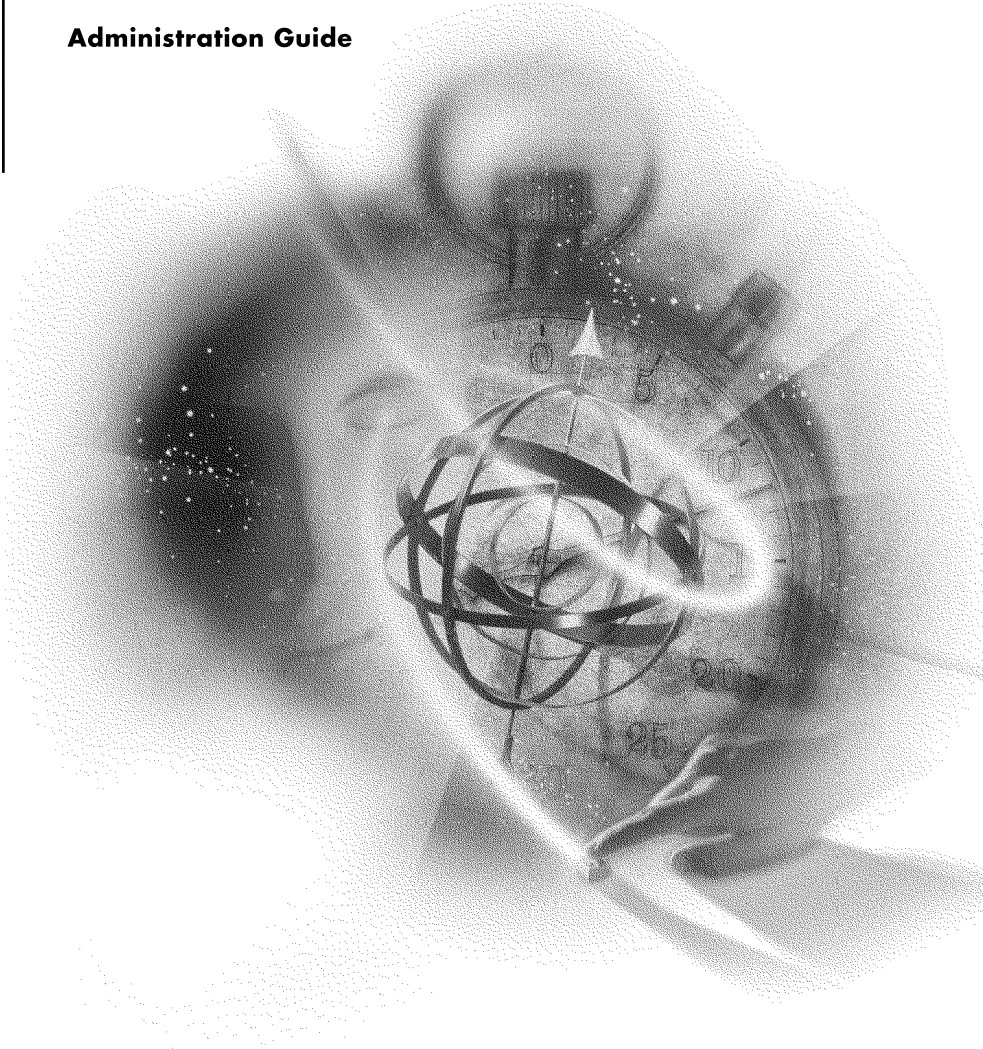


Remote Server Management

Administration Guide



NetWare[®] 5.1
NETWORKING SOFTWARE

Novell[®]

Legal Notices

Novell, Inc. makes no representations or warranties with respect to the contents or use of this documentation, and specifically disclaims any express or implied warranties of merchantability or fitness for any particular purpose. Further, Novell, Inc. reserves the right to revise this publication and to make changes to its content, at any time, without obligation to notify any person or entity of such revisions or changes.

Further, Novell, Inc. makes no representations or warranties with respect to any software, and specifically disclaims any express or implied warranties of merchantability or fitness for any particular purpose. Further, Novell, Inc. reserves the right to make changes to any and all parts of Novell software, at any time, without any obligation to notify any person or entity of such changes.

This product may require export authorization from the U.S. Department of Commerce prior to exporting from the U.S. or Canada.

Copyright © 1993-2000 Novell, Inc. All rights reserved. No part of this publication may be reproduced, photocopied, stored on a retrieval system, or transmitted without the express written consent of the publisher.

