

Chapter 13

Using the Resource Configurator and NMC-RX Services

This chapter discusses using the NMC-RX Resource Configurator for configuring the NMC-RX services.

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Overview

The Resource Configurator is a stand-alone application that allows configuration of the following resources:

NMC-RX database – Provides a main storage area for management of both group and device configurations.

SNMP – Enables you to configure basic SNMP parameters.

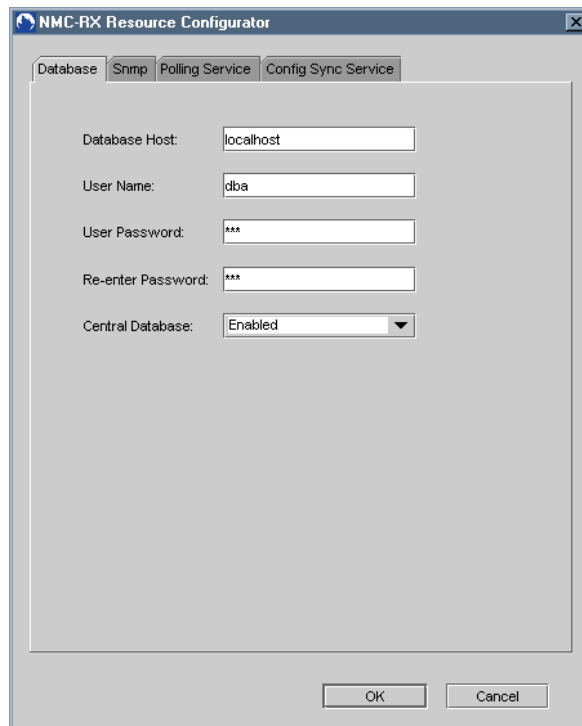
Polling service – Collects status information on managed devices via SNMP and redistributes that information to network management clients.

ConfigSync service – Provides device discovery services.

Running the Resource Configurator

1. Double-click the Resource Configurator desktop icon, or from the NMC-RX Tools menu, click NMC-RX Settings.

The NMC-RX Resource Configurator opens.



2. Click each tab and set parameters (see following sections for details).
3. Click OK when you are done.

The settings are saved, and the Resource Configurator closes.

Configuring the NMC-RX Database

The NMC-RX application provides two databases: the Demo database, which includes some configurations of groups and devices that you may use to get started, and a second database with no groups or devices configured.



NOTE: If the Database tab does not appear in the Resource Configurator, the database was not installed on your workstation.

To configure the database:

1. Click the Database tab in the NMC-RX Resource Configurator.
2. Set the database parameters. See Table 67.

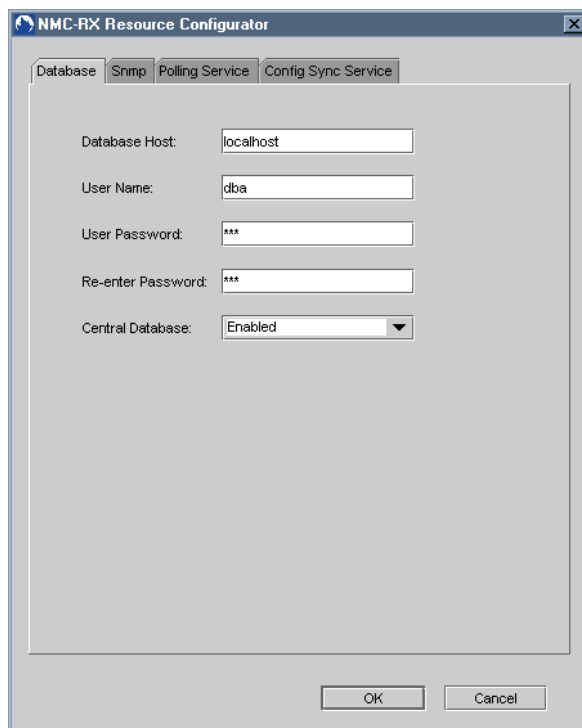


Table 67: Database parameters

Parameter	Description
Database Host	System on which the database resides Either accept <i>localhost</i> (the default), or replace <i>localhost</i> with either the name or IP address of the system on which the database resides NOTE: If you use a name, a naming service must be running on the network. We recommend using an IP address.
User Name	Currently, the only way to access the database; default: dba
User Password	Currently, the only way to access the database; default: sql
Re-enter Password	Enter your password again to confirm it.
Central Database	Enables/disables use of multiple users on the database; provides transaction logging

