AUTHORIZED DOCUMENTATION

Remote Server Management Administration Guide

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NetWare®

6.5 SP8

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About This Guide

This guide includes information about understanding, setting up, and managing the Remote Console utility (RConsoleJ).

RConsoleJ lets you use a network workstation to control and manage a remote NetWare® server. You can lock servers in a safe place, remove keyboards and monitors, and then start a remote control session from a workstation whenever you need to access a server's console.

- "Overview" on page 9
- "What's New" on page 11
- "Migrating RConsoleJ from NetWare 6.5 to OES 2 Linux" on page 13
- "Running RConsoleJ in a Virtualized Environment" on page 15
- "Setting Up RConsoleJ" on page 17
- "Managing NetWare Servers Remotely" on page 25
- "Security Considerations for RConsoleJ" on page 27

Audience

This guide is intended for network administrators.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comments feature at the bottom of each page of the online documentation, or go to www.novell.com/documentation/feedback.html and enter your comments there.

Documentation Updates

For the most recent version of the *NW 6.5 SP8: Remote Server Management Administration Guide*, see the NetWare 6.5 SP8 Documentation Web site (http://www.novell.com/documentation/nw65).

Documentation Conventions

In Novell® documentation, a greater-than symbol (>) is used to separate actions within a step and items in a cross-reference path.

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Overview

1

NetWare® 6.5 provides Java*-based remote console utility (RConsoleJ) that lets you control a NetWare server from a workstation and perform the following tasks:

- Use console commands as you would at the server console
- Use NLM™ programs as you would at the server console (for example, `edit.nlm` to edit files)
- Send console commands in the server's native language from the RConsoleJ Client using Buffer Input.
- Control the server from another server using RConsoleJ
- Upgrade a NetWare server (text-based UI only)
- Use Secure Socket Layer (SSL) based secure session

1.1 RConsoleJ Components

Before setting up RConsoleJ, you should understand the RConsoleJ components. The following RConsoleJ components interact with each other to help you remotely control a NetWare server:

- "RConsoleJ Client" on page 9
- "RConsoleJ Agent" on page 9
- "RConsoleJ Proxy Agent" on page 9

1.1.1 RConsoleJ Client

The RConsoleJ Client is a Java-based utility running on a Java-enabled workstation or NetWare server. From the RConsoleJ Client you can remotely control and monitor all NetWare console operations.

1.1.2 RConsoleJ Agent

The RConsoleJ Agent (`rconag6.nlm`) is a utility running on the target NetWare server. The target NetWare server can be connected over IP, IPX™, or IP/IPX running the RConsoleJ Agent. The RConsoleJ Agent services all RConsoleJ Client requests.

The RConsoleJ Agent advertises its services using Service Location Protocol (SLP) on NetWare 5.*x* and later.

1.1.3 RConsoleJ Proxy Agent

The RConsoleJ Proxy Agent (`rconprxy.nlm`) is a utility running on a NetWare server (supported only on NetWare 5.*x* and later). It routes all IP packets to IPX and vice versa.

The RConsoleJ Proxy Agent advertises its services using Service Location Protocol (SLP).

IMPORTANT: If the target NetWare server uses only IPX, the NetWare server (loaded with the RConsoleJ Proxy Agent) must have both IP and IPX stacks installed.

What's New

2

This section includes the features that were updated in the Remote Server Management for NetWare® since its release in NetWare 6.0:

- You can send lengthy console commands to the server using the new Buffer Input utility. You can also send commands in the server's native language using Buffer Input.

  See “Sending Console Commands in the Server's Native Language” on page 25.

- It supports SSL-based secure session using the Secure IP connection option.

  See “Initiating a Secured IP Connection” on page 20.

  For more information on SSL, see the SSL documentation (http://home.netscape.com/eng/ssl3/draft302.txt).

- It supports an Unsecure IP connection for backward compatibility with NetWare 5 and NetWare 6.

  See “Initiating an Unsecure IP Connection” on page 21.