U.S. Patent Nos. 4,555,775; 5,157,663; 5,349,642; 5,455,932; 5,553,139; 5,553,143; 5,594,863; 5,608,903; 5,633,931; 5,652,854; 5,671,414; 5,677,851; 5,692,129; 5,758,069; 5,758,344; 5,761,499; 5,781,724; 5,781,733; 5,784,560; 5,787,439; 5,818,936; 5,828,882; 5,832,275; 5,832,483; 5,832,487; 5,859,978; 5,870,739; 5,873,079; 5,878,415; 5,884,304; 5,893,118; 5,903,650; 5,905,860; 5,913,025; 5,915,253; 5,925,108; 5,933,503; 5,933,826; 5,946,467; 5,956,718; 5,974,474. U.S. and Foreign Patents Pending.

Novell, Inc.
122 East 1700 South
Provo, UT 84606
U.S.A.

www.novell.com

Remote Server Management Administration Guide
January 2000
104-001239-001

Online Documentation: To access the online documentation for this and other Novell products, and to get updates, see www.novell.com/documentation.

Novell Trademarks

For a list of Novell trademarks, see the final appendix of this book.

Third-Party Trademarks

All third-party trademarks are the property of their respective owners.

Contents

- Remote Server Management Overview 7**
- 1 Managing 9**
 - Using DOS-Based Remote Console 9
 - Choosing a Connection Type. 9
 - Running RCONSOLE Through a LAN or WAN Connection 10
 - Preparing to Run a Remote Console Session Over a Modem 13
 - Running RCONSOLE Over a Modem 15
 - Loading Remote Modules on Bootup. 17
 - Upgrading Files on a Remote Server. 19
 - Installing or Reconfiguring Applications on a Remote Server 19
 - Rebooting a Remote Server 20
 - Using Java-Based Remote Console (RConsoleJ) 21
 - Connection Requirements 21
 - Overview of RConsoleJ Components 22
 - Preparing To Run RConsoleJ 23
 - Running RConsoleJ from a Novell Client. 25
 - Running RConsoleJ from a NetWare 5 Server 27
 - Loading RConsoleJ Modules at Startup 29
 - Restarting a Remote Server Using RConsoleJ. 30
- A Novell Trademarks. 33**

Remote Server Management Overview

Managing servers remotely provides greater server security.

You can lock servers in a safe place, remove the keyboards and monitors, then start a remote console session from a workstation whenever you need to access a server's console.

1

Managing

NetWare 5 provides DOS-based and Java-based remote console utilities, both of which let you use a network workstation as a server console.

IMPORTANT: For security reasons, the version of RConsoleJ included in the initial release of NetWare 5 must only be used inside firewalls.

To determine which remote console utility best fits your needs, refer to the following table.

Function	DOS-based RCONSOLE	Java-based RConsoleJ
Use console commands as you would at the server console	Yes	Yes
Scan directories and edit text files in NetWare and DOS partitions on a server (using edit.nlm)	Yes	Yes
Transfer files to, but not from, a server	Yes	No
Control the server using an IP connection	No	Yes
Control the server from another server	No	Yes
Stop or start a server	Yes	Yes
Install or upgrade NetWare	Yes	No

Using DOS-Based Remote Console

Choosing a Connection Type

You can run remote console sessions through a LAN or WAN connection, or via a modem or a null modem cable.

- ♦ **LAN or WAN connection.** A station establishes a remote console session with a server on the local or wide area network, connected by cabling or by a wide-area link using IPX/SPX protocol. See [“Running RCONSOLE Through a LAN or WAN Connection”](#) on page 10.
- ♦ **Modem connection.** A station establishes a remote console session with a server through a modem or null modem cable. A null modem cable is a direct serial connection between two computers, as opposed to a network connection. See [“Preparing to Run a Remote Console Session Over a Modem”](#) on page 13 and [“Running RCONSOLE Over a Modem”](#) on page 16.

Running RCONSOLE Through a LAN or WAN Connection

To run a remote console session over a LAN or WAN connection you must do the following:

1. Load the RSPX NLM on the server. (This also loads REMOTE NLM.)
2. Run RCONSOLE.EXE from the workstation to access the server.

Each of these tasks is described in detail in the following procedure.

Prerequisites

- ☐ RSPX NLM (and REMOTE NLM)
- ☐ 75 KB of available memory on the server
- ☐ A workstation running DOS 3.30 or later version
- ☐ 300 KB of available memory on the workstation
- ☐ A search drive mapped to the directory where the RCONSOLE.EXE file is located (usually SYS:PUBLIC)
- ☐ The remote console password established when loading RSPX.NLM

If you want to use the supervisor password, enter it when loading RSPX.NLM.

NOTE: You don't need the Supervisor object right to the remote server because RCONSOLE does not use Novell Directory Services.

Procedure

- 1 At the server console prompt, type

LOAD RSPX <Enter>

You are prompted to enter a password to use when you establish the remote console session from a workstation. If you want to use the supervisor password, you must enter it at this point.