3. If you have finished creating services, click OK. Otherwise, click the next tab to continue.

Running the Database

Before running the NMC-RX application or the Polling or ConfigSync services, you must run the NMC-RX database either locally or on another system.



NOTE: The database can be running on a machine other than the one on which the Polling and ConfigSync services are running. In this case, be sure you started the database on the other machine.

To run the NMC-RX database, double-click the database icon. (You can choose either NMC-RX Database or NMC-RX DemoDB.)

If you are running the database locally, the Database icon appears in the desktop tray. This is the graphical indication that the database is available to the NMC-RX application. The Polling and ConfigSync services and the NMC-RX application can now connect with the database.

If you are running the database on another machine, you do not receive any indication that it is running.



NOTE: Be sure to wait until the database is initialized before launching other NMC-RX components. If an error occurs, close all NMC-RX components (including the database) and start over.



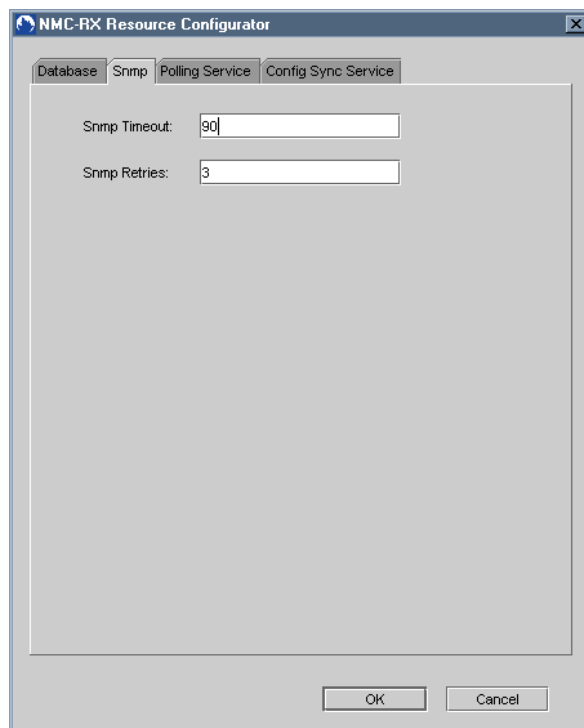
NOTE: The database does not start automatically when you restart your system. Also, when you exit the Polling service, the ConfigSync service, or the NMC-RX application itself, you do not need to stop the database from running.

Configuring SNMP

The Resource Configurator allows you to configure basic SNMP parameters.

To configure SNMP:

1. Click the SNMP tab in the NMC-RX Resource Configurator.



2. Set the SNMP parameters. See Table 68.

Table 68: SNMP parameters

Parameter	Description
SNMP Timeout	Amount of time (seconds) that passes after an SNMP request has been made before it is considered not to have responded
SNMP Retries	Number of times an SNMP request will be sent and timed out before the request is considered to have failed

3. If you have finished creating services, click OK. Otherwise, click the next tab to continue.

Configuring the Polling Service

The Polling service is an application that collects status information on managed devices via SNMP and redistributes that information to network management clients. This service eliminates the need for every client to poll devices individually for status and reduces the SNMP load placed on managed devices. The status must be updated frequently to maintain an accurate view of the device. The Polling service also maintains a log detailing client connections and polling problems that arise.



NOTE: If the Polling service tab does not appear in the Resource Configurator, the service was not installed on your workstation.

To configure the Polling service:

1. Click the Polling Service tab in the NMC-RX Resource Configurator.
2. Set the polling service parameters. See Table 69.