Migrating RConsoleJ from NetWare 6.5 to OES 2 Linux

3

This section contains the following information:

- Section 3.1, “Coexistence,” on page 13
- Section 3.2, “Migration,” on page 13

3.1 Coexistence

This section provides information regarding the compatibility and coexistence of RConsoleJ utility with existing networks containing NetWare® or Linux* platforms.

3.1.1 Compatibility

The following table summarizes the compatibility of RConsoleJ utility with various operating systems:

Table 3-1 *Compatibility Matrix for RConsoleJ on NetWare and SUSE Linux Operating Systems*

Operating System	Compatible Versions
NetWare	NetWare 6.5 SP3 or later
	NetWare 6.*x*
	NetWare 5.*x*
Linux	Not available

3.1.2 Coexistence Issues

When using older versions (any versions before NetWare 6.5 SP3) of the RConsoleJ client (`rconj.exe`) to securely connect with a server running the NetWare 6.5 SP3 or later versions of `rconag6.nlm`, you might experience difficulty connecting to the target server if you do not accept the server certificate on the first connection attempt.

To work around this issue:

1. From the System Console of the target server, unload and reload the `rconag6.nlm`.
2. Retry the connection and accept the certificate.

3.2 Migration

RConsoleJ is not available on OES 2 Linux. Other utilities are available for accessing the Linux console remotely.

Running RConsoleJ in a Virtualized Environment

4

RConsoleJ runs in a virtualized environment just as it does on a physical NetWare® server and requires no special configuration or other changes.

To get started with virtualization, see "Introduction to Xen Virtualization" (http://www.novell.com/documentation/sles10/book_virtualization_xen/data/sec_xen_basics.html) in the *Virtualization with Xen* (http://www.novell.com/documentation/sles10/book_virtualization_xen/data/book_virtualization_xen.html) guide.

For information on setting up virtualized NetWare, see "Installing and Managing NetWare on a Xen-based VM" in the *OES 2 SP2: Installation Guide*.

Setting Up RConsoleJ

5

This section contains the following sections:

- Section 5.1, “Loading Agents at Startup,” on page 17
- Section 5.2, “Loading the RConsoleJ Agent,” on page 18
- Section 5.3, “Running the RConsoleJ Client,” on page 19
- Section 5.4, “Loading the RConsoleJ Proxy Agent on a Proxy Server,” on page 19
- Section 5.5, “Initiating Remote Sessions Using RConsoleJ,” on page 20

5.1 Loading Agents at Startup

You can load either the RConsoleJ Agent or the RConsoleJ Proxy Agent when you start the server.

- Section 5.1.1, “Loading the RConsoleJ Agent at Startup,” on page 17
- Section 5.1.2, “Loading the RConsoleJ Proxy Agent at Startup,” on page 18

5.1.1 Loading the RConsoleJ Agent at Startup

You can load RConsoleJ Agent (`rconag6.nlm`) at startup using either of the following methods.

- “Using Encrypted Password (Recommended)” on page 17
- “Using Plain Text Password” on page 17

Using Encrypted Password (Recommended)

1 Create or change the `ldrconag.ncf` script file.

1a At the System Console prompt, enter `rconag6 encrypt`.

1b On the RConsoleJ Agent server screen, enter the password and port numbers when prompted.

1c When prompted to save the displayed command to the `sys:system/ldrconag.ncf` file, type `y` and then press any key.

2 Prepare the `autoexec.ncf` file to run the `ldrconag.ncf` script file at startup.

2a Comment out the following line:

```
load rconag6 user_defined_password_here 2034 16800 2036
```

2b Add the following line:

```
ldrconag
```

Using Plain Text Password

Add the following line to the `autoexec.ncf` file:

```
load rconag6 user_defined_password 2034 16800 2036
```

5.1.2 Loading the RConsoleJ Proxy Agent at Startup

To load the RConsoleJ Proxy Agent (`rconprxy.nlm`) at the startup, specify the following line in the `autoexec.ncf` file:

```
load rconprxy 2035
```

5.2 Loading the RConsoleJ Agent

If you didn't load the RconsoleJ Agent when you started the server, you can use this procedure to do it.