By default, the RSPX NLM requires packet signatures to ensure security. You can change the default setting if desired. For more information about packet signatures, see [NetWare Server Security](#).

Once the RSPX NLM is loaded on the server, you can start a remote session from a workstation. (REMOTE NLM is automatically loaded with RSPX NLM.)

- 2 Go to the workstation and log in to the network.
- 3 Make sure you have a drive mapped to the directory where the RCONSOLE.EXE file is located (usually SYS:PUBLIC).

If you don't have a drive mapped, type

MAP S16:=SYS:PUBLIC <Enter>

- 4 Start RCONSOLE by completing one of the following steps:

- 4a If you know the name of the server, type the following command and then skip to [Step 7](#):

RCONSOLE servername <Enter>

- 4b If you know only part of the server name, type the partial name followed by an asterisk, select a server from the displayed list, and continue with [Step 7](#).

- 4c If you do not know the name of the server, type the following command.

RCONSOLE <Enter>

- 5 Select LAN from the Connection Type menu.

A list of available servers appears.

- 6** Connect to the server, using one of the following methods:
- 6a** Select a server from the list.
 - 6b** Type the name of the server.
 - 6c** If the server name doesn't appear in the list and you know the IPX internal network number of the server:
 - ♦ Press <Insert>.
 - ♦ Enter the IPX internal network number in hexadecimal notation.
- 7** At the prompt, type the password you established when you loaded REMOTE.NLM on the server.

The remote console session is now open. The workstation screen displays the same information you would see on the server console screen.

NOTE: Graphical screens are not displayed in remote console utilities.

When the utility launches, if a graphical screen is displayed on the server console screen, the System Console screen is displayed in the remote view.

After a remote console session starts, if someone at the server console switches to a graphical screen, the switch is not reflected on the remote screen.

- 8** To view a menu of options for the remote session, press <Alt>+<F1>.

The remote console Available Options menu appears.

During an RCONSOLE session you can use the keys described in the following table. All the other keys function as if you were at the server console.

Table 1 RCONSOLE Keys

Key	Description
<Alt>+<F1>	Access the Available Options menu.
<Alt>+<F2>	Exit Remote Console.
<Alt>+<F3>	Cycle backward through the current console screens.
<Alt>+<F4>	Cycle forward through the current console screens.
<Alt>+<F5>	Show the address of the workstation you are using for this session.
<F1>	Display Remote Console help when the Remote Console Available Options menu is on the screen. (When another screen is showing, this key displays the relevant server help information.)

9 To end the remote console session, press <Alt> + <F2> from the console prompt or select End Remote Session with Server from the Available Options menu.

10 Choose Yes from the Quit Remote Console Session? box.

If you specified the name of a specific server as a parameter when you executed RCONSOLE, the remote session with that server is ended.

If you selected the server from a list of available servers, the available servers list is redisplayed. To exit from the list of servers, press <Esc> and then select Yes from the Exit Remote Console? menu.

Preparing to Run a Remote Console Session Over a Modem

Before running remote console sessions over a modem or null modem cable, you must complete the following steps:

1. On the server, load REMOTE.NLM, RS232.NLM, and the appropriate communications port driver, such as AIOCOMX.NLM.
2. Create a callback file, if desired.
3. Load necessary workstation files.

Each of these tasks is explained in the following procedure.

Prerequisites

- ❑ The following NLM files:
REMOTE.NLM
RS232.NLM
- ❑ A communications port driver such as AIOCOMX

Procedure

- 1** At the server console prompt, type

```
[LOAD] REMOTE [password] <Enter>
```

You must provide a password to use when establishing the remote console session from a workstation. If you do not specify the password as a parameter, you are prompted to enter one.

If you want to use the supervisor password, you must enter it at this point.

- 2** Complete the following steps to load the communications interface module and driver:

- 2a** Load the communications port driver by typing

```
[LOAD] AIOCOMX <Enter>
```

This driver is provided with NetWare. You can replace it with an equivalent driver if you choose.

- 2b** Load the modem connection NLM by typing

```
[LOAD] RS232 [comm_port] [modem_speed] [N] [C]  
<Enter>
```

Replace *comm_port* with the communications port number (1 or 2).

Replace *modem_speed* with the baud rate (2400, 4800, ... 115200).

Use the N parameter if you are using a null modem cable.

Use the C parameter if you want to use the callback option. The callback option is explained in the next step.

- 3** (Optional) Create a CALLBACK.LST file in the SYS:SYSTEM directory on the server.

A callback list is a list of modem (telephone) numbers that are authorized to access the server.

The server uses the callback option only if the C parameter was used when the RS232 NLM was loaded on the server.

When a call comes in, the server notes the number of the modem calling and then terminates the connection. The server then checks for the number in the callback list. If the number is in the list, the server calls the number and reestablishes the modem connection. If the number is not in the list, the server ignores the call.