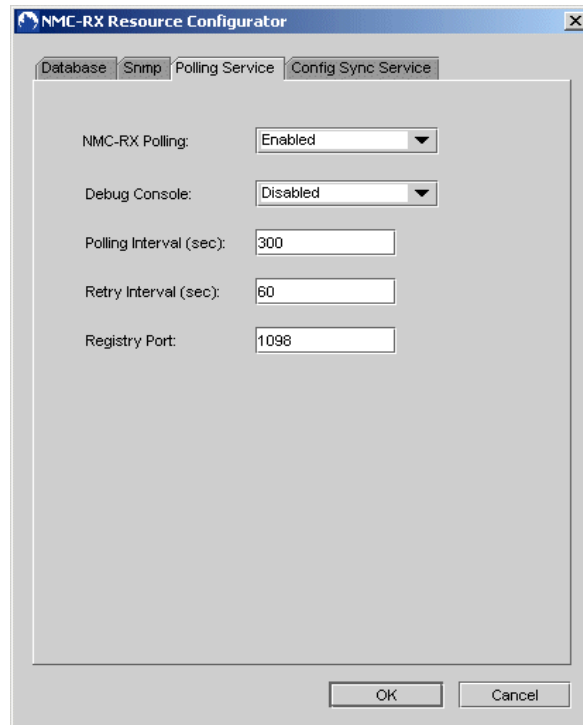


Table 69: Polling service parameters

Parameter	Description
NMC-RX Polling	Enable or disable the Polling service; default: Enabled
Debug Console	Enable or disable the polling client console; console shows polling activity as it happens; default: Disabled
Polling Interval (sec)	Time that passes between polls; default 300 seconds (5 minutes)
Retry Interval (sec)	Time between not discovering a device and trying again; default 60 seconds (1 minute)
Registry Port	Standard default for the port is 1099; if 1099 is in use, you can change the port number

3. If you have finished creating services, click OK. Otherwise, click the next tab to continue.

Running the Polling Service

Be sure the Polling service is running before you start the NMC-RX application. If the Polling service is not running, the application periodically tries to connect to the Polling service.



NOTE: Only one instance of the Polling service should be run per NMC-RX database. For example, if two users are running the NMC-RX application and are sharing a database, they should run only one Polling service between them.

To run the Polling service:

Double-click the NMC-RX Polling icon on your desktop, or click Start > Programs > Nmc-rx > Polling Service.



NOTE: If the Polling service cannot connect to the database, it will not start, and a message will indicate that the database is unavailable.

Getting Status Information

When the Polling service is running, the system folders and the device and module icons change color to indicate the status of each device. Text labels to the right of the module type denote a slot's status. See Table 70 and Table 71 for color and text status explanations.

Table 70: Color status indicators

Color	Meaning
Blue	No connection has been made between the NMC-RX application and the device. NOTE: This color is not used for modules.
Gray	The Polling service has not reported any status for the device or module. Also, when polling is not enabled in the NMC-RX application, all device or module icons are gray. NOTE: This color should persist only when an unreachable device is being polled for the first time, in which case it will turn blue after approximately 75 seconds.
Green	Device or module is OK.
Red	Device or module has failed.
Yellow	A warning that something is not right with the device or module. For example, the device has a problem with one or more, but not all, modules, or the modules have not finished booting and initializing.
Cyan	A failure that does not affect service; for example, a card or port being in the admin down state

Table 71: Text status labels

Label	Meaning
EMPTY	Slot does not contain a module.
Standby	Card is the spare for its redundancy group.
Offline	Module is present, but currently offline.
Update	Module has an operational status of online, but was not discovered by the ConfigSync service during the last discovery. You should perform an update on this module.
Mismatch	Current module is different than the one discovered earlier. You should perform an update on this module.
Missing	Module that was discovered earlier has been removed.
Spared for by <i>N</i>	Module has failed and module <i>N</i> has taken over.

