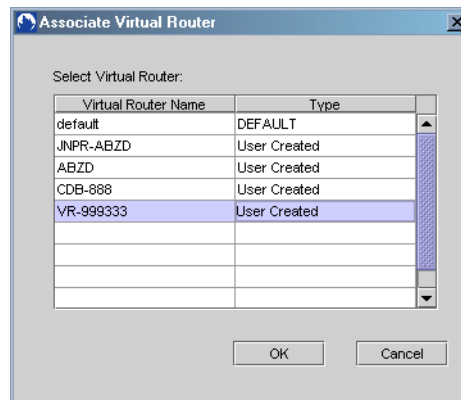


3. Close the Template Pre-View dialog box.
4. Click OK in the Apply Template dialog box.

The information is entered in the Default BGP Template text box in the System Info tab.

### Associate Virtual Router

The Associate Virtual Router dialog box appears when you click  in the description box next to Virtual Router on the System Info tab. Use it to select a virtual router.



1. Click a virtual router.
2. Click OK.

The virtual router name is entered in the Virtual Router text box in the System Info tab.

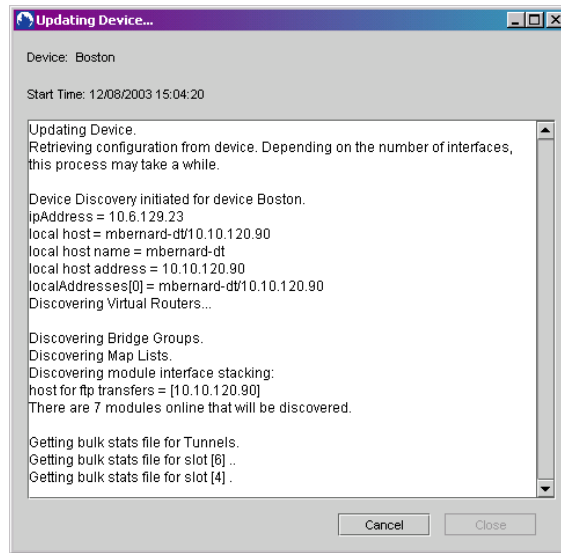
## Updating a Device Configuration

You can update the NMC-RX configuration for the device so that it matches the current configuration on the physical device.

To update your system:

1. In either the Instance Explorer or the Device-wide Explorer, select System, right-click, and select Update.

The Updating Device progress dialog box appears and indicates that the NMC-RX application is downloading the most recent configuration from the device.

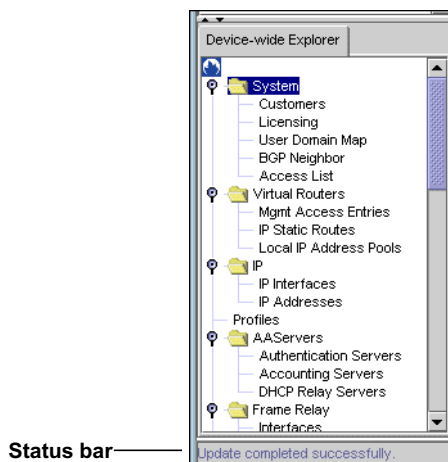


**NOTE:** When the NMC-RX application starts automapping the device and you close the Creating Device dialog box or click the Cancel button, a confirmation dialog box appears.

Any error messages or warnings that may occur during the update appear in the Updating Device dialog box. When the update is complete, a pop-up dialog box appears if there are any errors or warnings.

2. If you want to update the device regardless of the error or warning, click Yes.

When the process is complete, the status of the configuration appears in the status bar at the bottom of the window.