Use a text editor or the EDIT utility to create the file. If you need help creating the file, see [Using EDIT to Create and Edit Text and Batch Files](#).

3a In the file, enter a list of callback numbers that are authorized to start a remote console session.

For example, you might list three numbers:

18015552257

5554321

4269

The first is a long distance number (with an area code), the second is a local number, and the third is an internal extension number.

3b Save the text file.

4 Prepare the workstation as a remote console by creating a directory and copying the following RCONSOLE run files to it:

RCONSOLE.EXE

RCONSOLE.HEP

RCONSOLE.MSG

IBM_RUN.OVL

_RUN.OVL

IBM_AIO.OVL

_AIO.OVL

TEXTUTIL.HEP

TEXTUTIL.IDX

TEXTUTIL.MSG

It doesn't matter where you place the directory or what you name it. The run files come with your NetWare system.

You are now ready to run a remote console session over a modem.

Running RCONSOLE Over a Modem

Prerequisites

- ☐ A workstation with a Hayes*-compatible modem (2400, 4800, ... 115200 baud) or a null modem cable connected to the server
- ☐ 300 KB of available memory on the workstation
- ☐ REMOTE.NLM, AIO.NLM, RS232.NLM, and the communications port driver (such as AIOCOMX) loaded on the server
- ☐ All necessary files loaded on the workstation
- ☐ The remote console password

Procedure

- 1** At the workstation, change to the directory you created for the remote files (described in [“Preparing to Run a Remote Console Session Over a Modem” on page 13](#)) and type

RCONSOLE <Enter>

- 2** Select Asynchronous from the Connection Type menu.
- 3** If this is the first session from this workstation, select Configuration from the Asynchronous Options menu, and then continue with Step 4. Otherwise, skip to [Step 7](#).
- 4** In the Current Modem Configuration window, set the options according to your modem and workstation specifications.
 - 4a** Use the arrow keys to highlight a field and press <Enter>.
 - 4b** If the cursor becomes active in the field, type in the appropriate information.
 - 4c** If a selection is displayed, select the appropriate item.

The UserID and the Call Back fields must be filled in. Choose any string for the UserID. For example, you may use your name or your phone number. This ID is displayed on the server console during the remote session.

4d In the Callback field, enter the modem (telephone) number you are calling from.

If the Call Back option is used, this number must be in the callback list. See [“Preparing to Run a Remote Console Session Over a Modem” on page 13](#).

5 Press <Esc> to exit the window.

6 Choose Yes from the Save Changes? box to save your configuration.

7 Choose Connect to Remote Location from the Asynchronous Options menu.

A list of available servers is displayed.

8 Select a server.

If you are using the callback option, the server terminates the connection and compares the number in the modem configuration file with the numbers in the callback list.

If the number in the modem configuration file is in the list, the server dials the number to establish the connection and then displays the console prompt. If the number is not in the list, the server displays an error message.

9 Once the console prompt is displayed, the remote console session is active. Press <Alt>+<F1> to view the Available Options menu.

During the RCONSOLE session, you may use the keystrokes shown in [Table 1 on page 13](#). All other keys function as if you were at the server console.

NOTE: RCONSOLE does not provide guaranteed packet delivery. When sending or receiving packets from a server with extensive disk or LAN activity, RCONSOLE may time out.

If this happens, you receive a No response from server or an Unable to send request to server message. If you receive one of these messages, retry the operation.

NOTE: Graphical screens are not displayed in remote console utilities.

When the utility launches, if a graphical screen is displayed on the server console screen, the System Console screen is displayed in the remote view.

After a remote console session starts, if someone at the server console switches to a graphical screen, the switch is not reflected on the remote screen.

- 10** To exit the remote console session, press <Alt>+<F2> at the console prompt or select End Remote Session from the Available Options menu and then select Yes.

Loading Remote Modules on Bootup

You can put commands in the AUTOEXEC.NCF file to load remote console modules each time the server is booted.

Since these modules require the remote password, you may choose to place an encrypted version of the password in the file, too. The method described in this section secures the server console by hiding the remote console password from users who access the AUTOEXEC.NCF file.

The following procedure explains how to set an encrypted password and autoload REMOTE.NLM with the encrypted password.

- 1** To encrypt a password for REMOTE.NLM, type the following:

```
[LOAD] REMOTE <Enter>
```

- 2** Execute the following command:

```
REMOTE ENCRYPT <Enter>
```

The server prompts you to enter the password to be encrypted.

- 3** Enter the password you want to use for remote console sessions.

If you want to use the supervisor password, you must enter it at this point.

The system displays the encrypted value and a message asking if the LOAD REMOTE command should be written to the SYS:SYSTEM\LDREMOTE.NCF file.