Polling Service Log

When the Polling service is running, it creates a log file (pollingServer.log). This log file is in the *log* directory of the NMC-RX home directory on the system the Polling service is running on.

Configuring the ConfigSync Service

The ConfigSync service provides device discovery services. For the ConfigSync service to discover a device on your network, you need to create the device in the NMC-RX application using the device's network IP address. When you create a new device through the NMC-RX application, the ConfigSync service goes out to the device and obtains information about it. You can also configure FTP settings so that you can save and restore configuration files.



NOTE: If the ConfigSync Service tab does not appear in the Resource Configurator, the service was not installed on your workstation.



NOTE: Anonymous FTP must be set up and running correctly for the NMC-RX application to use the ConfigSync service.

To configure the ConfigSync service:

1. Click the ConfigSync Service tab in the Resource Configurator.
2. Set the ConfigSync parameters on the Discovery/Update tab. See Table 72.

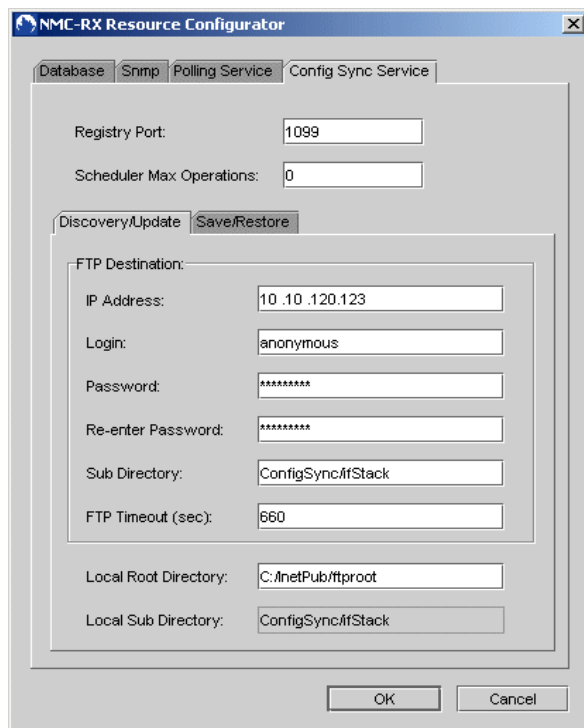


Table 72: ConfigSync Service Discovery/Update tab parameters

Parameter	Description
Registry Port	Standard default for the port is 1099; if 1099 is in use, you can change the port number.
Scheduler Max Operations	Limit for the total number of operations that can be active in the ConfigSync service at one time; range: integer greater than 0; default 5; zero indicates no limit
IP Address	IP address of the workstation running the ConfigSync service
Login	Discovered by the ConfigSync service at startup; if you can change the login, it will not go into effect until the next startup; default: anonymous.
Password	Discovered by the ConfigSync service at startup; if you can change the password, it will not go into effect until the next startup.
Re-enter Password	Re-enter the password for validation.
Sub Directory	Subdirectory of the FTP root on the workstation running ConfigSync and into which the system deposits files; default directory: ConfigSync\ifStack
FTP Timeout (sec)	Amount of time (seconds) that passes after an FTP request has been made before it is considered not to have responded
Local Root Directory	Directory on the ConfigSync server machine that is the FTP root; default: C:\inetPub\ftproot; when you FTP to the target machine, this is the directory you reach; the local root directory is case sensitive. NOTE: The local root directory needs write permission and anonymous access.

Table 72: ConfigSync Service Discovery/Update tab parameters (continued)

Parameter	Description
Local Sub Directory	Default directory is ConfigSync\ifStack; directories for ConfigSync\ifStack must be created under the <i>ftproot</i> directory; the local subdirectory is case sensitive.