Status bar

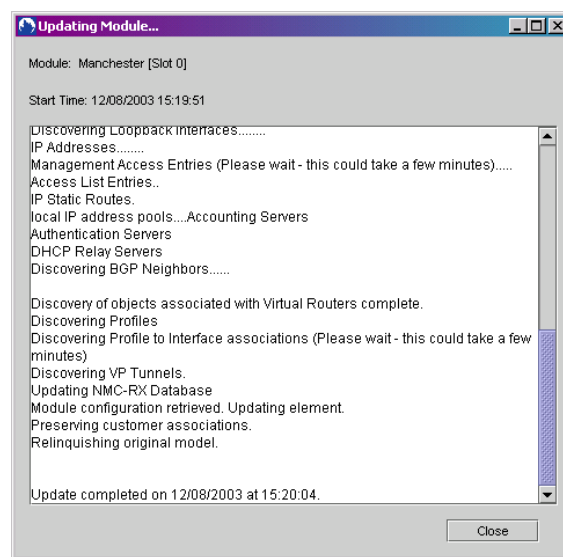
## Updating a Single Module or Port

You can update the NMC-RX configuration for a single module or port to match the current configuration on the physical device.

To update a single module or port:

1. In the Instance Explorer, select the module or port, right-click, and select Update.

The Update Module window or Update Port window (not shown) appears.



Any error messages or warnings that may occur during the update appear in the Updating Device dialog box. If only warnings occur, the update continues. However, if any errors occur, the update does not take place.

2. Click Close after the update is complete.

## Line Module Redundancy Groups

The NMC-RX software can recognize line module redundancy groups on a device and display which module is active and inactive (spared for). A redundancy group folder is created in the Instance Explorer, and the line modules in that group are placed in the folder.

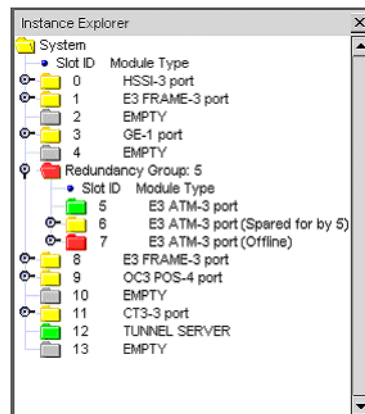
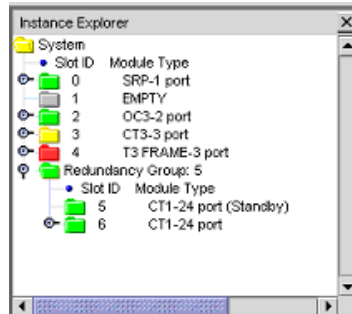


Table 11 contains some common redundancy group terms.

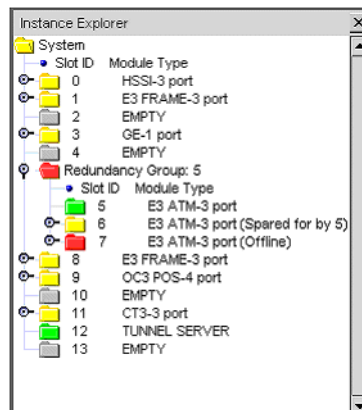
**Table 11: Line Module Redundancy Group Terms**

Term	Description
Redundancy group	<p>Group of line modules that contain a spare and one or more primary line modules in adjacent slots. To have a redundancy group, you must install a special midplane that allows the spare line module to take over (or spare) for any of the primary line modules. Redundancy groups come in several sizes from 2 to 6 line modules. For example:</p> <ul style="list-style-type: none"> <li>■ 2-module group is referred to as 1 + 1 (1 primary + 1 spare) redundancy</li> <li>■ 3-module group is referred to as 2 + 1 (2 primary + 1 spare) redundancy</li> <li>■ 6-module group is referred to as 5 + 1 (5 primary + 1 spare) redundancy</li> </ul>
Spare line module	<ul style="list-style-type: none"> <li>■ Line module in the lowest-numbered slot of the redundancy group. The spare takes over when a primary line module goes offline.</li> <li>■ Not configurable (except for admin status)</li> </ul>
Primary line module	<ul style="list-style-type: none"> <li>■ Active line module that is not a spare</li> <li>■ When offline, primary line modules are spared for by the spare line module in the group</li> <li>■ Configurable when online and when being spared for by a spare line module</li> <li>■ If there are multiple offline primary line modules, only one can be spared for by a spare line module</li> </ul>
Sparing for	<ul style="list-style-type: none"> <li>■ Spare line module takes over for a primary line module</li> <li>■ When the primary line module is offline, the state of the spare line module changes from standby to online. This process is also called switchover or failover.</li> </ul>

**Example 1** In this example, slot 5 has a spare line module in standby mode, and slot 6 has a primary line module that is online in a 1 + 1 redundancy group. Note that the group is issued an ID (5).