- 4** To include the LOAD REMOTE command with your encrypted password in the LDREMOTE.NCF file, respond Yes.

The system places a LOAD REMOTE command into the LDREMOTE.NCF file with the encrypted password as a parameter.

You can execute the LDREMOTE.NCF file with the encrypted password whenever you want to load REMOTE.NLM, or you can place the command to execute the file into your AUTOEXEC.NCF file by completing all the steps in this procedure. Either option will save you from having to type in the encrypted password, which is often quite long, every time you load REMOTE.NLM.

- 5** To autoload REMOTE.NLM with an encrypted password on bootup, use either NWCONFIG or EDIT to open the AUTOEXEC.NCF file.

For information about editing .NCF files, see [Using EDIT to Create and Edit Text and Batch Files](#).

- 6** Move the cursor to the end of the file and type the following:

```
LDREMOTE
```

- 6a** For LAN or WAN connections, type the following after LDREMOTE:

```
LOAD RSPX
```

- 6b** For modem connections, type the following after LDREMOTE:

```
LOAD AIOCOMX
```

The AIOCOMX driver is provided with NetWare. You can replace it with an equivalent driver if you choose.

```
LOAD RS232 [comm_port] [modem_speed] [N] [C]
```

Replace *comm_port* with the communications port number (1 or 2).

Replace *modem_speed* with the baud rate (2400, 4800, ... 115200).

Use the N parameter if you are using a null modem cable.

Use the C parameter if you want to use the callback option. For information and instructions, see [“Preparing to Run a Remote Console Session Over a Modem”](#) on page 13.

- 7** Exit and save the AUTOEXEC.NCF file.

The server will now automatically load the necessary remote modules and your encrypted password whenever it is booted.

For more information about utilities related to using a remote console, see [RCONSOLE](#), [REMOTE](#), [RS232](#), or [RSPX](#) in the Utilities Reference library.

Upgrading Files on a Remote Server

You can use a remote console to copy new NetWare files to a server. Files can be copied from diskettes, a CD-ROM drive, a local drive, or from a network directory. To copy new NetWare files to volume SYS: on a remote server, follow these steps.

Prerequisites

- ❑ Workstation and server prepared for remote console sessions. See [“Running RCONSOLE Through a LAN or WAN Connection” on page 10](#) and [“Preparing to Run a Remote Console Session Over a Modem” on page 13](#).

Procedure

- 1** Start a remote console session with the server.
- 2** At the remote console, type
`[LOAD] NWCONFIG <Enter>`
- 3** Choose Copy Files Option.
- 4** Choose a remote path.

This is the path from which the files will be installed. You may load files from NetWare diskettes, a local drive, a CD-ROM, or a network drive.

- 5** Follow the subsequent prompts.

Installing or Reconfiguring Applications on a Remote Server

You can use a remote console session to install or reconfigure Novell or third-party products on a remote server. Follow these steps.

Prerequisites

- ❑ Workstation and server prepared for remote console sessions. See [“Running RCONSOLE Through a LAN or WAN Connection” on page 10](#) and [“Preparing to Run a Remote Console Session Over a Modem” on page 13](#).

Procedure

- 1** Start a remote console session with the server.
- 2** At the remote console, type
`[LOAD] NWCONFIG <Enter>`
- 3** Choose Product Options > View/Configure/Remove Installed Products.
A list of currently installed products (if any) appears.
- 4** To reconfigure an installed product, select that product and press <Enter>. Follow screen instructions.
- 5** To install a new product, press <Insert>.
A message states that the product will be installed from the A: drive, unless otherwise indicated.
- 6** If necessary, insert the product installation diskette into the drive.
- 7** Press <Enter> to accept the default, drive A:, or press <F3> to enter a different installation source path.
- 8** Follow the prompts to install the product.

Rebooting a Remote Server

You can reboot a NetWare server from a remote console by first modifying the server's AUTOEXEC.BAT file and then executing another .NCF file that you create for this purpose.

Prerequisites

- ❑ Workstation and server prepared for remote console sessions. See [“Running RCONSOLE Through a LAN or WAN Connection” on page 10](#) and [“Preparing to Run a Remote Console Session Over a Modem” on page 13](#).
- ❑ Commands in the server AUTOEXEC.NCF file that load the remote modules. See [“Loading Remote Modules on Bootup” on page 18](#).

Procedure

- 1** To automatically reboot the server, put commands to change to the NetWare directory and execute SERVER.EXE in the server's AUTOEXEC.BAT file.

For example, if the SERVER.EXE file is in the NWSERVER directory on drive C:, put the following lines in the server's AUTOEXEC.BAT file:

```
CD C:\NWSERVER  
SERVER.EXE
```

- 2** Start a remote console session with the server.

