



# **NMC-RX™ Element Management System for Juniper Networks® Routing Platforms**

## **Release Notes**

*Release 7.1.0*

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# Release 7.1.0

These *Release Notes* are for NMC-RX Element Management System Release 7.1.0. Unless specified otherwise, information in these *Release Notes* pertains to both the Windows and Sun Solaris versions of the release 7.1.0 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 E-series routers in your network and to communicate with them to obtain a complete and accurate picture of the network services that you provide to your customers.

## Before You Start

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

## About Release 7.1.0 Documentation

With the NMC-RX application, you receive the following documentation:

- Online Help (integral to the NMC-RX application)
- A PDF version of the *NMC-RX User Guide* (Vol. 1 and Vol. 2)
- A PDF version of the *NMC-RX Release Notes* (this document)

## **Contacting Customer Service**

For technical support, open a support case with the Case Manager link at <http://www.juniper.net/support/> or call 1-888-314-JTAC (from the United States, Canada, or Mexico) or 1-408-745-9500 (from elsewhere).

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

If you need to update your license keys after you install the NMC-RX application, choose NMC-RX Licensing from the Help menu. In the NMC-RX Licensing Information dialog box, you can change either your Config Sync Services or Provisioning Service license key.

## **New Features and Enhancements**

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NMC-RX Release 7.1.0 includes new features and enhancements (defined in the following sections). These features have been added to the NMC-RX application since Release 7.0.x.

This release is intended to work with JUNOS Releases 7.1.x, 7.0.x, and 6.1.x. This release is also compatible with JUNOS Releases 6.0.x and 5.3.x.

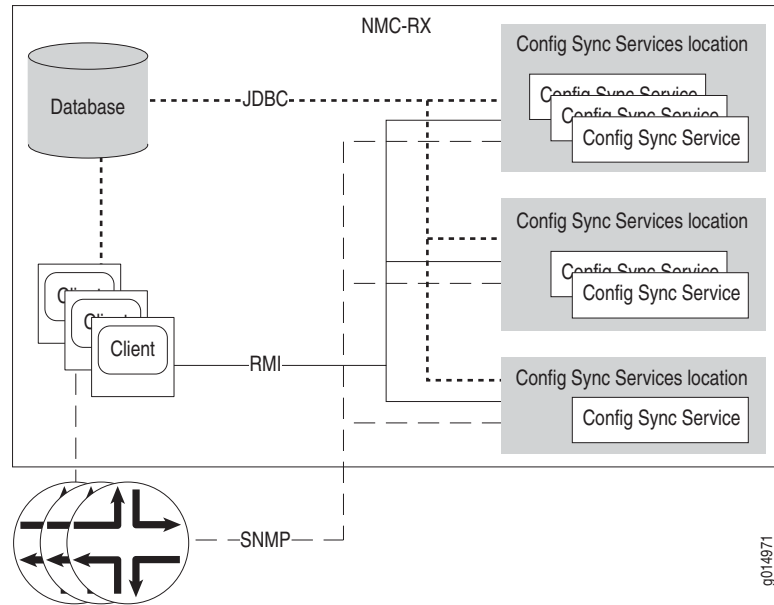
### **Canceling a Recurring Scheduled Task That Is in Progress**

You can now cancel a recurring scheduled task that is currently in progress. Do this by deactivating the scheduled task in the List All area or when viewing the scheduled tasks for a particular device.

### **Discovery Performance Improvements**

The NMC-RX application uses a distributed processing model to provide greater scalability and control of discovery and update processes for E-series devices (Figure 1). Discovery performance improvements have been made for the following objects:

- ATM SubInterfaces
- ATM Circuits
- IP Interfaces
- IP Addresses

**Figure 1: Sample Config Sync Services Distribution**

A Config Sync Services pool allows multiple Config Sync Services to be active simultaneously, thus providing a wealth of processing power that is available to multiple Config Sync Services locations. With the addition of the new Config Sync Services installation option, a system administrator can choose to install one or more Config Sync Services on a workstation without having to install the other NMC-RX components.

You can run multiple Config Sync Services on a single platform or utilize multiple platforms as part of the same NMC-RX Config Sync Services pool. You can oversee and manage the distributed Config Sync Services pool using the NMC-RX client application. For more information about Config Sync Services, see *NMC-RX User Guide, Vol. 2, Chapter 11, Configuring Config Sync Services*.

### ***ERX-310 Router and E320 Router Support***

You can now configure ERX-310 routers and E320 routers using the NMC-RX application.

