



# NMC-RX Element Management System Release Notes

*Release 4.0.1*

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# NMC-RX Release Notes

These *Release Notes* are for NMC-RX Element Management System Release 4.0.1. Unless specified otherwise, information in these *Release Notes* pertains to both the Windows NT and Sun Solaris versions of the 4.0.1 software.



**Note:** *If the information in these Release Notes differs from the information found in the product documentation, follow these Release Notes.*

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## Overview

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The NMC-RX application allows you to manage, configure, and monitor the ERX edge routers in your network and to communicate with them to obtain a complete and accurate picture of the network services you provide to your customers.

## **Before You Start**

Before you use the NMC-RX application, Juniper Networks suggests that you read these *Release Notes* in their entirety, especially the sections *Known Problems*, *Known Limitations*, and *Fixed Problems*.

## **About Release 4.0.1 Documentation**

With NMC-RX, you receive the following documentation:

- Online help (accessed through the software)
- A PDF version of the *NMC-RX User Guide*
- A PDF version of the *NMC-RX Release Notes* (*this document*)

## **Contacting Customer Service**

For technical support, contact Juniper Networks at support@juniper.net, or at 1-888-314-JTAC (within the United States) or 408-745-9500 (from outside the United States).

## **Updating the NMC-RX License Key**

If you need to update your license key after you install the NMC-RX application, choose NMC-RX Licensing from the Help menu.

## **New Features and Enhancements**

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NMC-RX Release 4.0.1 includes significant new features and enhancements (defined in the following sections). These features have been added to the NMC-RX application since Release 3.2. This release is compatible with ERX Releases 2.x, 3.0.x through 3.4.x, and 4.0.x.

### **AAA Configuration**

Additional AAA and RADIUS parameters supported by the CLI are now configurable through the NMC-RX application.

The new configurable AAA parameters consist of: User Session timeout parameters, Accounting Stop on Failure, Accounting Stop on Access Deny, and Duplicate Address Check.

The new configurable RADIUS parameters include: Update Source Address, UDP Checksum, Rollover on Reject, and RADIUS message attributes. AAA statistics can be monitored as an action on Virtual Router objects.

## **ATM CAC**

You may set the optional connection admission control (CAC) parameters when creating and modifying ATM interfaces. When CAC is enabled, the NMC-RX application calculates the required bandwidth and compares it to the available bandwidth based on the most recent system update. You are warned if the application determines that there is not sufficient bandwidth to honor the request. This calculation is executed when there is existing stacking and upon creation and modification of VP tunnels and ATM circuits.

## **ATM Ping**

The NMC-RX application supports ATM Ping on data circuits. This feature is applicable on an ERX edge router running release 3.2.3 or greater. Ping using data circuits is supported on all ATM cards.

## **Hybrid PVC**

Allows you to stack one each of IP, PPPoE, and CBF interfaces on a Bridged IP (1483) interface.

The Bridged IP (1483) Create menu option contains IP Address, PPPoE Interface, and CBF Interface options. Since only one of each is allowed, the menu options will only contain those interfaces that have not already been created. Once created, these interfaces can be listed relative to the Bridged IP or the device.

You can also create hybrid PVCs through the Bulk Services wizard.

## **Line Module Redundancy**

The NMC-RX application now supports the configuration of line module redundancy. A redundancy group is a group of line modules that has a spare and one or more primary line modules in adjacent slots. For a redundancy group, a special midplane must be installed which allows the spare line module to take over for any of the primary line modules.

## **Installation**

The installation procedure for the NMC-RX application has been simplified. You may now choose from three installation sets:

- All NMC-RX Components with Database Server
- All NMC-RX Components
- NMC-RX Client Only

## **Policy Management**

Policy management allows you to implement packet forwarding and routing specifically tailored to customers' requirements. You can create and implement policies, and assign those policies to profiles or IP interfaces. In this way, specified tasks are performed on packets based on the criteria you define in the policy list. See *Chapter 26, Configuring Policy Management* in the *NMC-RX-Element Management System User Guide*.

Policy management uses policy routing to predefine packet flow to a destination port without performing a route table lookup. Packets are sorted according to protocol or precedence into packet flows at ingress or egress by classifier control lists. Policy lists initiate actions specified by rules that can include classifier control lists.