- 3** Load the EDIT NLM on the server by typing

```
LOAD EDIT <Enter>
```

- 4** Create an .NCF file and include the following commands in the order given:

```
REMOVE DOS  
RESTART SERVER
```

See [Using NWCONFIG to Create and Edit Startup Batch Files](#).

- 5** Save the file in the SYS:SYSTEM directory.
- 6** Start a remote console session with the server.
- 7** Send a message to all users to inform them that the server is going down.
See [Sending Console Messages to Workstations](#) if you need help sending a message.

- 8** At the system prompt on the remote console, enter the name of the .NCF file you created.

This reboots the server. The keyboard is disabled for a few minutes while the file is processed.

When the file has finished processing, a connection is lost message appears.

- 9** Press <Esc> to exit the remote session.
- 10** Open a new remote console connection with the server.

Using Java-Based Remote Console (RConsoleJ)

Connection Requirements

RConsoleJ has two connection requirements:

- ♦ **IP Connection.** You must have an IP connection to the network.
- ♦ **NetWare 5 server access .** You must be logged in to a NetWare 5 server.

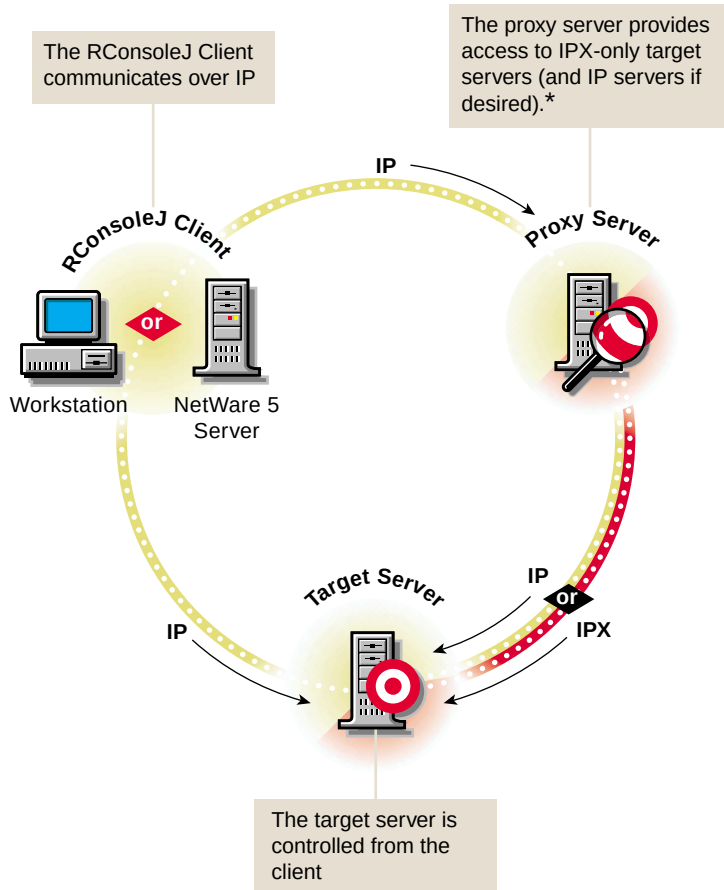
Overview of RConsoleJ Components

An RConsoleJ session consists of at least two and possibly three components, depending on the connectivity requirement:

- ♦ RconsoleJ running on a Novell Client or NetWare server.
- ♦ Agent software running on the target server.
- ♦ Proxy software running on a proxy server if the target server uses IPX rather than IP to communicate.

IMPORTANT: The Proxy server must run both IP and IPX.

Communication between these components is summarized in the following illustration.



*If the target server uses IPX, the proxy server must have both IP and IPX stacks loaded.

Preparing To Run RConsoleJ

IMPORTANT: For security reasons, the version of RConsoleJ included in the initial release of NetWare 5 must only be used inside firewalls.

Before you can run RConsoleJ, you must prepare the target server to communicate with RConsoleJ. If the target server communicates using IPX, you must also prepare a proxy server to handle the IPX connection. The proxy server must have both IP and IPX loaded.

1. On the target server, load RCONAG6.NLM.
2. On the proxy server, load RCONPRXY.NLM.

Each of these tasks is explained in the following procedures.

Preparing a target server

Prerequisites

- ☐ RCONAG6.NLM
- ☐ SPXS.NLM for all servers communicating over IPX

Procedure

- 1** If the target server communicates using IPX, enter the following command at the server console prompt. Otherwise, skip to the next step.

SPXS

- 2** At the server console prompt, enter

RCONAG6

You are prompted to enter a password to use when you establish the RConsoleJ session.

- 3** Enter the password you want network administrators to use when accessing the target server using RConsoleJ.