1. At the System Console prompt, enter

   ```
   RCONAG6
   ```

2. Enter the password you want network administrators to use when accessing the target NetWare® server using RConsoleJ.
3. Enter the TCP port number.

   The default value is 2034.

   If the server communicates using IPX™ only, enter `-1` to disable TCP listening.

   To enable listening over a dynamically assigned port, enter `0`.
4. Enter the SPX™ port number on which RCONAG6 will listen for a proxy server.

   The default is 16800.

   If the server communicates using IP only, enter `-1` to disable SPX listening.

   To enable listening over a dynamically assigned port, enter `0`.

   NOTE: /DEV/TCP and /DEV/TCPSSL will fail if you are using a pure IPX server.

   To enable RconsoleJ across the firewall, keep the following ports open: 2034, 2035, and 2036.
5. Enter the TCP port number for the secure session.

   The default is 2036.

   Ensure that the Key Material Object named SSL CertificateDNS has been created.

   NOTE: The Secure connection is available only on IP and not on IPX.

5.3 Running the RConsoleJ Client

You can run the RConsoleJ from a workstation or from a NetWare server to connect to and manage a different server.

- Section 5.3.1, “Running the RConsoleJ Client from a Workstation,” on page 19
- Section 5.3.2, “Running the RConsoleJ Client on a NetWare Server,” on page 19

5.3.1 Running the RConsoleJ Client from a Workstation

You can run the RConsoleJ Client on a workstation using either of the following methods:

- From a Windows* 2000/XP workstation, ensure that you have a drive mapped to the root of volume sys: on the NetWare server. From the Windows desktop, browse to *ConsoleOne_installation_directory**1.2* and run `rconj.exe`.
- In ConsoleOne®, right-click the *NetWare Server* object that you want to remotely control and click *Remote Console*, or click the *NetWare Server* object and then select *Remote Console* from the *Tools* menu.

5.3.2 Running the RConsoleJ Client on a NetWare Server

You can run the RConsoleJ Client on a NetWare server using any of the following methods:

- In ConsoleOne, right-click the *NetWare Server* object that you want to remotely control and click *Remote Console*, or click the *NetWare Server* object and then from the *Tools* option click *Remote Console*.
- At the System Console prompt, enter `rconj.ncf`.
- At the server GUI, click *Novell* > *Programs* > *RConsoleJ*.

5.4 Loading the RConsoleJ Proxy Agent on a Proxy Server

When the NetWare server is running the RConsoleJ Proxy Agent, the RConsoleJ Client can communicate through it with the target NetWare server that uses only IPX to communicate.

If you didn't load the RconsoleJ Proxy Agent when you started the server, you can use this procedure to load it.

1. Make sure an IP/IPX stack is loaded.
2. At the System Console prompt, enter the following command:

   ```
   rconprxy
   ```

3. Enter the TCP port number where RCONPRXY will listen for RConsoleJ.

   The default is 2035.

   To enable listening over a dynamically assigned port, enter `0`.

5.5 Initiating Remote Sessions Using RConsoleJ

The information in this section can help you initiate remote sessions using RConsoleJ in the following scenarios:

- Section 5.5.1, “Scenario 1: An IP Client Controlling an IP or IP/IPX NetWare Server,” on page 20
- Section 5.5.2, “Scenario 2: An IP Client Controlling an IPX NetWare Server,” on page 22

5.5.1 Scenario 1: An IP Client Controlling an IP or IP/IPX NetWare Server

- “Prerequisites” on page 20
- “Initiating a Secured IP Connection” on page 20
- “Initiating an Unsecure IP Connection” on page 21