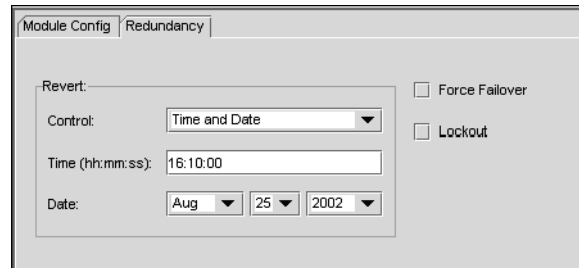
**Example 2** In this example, slots 5 through 7 are in a 2 + 1 redundancy group. The spare line module in slot 5 is currently sparing for the primary line module in slot 6, which is inactive. The primary line module in slot 7 is also inactive, but because the spare line module is already sparing for slot 6, slot 7 is colored red and labeled Offline.



## Configuring a Redundancy Module

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When you configure a line module, set redundancy features by clicking the Redundancy tab. The tab is visible only when the current slot is a member of a redundancy group and is a primary module. The tab is not displayed for spare line modules.



The screenshot shows a window titled "Module Config" with a "Redundancy" tab selected. The window contains a "Revert:" section with the following controls:

- Control:** A dropdown menu set to "Time and Date".
- Time (hh:mm:ss):** A text input field containing "16:10:00".
- Date:** Three dropdown menus for month, day, and year, set to "Aug", "25", and "2002" respectively.
- Force Failover:** An unchecked checkbox.
- Lockout:** An unchecked checkbox.

You can perform the following redundancy tasks:

- Force a failover to the spare line module.
- Prevent the spare line module from taking over for the slot where the line module is located.
- Revert to the primary line module at a particular time and date.



**NOTE:** For information about configuring modules, see each line module chapter.

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To configure module redundancy:

1. In the Instance Explorer, select the module that you want to configure, right-click, and select Configure.
2. Click the Redundancy tab.

3. Set the parameters (Table 12).

**Table 12: Module Redundancy Parameters**

Parameter	Description
Control	<p>Lets you revert control to the primary module at a specific time</p> <ul style="list-style-type: none"> <li>■ Off—Default</li> <li>■ Time and Date—Select a specific time and date</li> <li>■ Immediate—Available if module is inactive</li> </ul>
Time, Date	<ul style="list-style-type: none"> <li>■ Lets you select a specific time and date to revert control to the primary line module</li> <li>■ Available when Time and Date are selected from Control</li> </ul>
Force Failover	<ul style="list-style-type: none"> <li>■ Select to make the current slot inactive and cause the spare line module to take over</li> <li>■ Enabled only when the primary line module is online</li> </ul>
Lockout	<ul style="list-style-type: none"> <li>■ Prevents the spare line module from taking over for the slot. Selecting Force Failover, however, overrides Lockout.</li> </ul>

4. Click Save.

## System Logging

The NMC-RX application has a logging feature that records several attributes, actions, events, and errors on the system. The NMC-RX application saves one log file for each client session and stores the file in the */log* directory of the NMC-RX installation directory in the following filename format:

```
nmcrxlogMMDDYYYY_HHMMSS.log
```

By default, logging is enabled when you install the application.

To turn logging off:

1. Open *traceLog.rc* (located in the NMC-RX installation directory).
2. Change **nmcrxLogFileOn=On** to **nmcrxLogFileOn=Off**.
3. Save the file.

See the following sections for the types of information that are logged.

## User Login Actions

When you log in or out, user login actions are logged in the following format:

MM/DD/YYYY HH:MM:SS user:[username/Privilege Level] Message

where:

- MM/DD/YYYY—Month, day, year
- HH:MM:SS—Hour, minute, second
- username—Name can be from 1–32 characters and must contain at least one alphabetic and one numerical character. If the username = admin, the default privilege level of “all privileges” is used.
- privilege level—Determines the privileges that are assigned to the user. The following letter codes are used:
  - s—Security
  - b—Backup
  - v—View
  - c—Create
  - m—Configure
  - d—Delete
  - e—Execute
- Message—User login action

See Table 13 for username and privilege level examples. These actions include authorized client logins, unauthorized login attempts, user login changes, and user password changes.