If you want to use the ADMIN password, you must enter it at this point.

You are prompted for a TCP port number.

- 4** Enter the TCP port number on which RCONAG6 will listen for either RConsoleJ or a proxy server.

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.

You are prompted for an SPX port number.

- 5** Enter the SPX port number on which RCONAG6 will listen for a proxy server.

The default value 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.

- 6** If the target server communicates using IPX, prepare a proxy server by completing the next procedure.

After completing all the steps above, you can start an RConsoleJ session from a Novell Client workstation or a NetWare 5 server.

Preparing a proxy server

Prerequisites

- ☐ RCONPRXY.NLM
- ☐ SPSX.NLM for all servers that communicate using IPX
- ☐ Both IP and IPX running on the proxy server

Procedure

- 1** If the target server communicates using IPX, enter the following command at the server console prompt. Otherwise, skip to the next step.

SPXS

- 2** At the server console prompt, enter the following command.

RCONPRXY

You are prompted for the TCP port number.

- 3** Enter the TCP port number on which RCONPRXY will listen for RConsoleJ.

The default value is 2035.

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

Once the proxy server is running, RConsoleJ can communicate through it with a target server that uses only IPX to communicate.

Running RConsoleJ from a Novell Client

You can run RConsoleJ from a Novell Client (Windows 95, 98, or NT) using various methods. All required RConsoleJ software is on the NetWare 5 server rather than the client.

Prerequisites

- ☐ Novell Client software
- ☐ An IP connection to the network
- ☐ Be logged in to a NetWare 5 server

Procedure

There are two basic methods for starting RConsoleJ on a Novell Client workstation.

1 Complete one of the following substeps.

1a In NetWare Administrator, click Tools > Pure IP Remote Console.

1b From a Windows 95, 98, or NT workstation, ensure you have a drive mapped to the root of the SYS: volume on the NetWare 5 server. In the Windows Start / Run dialog box, browse that drive mapping to \PUBLIC\MGMT\CONSOLEONE\1.2 and run RCONJ.EXE.

2 Click Remote Servers, select a server from the list, enter the appropriate password and skip to **Step 3**, or enter the required information for RConsoleJ to locate the target server:

2a If the target server communicates using IP, enter one of the following in the Server Address slot:

- ♦ The target server's case-sensitive name entered in DNS
- ♦ The target server's IP address

2b If the target server communicates using IPX, enter either the case-sensitive server name or the IPX address and IPX number separated by a colon, as shown in the following example:

IPX_Address:000000000001

2c In the Password slot, enter the password provided when RCONAG6 was loaded.

2d If you entered a non-default TCP port number and/or you are using a proxy server, click Advanced>. Otherwise, skip to **Step 3**.

- 2e** If you entered a non-default TCP port number, enter the TCP port number given when RCONAG6 was loaded on the target server. If you are not using a proxy server, skip to **Step 3**.
 - 2f** In the Remote Server Port slot, enter the SPX port number given when RCONAG6 was loaded on the target server.
 - 2g** Check the Connect through Proxy checkbox.
 - 2h** In the Server Address slot, enter the proxy server's case-sensitive name entered in DNS, or the proxy server's IP address.
 - 2i** In the Port No slot, enter the proxy server's TCP port number.
 - 2j** If the target server communicates using IPX, set the Agent Protocol to SPX.
 - 3** Click Connect.
- The remote console session is now open. RConsoleJ displays the same information you would see on the server console screen.
- NOTE:** Graphical screens are not displayed in remote console utilities.
- When the utility launches, if a graphical screen is displayed on the server console screen, the System Console screen is displayed in the remote view.
- After a remote console session starts, if someone at the server console switches to a graphical screen, the switch is not reflected on the remote screen.
- 4** (Optional) To connect to another server, click Disconnect in the RConsoleJ window.
 - 5** To close RConsoleJ, click in the upper left corner of the RConsoleJ window and select Close.

Running RConsoleJ from a NetWare 5 Server

Prerequisite

- ☐ An IP connection to the network

Procedure

- 1** There are two basic methods for starting RConsoleJ on a NetWare 5 server. Complete one of the following substeps.
 - 1a** In ConsoleOne running, right-click a NetWare server object > click Remote Console.
 - 1b** From the server console prompt, type RCONJ.NCF.

2 Click Remote Servers, select a server from the list, enter the appropriate password and skip to **Step 3**, or enter the required information for RConsoleJ to locate the target server:

2a If the target server communicates using IP, enter one of the following in the Server Address slot:

- ♦ The target server's case-sensitive name entered in DNS
- ♦ The target server's IP address

2b If the target server communicates using IPX, enter either the case-sensitive server name or the IPX address and IPX number separated by a colon, as shown in the following example:

IPX_Address:000000000001

2c In the Password slot, enter the password provided when RCONAG6 was loaded.