NOTE: If FTP is configured properly, the following URL should bring up an FTP connection to the ifStack directory when placed in a Web browser address line:

ftp://your IP address:21/ConfigSync/ifStack

3. Click the Save/Restore tab, and enter Save/Restore parameters. See Table 73.

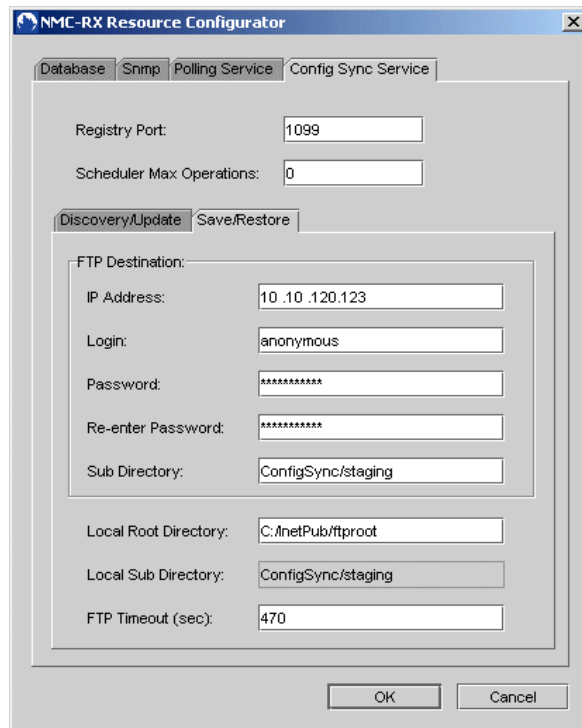


Table 73: ConfigSync Service Save/Restore tab parameters

Parameter	Description
Registry Port	Standard default for the port is 1099; if 1099 is in use, you can change the port number.
IP Address	IP address of the workstation running the ConfigSync service
Login	Discovered by the ConfigSync service at startup; defaults to anonymous; if you can change the login, it will not go into effect until the next startup.
Password	Discovered by the ConfigSync service at startup; if you can change the password, it will not go into effect until the next startup.

Table 73: ConfigSync Service Save/Restore tab parameters (continued)

Parameter	Description
Re-enter Password	Re-enter the password for validation.
Sub Directory	Subdirectory of the FTP root on the workstation running ConfigSync and into which the system deposits files; default directory is ConfigSync\ifStack
Local Root Directory	Directory on the ConfigSync server machine that is the FTP root; defaults to C:\inetPub\ftproot; when you FTP to the target machine, this is the directory you reach; the local root directory is case sensitive. NOTE: The local root directory needs write permission and anonymous access.
Local Sub Directory	Default directory is ConfigSync\staging; directories for ConfigSync\staging must be created under the <i>ftproot</i> directory. The local subdirectory is case sensitive.
FTP Timeout (sec)	Amount of time (seconds) that passes after an FTP request has been made before it is considered not to have responded

4. If you have finished creating services, click OK. Otherwise, click the next tab to continue.

Running the ConfigSync Service

We recommend that the ConfigSync service be running before you start the NMC-RX application. Without this service, you cannot autodiscover devices, and an error message will appear if you try to create a new device.

You can, however, start the ConfigSync service after you start the NMC-RX application because the NMC-RX application periodically tries to connect to the ConfigSync service. Once all devices have been discovered, you can close the ConfigSync service.

To run the ConfigSync service:

Double-click the NMC-RX ConfigSync icon, or click
Start > Programs > Nmc-rx > ConfigSync Service.

ConfigSync Service Log

The ConfigSync service maintains a log detailing its discovery activities and should be consulted for more information when you are diagnosing an error condition.

When the ConfigSync service is running, it creates a log file (ConfigSyncServer.log). This log file is in the *log* directory of the NMC-RX home directory on the system the ConfigSync service is running on.

Troubleshooting

If ConfigSync service starts and runs but stalls for a while when you try to discover a device, it will eventually time out after the timeout period and the number of retries you configured on the SNMP tab have been reached.



NOTE: Based on default SNMP timeout and retry values, eventual timeout will be 21 minutes.

Check that:

The FTP directories configured in the ConfigSync Service tab in the Resource Configurator exist on your machine.

Anonymous FTP works on your machine.