**Table 13: User Login Actions**

Type	Description	Example
Authorized client login	Logs a successful user login.	11/13/2003 08:56:19 user:[jdoe7/--v----] logged in
Unauthorized login attempts	Failed login entries show the attempted login ID, as well as the reason for failure.	11/13/2003 09:02:23 user:[admin/sbvcmd] login failed, invalid password
User login changes	Logout entry occurs when the user exits the NMC-RX application.	11/13/2003 08:57:31 user:[jdoe7/--v----] logged out
	When a logged-in user changes login, an entry appears showing a logout of the user and a subsequent login of a new user.	11/13/2003 08:57:31 user:[jdoe7/--v----] logged out 11/13/2003 08:58:19 user:[msmith/--v----] logged in
User password changes	Logs when a user password is changed.	11/13/2003 13:46:41 user:[admin/sbvcmd] Password changed for User [jsmith2]

## Execute-Only Actions

When execute-only actions are started, they are logged in the following format:

```
MM/DD/YYYY HH:MM:SS user:[username/Privilege Level] action_name message
```

These actions include ATM ping, ping, Telnet, and traceroute. The log entry includes relevant device information. For example:

**Example 1** 11/13/2003 08:57:31 user:[jdoe7/--v----] Ping from NMC-RX to 10.6.129.203

**Example 2** 11/13/2003 09:57:31 user:[jdoe7/--v----] Ping from 10.6.129.203 to 112.34.55.2

**Example 3** 11/13/2003 10:57:31 user:[jdoe7/--v----] telnet 10.6.129.203

## Processing Actions

For actions that may take a long time to process, both the start and end time are recorded. The following message format is used:

```
MM/DD/YYYY HH:MM:SS user:[username/Privilege Level] action_name  
<initiated|completed|standby> message on device_ID
```

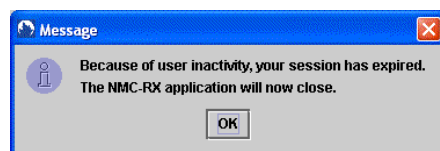
These actions include create, configure, delete, device updates, and configuration save and restore. For example:

**Example 1** 11/18/2003 15:56:00 user:[admin/sbvcmd] List Area create initiated on ATM Interface [ATM3/3]  
11/18/2003 15:56:14 user:[admin/sbvcmd] List Area create complete ATM Interface [ATM3/3]  
Created ATMSubIntf ATM3/3.3

**Example 2** 11/18/2003 15:56:00 user:[admin/sbvcmd] update initiated on 10.6.129.12  
...  
11/18/2003 16:16:00 user:[admin/sbvcmd] update completed on 10.6.129.12

## Using the User Inactivity Timer

You can use the user inactivity timer to specify the period of time that the NMC-RX application waits before it closes due to user inactivity. If you do not perform any tasks (view, configure, update, etc.) in the time specified, a message dialog box appears indicating that your session has ended.



When you click OK, all open dialog boxes and workshops close and the NMC-RX application exits. You must restart the application and log in again to continue using it.

The timer is reset each time you click the mouse or press a keyboard key within the NMC-RX application. When the application is busy, the timer is disabled but restarts when the task is completed.

## Configuring the User Inactivity Timer



**NOTE:** Only users with a security privilege can configure the user inactivity timer. For more information, see *Chapter 8, Configuring Security Settings*.

To enable or disable the user inactivity timer:

1. From the Configuration menu, select NMC-RX Application Settings, then click User Inactivity Timer.

The User Inactivity Timer tab appears in the work area.

2. Set parameters (Table 14).
  - To enable the timer, select the Enable Inactivity Timer check box, and enter a value in the field.
  - To disable the timer, clear the Enable Inactivity Timer check box.

**Table 14: User Inactivity Timer Parameters**

Parameter	Description
Enable Inactivity Timer	Enables or disables the timer
Inactivity timeout (min)	Number of minutes to wait before exiting the application during a period of inactivity; range 5-1000 minutes; default is set during installation

3. Click Save.

All current sessions are updated when the timer starts again.