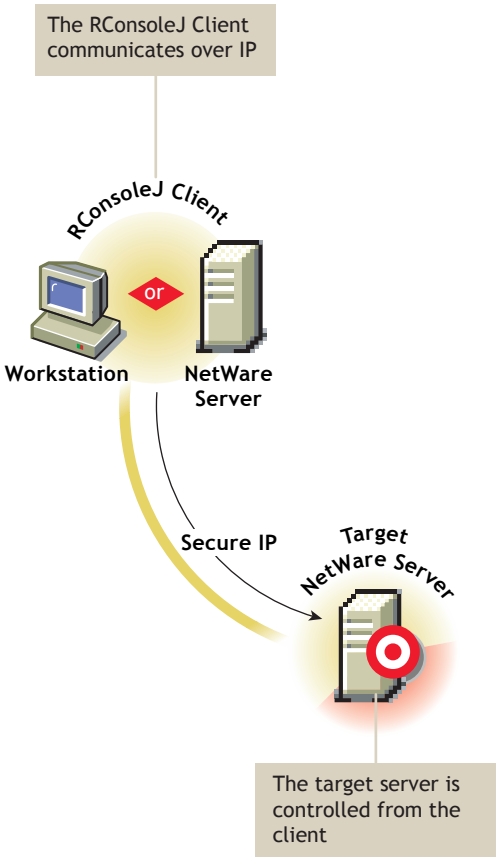
Prerequisites

- ❑ “Loading the RConsoleJ Agent” on page 18
- ❑ “Running the RConsoleJ Client” on page 19

Initiating a Secured IP Connection

The RConsoleJ Client communicates directly with the RConsoleJ Agent using TCP/IP.

Figure 5-1 *RConsoleJ Client Communicating with the Target NetWare Server over Secure IP*



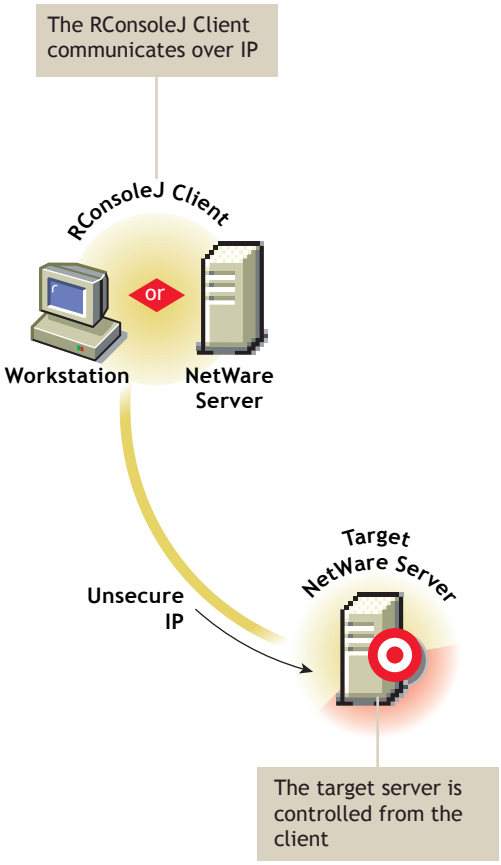
1. In the RConsoleJ Connection dialog box, select *Secure IP*.
2. Specify the IP address of the target NetWare server, or click the *Remote Servers* icon, then select the target NetWare server from the list.
3. Specify the password provided during loading of the RConsoleJ Agent on the target server.
4. Specify the port number.

   The default is 2036.
5. Click *Connect*.
6. To ensure server authentication, read the Untrusted Certificate Verification server certificate issued by the target server and click *OK* to accept it.

Initiating an Unsecure IP Connection

The RConsoleJ Client communicates directly with the RConsoleJ Agent using TCP/IP.

Figure 5-2 *RConsoleJ Communicating with the Target NetWare Server over Unsecure IP*



1. In the RConsoleJ Connection dialog box, select *Unsecure IP*.
2. Select *Connect Directly* as the unsecure connection option.
3. Specify the IP address of the target NetWare server, or click the *Remote Servers* icon and then select the target NetWare server from the list.
4. Specify the password provided during loading the RConsoleJ Agent.
5. Specify the port number.

   The default is 2034.
6. Click *Connect*.