**Note:** Policy management requires an ERX 4.0 release or greater.

## **Port and Module Discovery**

The NMC-RX application can now discover a single port or module on an ERX edge router. In earlier releases, the ConfigSync service could only fully discover a device or update an existing device.

## **PPPoE Pass Through**

This feature allows you to associate one Bridged IP (1483) interface with another by establishing a connection based forwarding (CBF) connection.

To establish a PPPoE Pass Through, you use the Establish CBF Connection menu option on the Bridged IP (1483) interface. This action creates the necessary interfaces to create a CBF connection. Traffic, other than IP and PPPoE traffic, is forwarded through the CBF connection to the associated Bridged IP (1483) interface. CBF connections can be listed relative to a CBF interface or relative to the device.

## **Save and Restore**

The NMC-RX application enables you to save and restore configuration files for the devices in your network. The Configuration Save utility saves a device's running configuration to a staging area and then transfers it to a user-specified location via FTP. The Configuration Restore utility transfers saved config files, via FTP, back to the originating device.

## **Solaris 2.8**

The NMC-RX application now supports Solaris 2.8.

## **SSCC Parameters**

ERX devices have an embedded client that interacts with the Service Deployment System (SDX; formerly SSC, Service Selection Center). You can now configure primary, secondary, and tertiary servers and ports.

## **Sybase Admin Password**

The administrator password is not visible in the Resource Configurator display. Asterisks are displayed instead.

## **Templates**

For all templatable objects, the NMC-RX application now provides the same template capability on object creation as is currently provided through object configuration. Object creation parameter settings can be saved as templates, and templates can be applied on object creation dialogs and through Bulk Services. In addition, object creation dialogs are now initialized with the default template values. Bulk Services allows the user to select a Template Pak to be applied, where applicable, throughout the Bulk Services process.

## **User Profile Password**

User profile password rules have been enhanced. When you create a user profile, the user's password must be at least 6, but no more than 16, characters long. It must also contain at least one alpha and one numeric character. The password assigned by the administrator is considered to be a default password that the user can change.

## **Windows 2000**

The NMC-RX application now supports Windows 2000.

## **Installation Information**

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See *Chapter 2, Installing and Running the NMC-RX Application* in the *NMC-RX Element Management System User Guide*.

## Known Problems

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This section lists the known problems in release 4.0.1:

- The uninstall program does not remove all registry key items, such as the NMCRX\_HOME environment variable. This does not create a problem when you either upgrade or re-install a different version or point release.
- When discovering a large system, the ConfigSync Service consumes a large amount of system memory. Once this memory is used, it is not returned to the system. This memory can only be released by shutting down the ConfigSync Service.

## Known Limitations

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This section lists the known limitations in release 4.0.1:

- When you use Bulk Services to create a large number of objects, you should limit the number of objects to a maximum of 9000. Otherwise, you run the risk of running out of memory. To create additional objects, you can exit the NMC-RX application and then restart.
- The NMC-RX application does not currently support Cisco HDLC and Frame Relay interfaces on POS interfaces, but discovery does not display a warning message regarding this limitation.
- If you choose NMC-RX Help from the Help menu on a Windows NT system and your default Web browser is Netscape Navigator (version 4.76), Netscape Navigator launches and displays the WebHelp. However, if Netscape Navigator is already running, WebHelp is not displayed, although the browser is brought to the foreground.

**Recommendation:** Use Internet Explorer Version 6.0 or later.

- If you choose NMC-RX Help from the Help menu on a Solaris system and your default Web browser is Netscape Navigator, Netscape Navigator may not always launch.

**Recommendation:** Use Internet Explorer Version 6.0 or later. See *Troubleshooting* for additional solutions.

- Currently, the NMC-RX application allows you to start multiple Polling and ConfigSync Services at the same time. Only the last service started is actually utilized by the application. There will be no disruption of service by starting these additional services; however, it is a waste of resources to do so, and currently no error message is

displayed to indicate the displacement of the existing service. You should close all instances and restart.

- When creating a BGP Neighbor, default values for many attributes are explicitly set in SNMP even if the user did not explicitly set these values. This results in unwanted configuration parameters being added to the configuration.

**Recommendation:** Remove these unwanted parameters using the CLI.

## Troubleshooting

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If any of the following conditions appear, try the suggested workaround(s).