## Downloading Software Releases to Devices

You can remotely download JUNOS software releases from a centralized location to one or more E-series routers. For example, you can select a specific software release and then download the file to multiple E-series routers at the same time.

You must store the software releases on the FTP server that is specified as the software release repository in the Software Download Settings work area of the NMC-RX application. You must configure read permission for the FTP user who is assigned to access the software release repository. List permission is optional; however, if you do not assign list permission, you must type the names of the software release files that you want to download, rather than select the files from a list.

### Configuring Software Download Settings

The Software Download Settings tab lets you enable the download software feature and configure the Software Repository FTP Settings, which you use to download the software. If you do not enable the FTP server, you cannot download the software to E-series routers using the NMC-RX application.



**NOTE:** Only users with a device maintenance privilege can configure software download settings. For more information, see *Chapter 8, Configuring Security Settings*.

To configure the software download settings:

1. From the Configuration menu in either the Network Workshop or the Device Workshop, select NMC-RX Application Settings, then click Software Download.

The Software Download tab appears in the work area.

2. Set the Software Download parameters (Table 15).

**Table 15: Software Download Parameters**

Parameter	Description
Enable Software Downloads	Select to enable software downloads; clear to disable the feature.
<b>Software Repository FTP Settings</b>	
IP Address	IP address of the Software Release Repository where the software is stored.
Login	User login ID for the FTP site; can be up to 32 characters; default: anonymous.
Password	User login password for the FTP site. The password entry is masked with "*" characters. You cannot leave the password blank; the password can be up to 1024 characters.
Sub Directory	Path from FTP root to the NMC-RX software releases directory; optional; range 255 characters.
Concurrent Downloads	Maximum number of simultaneous downloads that the FTP server allows; range: 1-10; default: 5.

3. Click Save.

### **Downloading Software Releases to Devices**

The download software feature is available in both the Network Workshop and the Device Workshop.

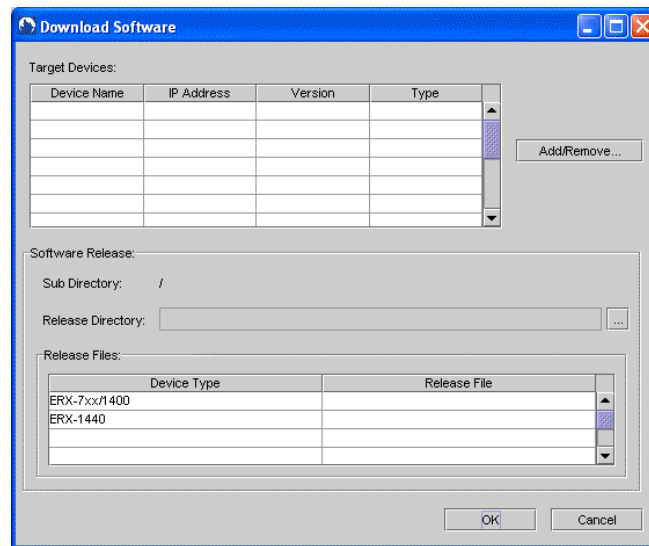
From the Network Workshop, you can download a software release to one or more devices simultaneously. From the Device Workshop, you can download to only one device.

### **Downloading Software to Multiple Devices**

To download software to multiple devices:


1. From the Network Workshop Tools menu, select Device Utilities, and select Download Software.

The Download Software dialog box appears.



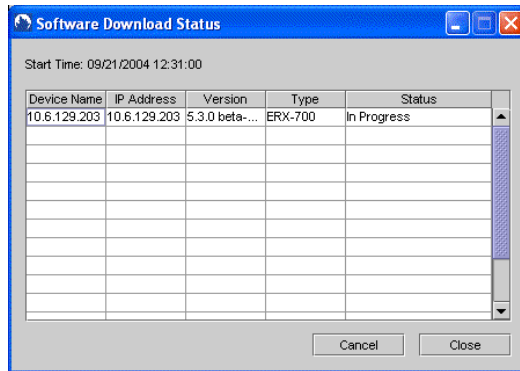
2. Select the target devices to which you want to download the software, and select the software release directory on the FTP server (Table 16).