5.5.2 Scenario 2: An IP Client Controlling an IPX NetWare Server

- "Prerequisites" on page 22
- "Initiating an IPX Connection" on page 23

Prerequisites

- ❑ "Loading the RConsoleJ Agent" on page 18

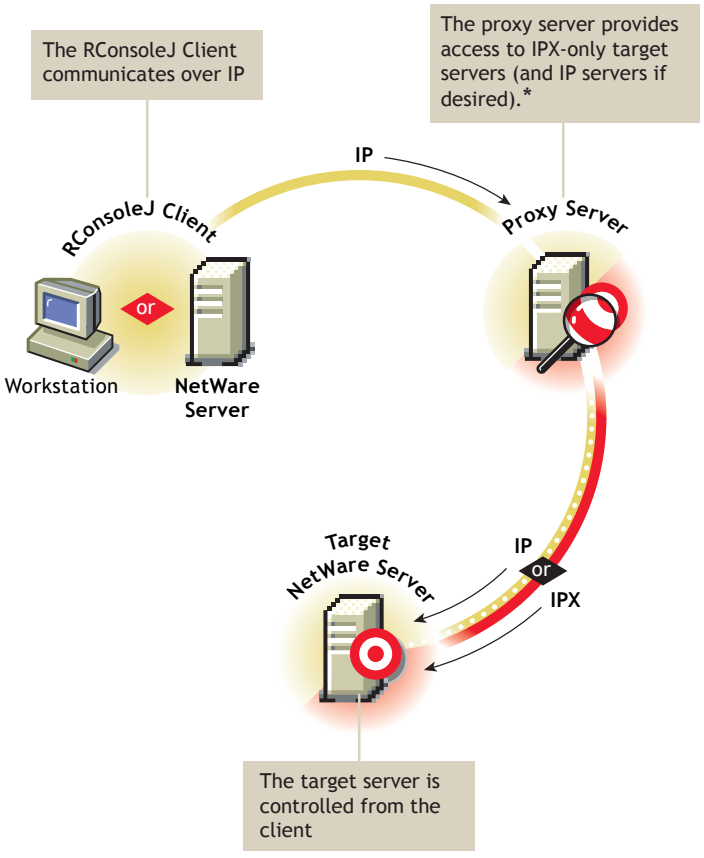
- “Running the RConsoleJ Client” on page 19
- “Loading the RConsoleJ Proxy Agent on a Proxy Server” on page 19

Initiating an IPX Connection

The RConsoleJ Client communicates with the RConsoleJ Agent through RConsoleJ Proxy Agent because the target NetWare server is based purely on IPX.

The RConsoleJ Proxy Agent is loaded on a NetWare server (proxy server) that has both IP and IPX stacks loaded. The RConsoleJ Proxy Agent receives all the IP requests from the RConsoleJ Client, converts them to IPX requests, and then sends them to the RConsoleJ Agent and vice-versa.

Figure 5-3 *RConsoleJ Client Communicating with the Target NetWare Server through the Proxy Server*



1. In the RConsoleJ Connection dialog box, select *Unsecure IP*.
2. Select *Connect Via Proxy* as the unsecure connection option.
3. From the *Connect Type* drop-down list, select *Connect through Proxy*.
4. Type the IP/IPX address of the target NetWare server, or select *SPX* to get the IPX address and *TCP* to get the IP address.
5. Make sure the appropriate default port is selected after specifying the IPX or IP address.

   The default is 16800 for IPX and 2034 for IP.

6 Specify the IP address of the proxy server, or click the *Remote Servers* icon and then select a proxy server from the list.

7 Type the port number that was specified during the loading of the RConsoleJ Proxy Agent.

The RConsoleJ Client communicates with the RConsoleJ Proxy Agent on this port.

The default is 2035.

8 Click *Connect*.

Managing NetWare Servers Remotely

6

After RConsoleJ establishes connections with the NetWare® server, you can view and manage the target NetWare server from your desktop or remote server.

The following sections explain the tasks you can perform to effectively manage a remote NetWare Server.

- Section 6.1, “Sending Console Commands in the Server's Native Language,” on page 25
- Section 6.2, “Synchronizing RConsoleJ Client and Target NetWare Screens,” on page 26
- Section 6.3, “Changing the Password of the RConsoleJ Agent,” on page 26

6.1 Sending Console Commands in the Server's Native Language

You can send console commands in the server's native language from the RConsoleJ Client using Buffer Input as shown in the following graphic. The buffer stores a list of ten history commands.