The E320 router supports the following modules:

- LM-4
- SRP-100
- SFM-100
- OC3/STM1-8 ATM IOA
- OC12/STM4-2 ATM IOA
- OC12/STM4-2 POS IOA
- OC48/STM16 POS IOA
- GE-4 IOA
- 10GE IOA
- Redundancy IOA
- Service IOA

### ***ERX OC3/STM1 GE/FE Module Combination***

The NMC-RX application now supports the OC3/STM1 GE/FE module on ERX routers. This module combination provides Gigabit Ethernet operation through one line interface and OC3/STM1 ATM operation through two line interfaces.

### ***ERX GE High Density (HDE) Module Combination***

The NMC-RX application now supports the GE High Density (HDE) module on ERX routers. This module combination provides Gigabit Ethernet operation through two line interfaces.

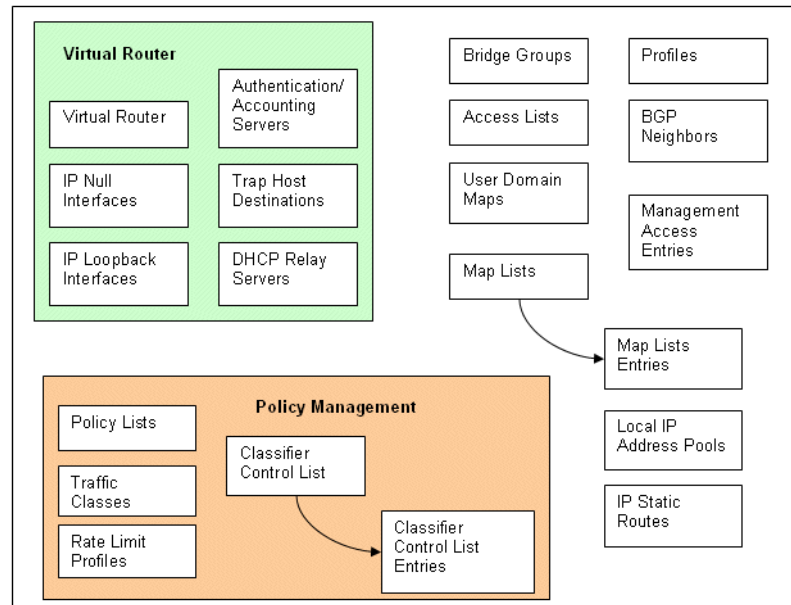
### ***Software License Key and End User License Agreement***

The NMC-RX software license key has been removed from the application and replaced with a standard End User License Agreement that you must accept to install the software. It is no longer necessary to enter a license key during installation. However, you still need a license key for Config Sync Services and Provisioning Service.

## Updating Global Configurations

The Global Update command enables you to update global and device-wide settings, either on demand or as a scheduled task. These settings are not explicitly part of stacking configurations, but instead are referenced by or associated to the stackings. Figure 2 illustrates the settings that are part of a global configuration update.

**Figure 2: Global Configuration Update Settings**



The following global configuration settings may refer to stacking configurations that are not discovered in a global configuration update:

- Virtual router
- Bridge group
- Profile
- Policy list

If a global configuration update has effected the stacking on these settings, a warning is displayed and you are given the option to perform a full device update.

## Provisioning Server Enhancements

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The following changes have been made for the Provisioning Service.

### ATM Subinterface Provisioning Object

The ATMSUBINTF\_DISTINGUISHER attribute has been added to the ATMSubInterface object type in the unspRXDeviceMgr.idl file. It was also added to the NMC-RX application.

Attribute	Characteristic	Description	MIB Entry
ATMSUBINTF_DISTINGUISHER	Create	ATM identifier used to uniquely characterize the subinterface on this ATM interface.	juniAtmSubIfDistinguisher

### ATM PVC Provisioning Object

The characteristic in the ATM PVC object type in the unspRXDeviceMgr.idl file has been changed from View to Create.

Attribute	Characteristic	Description	MIB Entry
VCD	Create	Virtual circuit descriptor	juniAtmSubIfVccVcd

### Port (OC3/OC12)

The LINE\_INTERFACE\_TYPE attribute in this type of provisioning object has been updated to accommodate the Hybrid-2xOC3 ATM, 1xGE module in the unspRXDeviceMgr.idl file.

**Table 1: Attributes (Port: OC3/OC12)**

Attribute	Characteristic	Description	MIB Entry
LINE_INTERFACE_TYPE	View	Line interface type	3 = OC3 2-port 12 = OC12 ATM 1-port 14 = OC3 ATM 4-port 36 = Hybrid-2xOC3 ATM, 1xGE (Valid for port 0 and port 1 only; port 2 is a GE type and is not supported.)