**Table 16: Download Software Parameters**

Parameter	Description
Target Devices	List of devices to which the software is downloaded; click Add/Remove to add or remove devices to or from the list; see <i>Network Workshop-Related Dialog Boxes</i> on page 84.
<b>Software Release</b>	
Sub Directory	Subdirectory of FTP root that contains the software releases.
Release Directory	Directory path from the FTP root directory that contains the software releases; click  to select the directory; see <i>Network Workshop-Related Dialog Boxes</i> on page 84.
Release Files	List of software releases that you want to download to the target devices.

3. Click OK.

The selected software releases are then validated. If validation is unsuccessful, an information dialog box appears that lists the errors. If successful, downloading begins, and the Software Download Status dialog box appears and shows the status of each download.



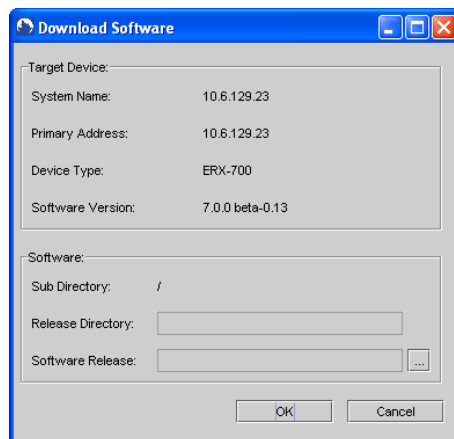
When you click Cancel, Close, or the  button, all queued downloads are canceled, but downloads already in progress continue. You cannot cancel pending downloads.

### Downloading Software to One Device

To download software to only one device:


1. Use one of the following methods to begin:
  - From the Device Workshop Tools menu, select Device Utilities, and click Download Software.
  - In the Device Workshop, click the System folder, right-click, and select Download Software.
  - In the Network Workshop, select a device, right-click, and select Download Software.

The Download Software dialog box appears.



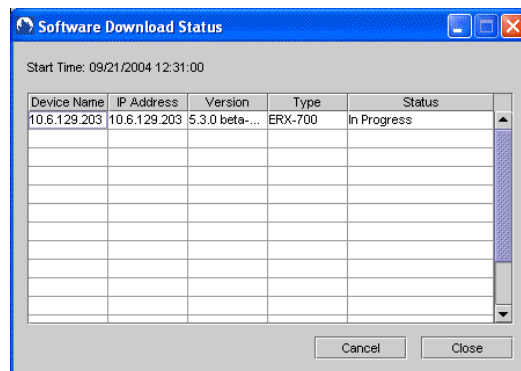
2. Select the software release on the FTP server (Table 17).


**Table 17: Download Software Parameters**

Parameter	Description
<b>Target Device</b>	Information about the device to which you are downloading the software.
<b>Software</b>	
Sub Directory	Subdirectory of FTP root that contains the software releases.
Release Directory	Directory path from the FTP root directory that contains the software releases.
Software Release	Name of software release that you want to download to the selected device; click  to select the file; see <i>Device Workshop-Related Dialog Boxes</i> on page 85.

3. Click OK.

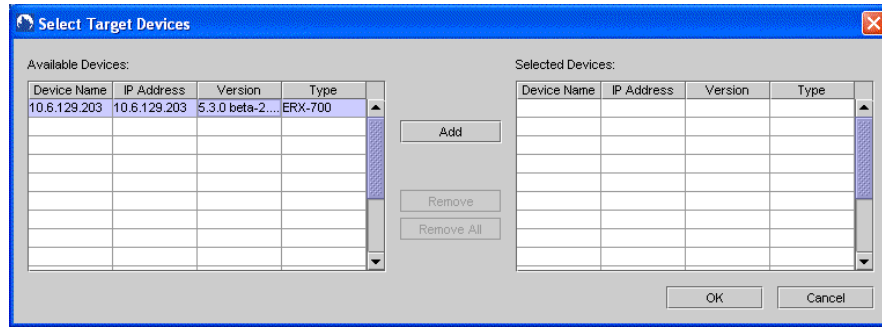
The selected software release is then validated. If validation is unsuccessful, an information dialog box appears that lists the errors. If successful, downloading begins, and the Software Download Status dialog box appears and shows the status of the file.