- The default port for Java RMI (Remote Method Invocation) is 1099. If this port is in use, Polling Service and ConfigSync Service do not run correctly and an error message appears.

**Workaround** – Go to the NMC-RX Resource Configurator and click the Polling Service tab. Change the RMI Registry Port from 1099 to another number (for example, try 1300). Now, click the ConfigSync Service tab and change the RMI Registry Port from 1099 to another number.

- When using Polling Service, the following message may appear:

`No access.`

The *No access* error occurs if Polling Service does not have the appropriate permissions (admin community string) to establish the MaxPDUSize on the box to be an appropriate value for the size of PDUs that are sent via Polling Service.

**Workaround** – Verify the community strings that are being used by viewing the user profile. From the Configuration menu, select List All, and click User Profile. Then select the user's name you want to view, right-click, and click View.

Telnet to the device and verify the SNMP settings by checking the **show config** information. In particular, you must ensure that you have a community string with admin privileges configured. If the community strings all look correct, temporarily change all of the community strings to the admin community string. Once you have successfully retrieved status from the NMC-RX application, go back and change the community strings to their original settings.

- There are two causes that prevent WebHelp from starting on Solaris:
  - > You have not defined the Netscape path in the PATH variable. This results in an error message being displayed in the NMC-RX window.  
**Workaround** – Define the Netscape path.
  - > You may not have permission to connect to the X server. This prevents Netscape from being started. When this happens, no error message is generated and you may think that the online help does not work properly.  
**Workaround** – Enter the command **xhost <hostname >** in a term window. Doing this disables the X server security and allows the Netscape browser to be displayed.

## Fixed Problems

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The following problems reported in Release 3.2.x, have been fixed:

- The following MIB exception is displayed when you run the NMC-RX application or the ConfigSync Service: Cannot find module: ATM-FORUM-SNMP-M4-MIB. (This does not affect the proper running of the NMC-RX application.)
- You can create both an IP address and a PPPoE interface either directly on the Ethernet line interface or on a VLAN subinterface stacked on the Ethernet line interface. Problems may arise, however, when you delete PPPoE interfaces in the reverse order from which you created them, using either the NMC-RX application or the CLI. The PPPoE interface does not delete completely, and there is currently no way to delete it through the CLI. Also, in the case of the VLAN subinterface, the interface may no longer be recognized by the CLI.
- If you have a Frame Relay interface configured on a HSSI port (configured by the CLI), and you do a system update, you receive a warning, and the Frame Relay interface is not learned by the ERX system.
- When creating an ATM circuit, if the MBS value is set to 0 when the SCR is not set to 0, then an SNMP error is returned from the device.
- When creating an ATM Circuit on a T3 ATM-3 port line card where the framing type of the line interface is set to either M23Plcp or CbitParityPlcp, if the PCR is set to a value greater than 40704, an SNMP error is returned from the device.

- When creating an ATM Circuit on an E3 ATM-3 port line card where the framing type of the line interface is set to Framed, if the PCR is set to a value greater than 33741, an SNMP error is returned from the device.
- When creating an ATM Circuit on an E3 ATM-3 port line card where the framing type of the line interface is set to G832, if the PCR is set to a value greater than 33920, an SNMP error is returned from the device.
- An error occurs when you use Services to create ATM subinterfaces that use profile of type Any encapsulation.
- When you use Services to create an ATM subinterface, they do not create auto-config PPPoE in the ERX configuration.
- The aal5autoconfig encapsulation type is missing from the ATM circuit configuration option.
- NMC-RX discovery fails when discovering an ERX device with VRF configured.
- NMC-RX discovery fails when Slot is administratively disabled.
- An NMC-RX client interface does not allow you to ping from an ERX device from a different virtual router.
- The NMC-RX application does not display ERX Module serial numbers.
- The PPPoE admin state is down after creation from the NMC-RX application.
- Extra "the" displayed in the information area in the Network Workshop (to the right of the Refresh button) following a List All command.
- The NMC-RX application or resource editor will not start on Pentium 4 Windows machine.
- The NMC-RX installation application will fail with an access violation exception error when installing on Pentium 4 Windows machine.
- Can't add static default route via NMC-RX application.
- "Not enough memory" error on startup of NMC-RX database occurs on machines with more than 4-GB of memory.