### **PVS Test Utility Dialog Box**

Two new fields, EMS Name and Port, have been added to the PVS Test Utility dialog box. You can now name and run multiple uniquely named PVS Services to one NMC-RX database.

### **Running Multiple PVS Services to One NMC-RX Database**

To run multiple uniquely named PVS Services to one NMC-RX database, follow these steps. Note that there must be one dedicated Provisioning Service for each CORBA client:

1. Start the Naming Service.
2. Modify the PVS.rc file by assigning a unique `emsName` and server port for the Provisioning Service.
3. Start the NMC RMI Service.
4. Start the NMC CORBA Service.
5. Start the PVS Test Utility, and confirm that the `emsName` (Provisioning Service) is up and functioning as expected.
6. Modify the PVS.rc file again by assigning a different `emsName` and server port for the Provisioning Service.
7. Repeat step 3–5.

## Installation Information

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See *Chapter 2, Installing and Running the NMC-RX Application*, in the *NMC-RX User Guide, Vol. 1*.

Solaris software patches 108940-50 and 108652-66 are required to install the NMC-RX application on Solaris 2.8. To find the required patches for your system, visit:

- <http://sunsolve.sun.com/pub-cgi/show.pl?target=patches/patch-access>

## Known Problems

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This section lists the known problems in release 7.1.0:

- When you use Add/Remove Programs in Windows to remove the Juniper Networks NMC-RX application, all Config Sync Services are also removed. However, entries for the Config Sync Services still appear in the Add/Remove Programs dialog box.

**Workaround:** Close, then reopen the Add/Remove Programs dialog box to refresh it and confirm that the Config Sync Services entries no longer appear.

- An SNMP error occurs when you try to configure an IP static route and select a nonbroadcast multiaccess (NBMA) or broadcast IP interface as the next hop. Only IP interfaces with a category of point-to-point can be used as the next hop for an IP static route.
- IP interfaces that you choose for any forward or next interface rules within a policy list must exist on the same virtual router. An SNMP error occurs if you add a forward or next interface rule to the policy list that specifies an IP interface from a different virtual router.

## Known Limitations

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This section lists the known limitations in Release 7.1.0:

- When you click Install on the Pre-Install Summary dialog box during installation, there is a short amount of time when the database updates. If you click Cancel during this time, the database remains locked for the installation of additional Config Sync Services.

**Recommendation:** Do not click Cancel after the installation begins. Instead, allow the installation to complete, and then use the NMC-RX Uninstaller or Config Sync Services uninstaller to remove the desired components.

- When you use Bulk Services to create a large number of objects, 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.

- Currently, the NMC-RX application allows you to start multiple Polling Services at the same time. Only one Polling Service is actually used by the application. There will be no disruption of service if you start additional services; however, it is a waste of resources to do so, and currently no error message is displayed to indicate any displacement of the service being used. All instances of polling should be closed, and only one restarted.
- When the Config Sync Services and the Polling Service are started before the database has completely initialized, an error occurs.

**Recommendation:** Wait until the database is initialized before launching other NMC-RX components. If an error has occurred, close all NMC-RX components (including the database) and start over.

- An error may occur if, during a device update, you attempt to make changes to a scheduled task and save them.

**Workaround:** Wait until the device has been updated, and then edit the scheduled tasks.

## Troubleshooting

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

- Two causes 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.
- 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:** Define the Netscape path.

**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 previous releases have been fixed:

- Config Sync Services FTP directories on Solaris are not created with read/write privileges.

**Workaround:** After starting a Config Sync Service for the first time, and before performing a device discovery, execute the following command:

```
chmod -R 777 < local FTP root directory > / < FTP subdirectory >
```

Note that `< local FTP root directory >` and `< ftp subdirectory >` are the directories set during installation.

- If you edit the Integrated Local Management Interface (ILMI) settings (virtual path identifier [VPI] and virtual circuit identifier [VCI]) of an ATM interface while the ILMI Settings Admin Status is set to “Up,” an SNMP error occurs.
- **Workaround:** Before changing VPI and VCI settings, change the ILMI Settings Admin Status to “Down,” and click Save. Next, update the VPI and VCI settings, and click Save. Then, change the ILMI Settings Admin Status back to “Up,” and click Save. You cannot create Frame Relay major interfaces for devices running JUNOS release 7.0.0bx. You can create Frame Relay major interfaces for devices running JUNOS release 7.0.0 or earlier.