When you click Cancel, Close, or the  button, all queued downloads are canceled, but downloads already in progress continue. You cannot cancel pending downloads.


## Network Workshop–Related Dialog Boxes

**Select Target Devices** The Select Target Devices dialog box appears when you click the Add/Remove button in the Download Software dialog box. Use it to add or remove devices from the Target Devices list.



1. Select a device from the list, and click Add.
2. Click OK.

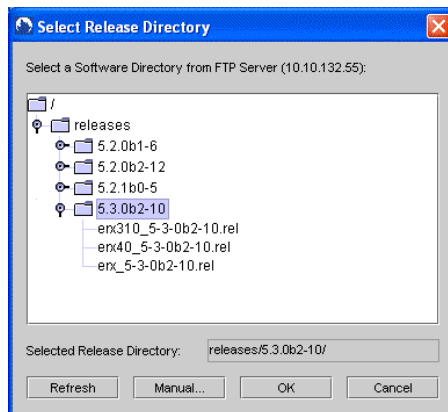
The devices are added to the Target Devices list.

**Select Release Directory** The Select Release Directory dialog box appears when you click  to the right of the Release Directory field in the Download Software dialog box. Use it to select a software directory from the FTP server that contains the software release you want to download.

Only release files and folders containing release files are displayed.



**NOTE:** Depending on the size of the software release repository, there may be a delay in listing the directories.



1. Click the folder that contains the software release you want to download.
2. Click OK.

The information is displayed in the Download Software dialog box.

### Select Release Files Manually

When you click Manual in the Select Release Directory dialog box, the Select Release Files Manually dialog box appears. From this dialog box, you can manually enter the release directory and release file.

1. Enter the release directory and release file (Table 18).

**Table 18: Select Release Files Manually Parameters**


Parameter	Description
Release Directory	Directory path from the FTP root directory that contains the software releases; combined with the filename and the subdirectory, it must not exceed 255 characters.
Release File	Name of software release that you want to download to the selected device; combined with the release directory and the subdirectory, it must not exceed 255 characters.

2. Click OK.

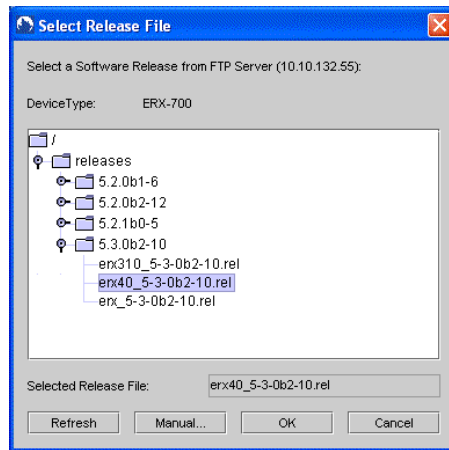
The information appears in the Download Software dialog box.

## Device Workshop–Related Dialog Boxes

### Select Release File

When you click  to the right of the Software Release field in the Download Software dialog box, the Select Release File dialog box appears. From this dialog box, you can select the software release file that you want to download to the selected device.

Only release files and folders that contain release files are listed.



**NOTE:** Depending on the size of the software release repository, there may be a delay in listing the directories.

1. Click the folder that contains the software release that you want to download.
2. Select the desired software release file.
3. Click OK.

The information appears in the Download Software dialog box.

**Select Release Files Manually** When you click Manual in the Select Release File dialog box, the Select Release Files Manually dialog box appears. From this dialog box, you can manually enter the release directory and release file.

1. Enter the release directory and release file (Table 19).

**Table 19: Select Release File Manually Parameters**

Parameter	Description
Release Directory	Directory path from the FTP root directory that contains the software releases; combined with the filename and the subdirectory, it must not exceed 255 characters.
Release File	Name of software release that you want to download to the selected device; combined with the release directory and the subdirectory, it must not exceed 255 characters.

2. Click OK.

The information appears in the Download Software dialog box.