Figure 6-1 *Send Console Commands in Japanese Using Buffer Input*

To send console commands:

1. From the Novell® RConsoleJ Client window, enter the command that you want to run at the target server in the Buffer Input field.
2. Click *Send*.

6.2 Synchronizing RConsoleJ Client and Target NetWare Screens

You can synchronize the screen displayed on the target NetWare server and the screen displayed on the RConsoleJ Client with each other. Switching the screen in the RConsoleJ Client switches the screen at the target server console and vice versa.

To synchronize the screens, from the Novell RConsoleJ window, click *Sync*.

To switch the screen on the server console to the currently activated screen on the RConsoleJ Client, click *Activate*.

6.3 Changing the Password of the RConsoleJ Agent

You can change the agent password to ensure that RConsoleJ sessions are secure.

To change the agent password for a remotely managed NetWare server, do the following at the System Console prompt:

1. Enter `unload rconag6`.
2. Enter `rconag6 encrypt`.
3. Enter a new password.
4. Enter the TCP port number.

   The default is 2034.
5. Enter the SPX™ port number.

   The default is 16800.
6. Enter the TCP port number for the secure session.

   The default is 2036.
7. When prompted to write the displayed load command to the `ldrconag.ncf` file, type `y` and then press any key.

   If you type y, the `ldrconag.ncf` file is updated and the new password is in effect when the agent is loaded from the command in the `ldrconag.ncf` script file after you reboot the server.

   If you type n, the `ldrconag.ncf` file is not updated. The new password is valid only for the current session. At a later time, if you load RCONAG6 from the `ldrconag.ncf` file, the previously saved password is used.

Security Considerations for RConsoleJ

7

No specific issues have been identified specifically for RConsoleJ.

For overall security considerations, see “Security” in the *NW 6.5 SP8: Planning and Implementation Guide*.

Documentation Updates

A

To help you keep current on updates to the documentation, this section contains information on content changes that have been made in this *Remote Server Management Administration Guide* since the initial release of NetWare® 6.5.

The documentation was updated on the following dates:

- Section A.1, "November 9, 2009," on page 29
- Section A.2, "November 1, 2005 (NetWare 6.5 SP5)," on page 29
- Section A.3, "February 28, 2005 (NetWare 6.5 SP3)," on page 29

A.1 November 9, 2009

This guide has been modified for publication on the NetWare 6.5 SP8 Documentation Web site.

A.2 November 1, 2005 (NetWare 6.5 SP5)

Updates were made to this guide.

A.2.1 Entire Guide

Location	Change
Entire guide.	Page design reformatted to comply with revised Novell® documentation standards.

A.3 February 28, 2005 (NetWare 6.5 SP3)

Updates were made to the following sections:

- Section A.3.1, "Coexistence and Migration," on page 29
- Section A.3.2, "Managing NetWare Servers Remotely," on page 30
- Section A.3.3, "Setting Up RConsoleJ," on page 30
- Section A.3.4, "Entire Guide," on page 30

A.3.1 Coexistence and Migration

Location	Change
"Migrating RConsoleJ from NetWare 6.5 to OES 2 Linux" on page 13	Added coexistence and migration information for the OES 2 release.

A.3.2 Managing NetWare Servers Remotely

Location	Change
Changing the Password of the RConsoleJ Agent (page 26)	Added these procedures.

A.3.3 Setting Up RConsoleJ

Location	Change
“Setting Up RConsoleJ” on page 17	Changed the flow of the entire section, updated Loading the RConsoleJ Agent procedures, updated instructions for starting an IPX™ section in Scenario 2, and renamed the “Deploying RConsoleJ” section to “Initiating Remote Sessions Using RConsoleJ.”

A.3.4 Entire Guide

Location	Change
Entire guide.	Changed document title to distinguish the utility for running on NetWare only, updated the “About This Guide” and “Overview” information to match current style guidelines, and added introductory paragraphs to several sections.