2d If you entered a non-default TCP port number and/or you are using a proxy server, click Advanced>. Otherwise, skip to **Step 3**.

2e If you entered a non-default TCP port number, enter the TCP port number given when RCONAG6 was loaded on the target server. If you are not using a proxy server, skip to **Step 3**.

2f In the Remote Server Port slot, enter the SPX port number given when RCONAG6 was loaded on the target server.

2g Check the Connect through Proxy checkbox.

2h In the Server Address slot, enter the proxy server's case-sensitive name entered in DNS, or the proxy server's IP address.

2i In the Port No slot, enter the proxy server's TCP port number.

2j If the target server communicates using IPX, set the Agent Protocol to SPX.

3 Click Connect.

RConsoleJ displays the same information you would see on the server console screen.

NOTE: Graphical screens are not displayed in remote console utilities.

When the utility launches, if a graphical screen is displayed on the server console screen, the System Console screen is displayed in the remote view.

After a remote console session starts, if someone at the server console switches to a graphical screen, the switch is not reflected on the remote screen.

- 4** (Optional) To connect to another server, click Disconnect in the RConsoleJ window.
- 5** To close RConsoleJ, click the upper left corner of the RConsoleJ window and select Close.

Loading RConsoleJ Modules at Startup

You can put commands in the SYS:SYSTEM\AUTOEXEC.NCF file to load the required RConsoleJ agent module using the SYS:SYSTEM\LDRCONAG.NCF file each time the server is started.

Since the module requires the remote password, you can place an encrypted version of the password in the LDRCONAG.NCF file too. The method described in this section secures the server console by hiding the remote console password from users who access the AUTOEXEC.NCF file.

The following procedure explains how to set an encrypted password and autoload RCONAG6.NLM with the encrypted password.

- 1** To encrypt a password for RCONAG6.NLM, enter the following:

```
RCONAG6 ENCRYPT
```

- 2** Enter the password you want to use for remote console sessions.

If you want to use the ADMIN password, you must enter it at this point.

- 3** Enter the other required port information.

The system displays the encrypted value and a message asking if the RCONAG6 command should be written to the SYS:SYSTEM\LDRCONAG.NCF file.

- 4** To include the RCONAG6 command with your encrypted password in the LDRCONAG.NCF file, respond Yes.

The system places a LOAD RCONAG6 command into the SYS:SYSTEM\LDRCONAG.NCF file with the encrypted password as a parameter.

You can execute the LDRCONAG.NCF file with the encrypted password whenever you want to load RCONAG6.NLM, or you can place the command to execute the file into your AUTOEXEC.NCF file by completing all the steps in this procedure. Either option will save you from having to type in the encrypted password, which is often quite long, every time you load RCONAG6.NLM.

- 5** To autoload RCONAG6.NLM with an encrypted password on startup, use either NWCONFIG or EDIT to open the AUTOEXEC.NCF file.

For information about editing NCF files, see [Using EDIT to Create and Edit Text and Batch Files](#).

- 6** Move the cursor to the end of the file and type the following:

```
LDRCONAG
```

- 7** Save and exit the AUTOEXEC.NCF file.

The server will now automatically load the necessary remote modules and your encrypted password whenever it is started.

For more information about utilities related to using RConsoleJ, see [RConsoleJ](#), [RCONAG6](#), or [RCONPRXY](#).

Restarting a Remote Server Using RConsoleJ

You can restart a NetWare server from a remote console by first modifying the server's AUTOEXEC.BAT file and then executing another .NCF file that you create for this purpose.

Prerequisites

- ☐ Target server prepared for remote console sessions. See [“Preparing To Run RConsoleJ” on page 24](#).
- ☐ Commands in the server AUTOEXEC.NCF file that load the remote modules. See [“Loading RConsoleJ Modules at Startup” on page 30](#).

Procedure

- 1** To restart the server automatically, add commands to the server's AUTOEXEC.BAT file to change to the NetWare directory and execute SERVER.EXE.

For example, if the SERVER.EXE file is in the C:\NWSERVER directory, add the following lines in the server's AUTOEXEC.BAT file:

```
CD C:\NWSERVER  
SERVER.EXE
```

- 2** Start a remote console session with the server.
- 3** At the server console prompt, enter

```
EDIT
```

- 4** Create an .NCF file and include the following command:

RESTART SERVER

See [Using NWCONFIG to Create and Edit Startup Batch Files](#).

- 5** Save the file in the sys:system directory.
- 6** Start a remote console session with the server.
- 7** Send a message to all users to inform them that the server is going down.
See [Sending Console Messages to Workstations](#) if you need help sending a message.
- 8** At the system prompt on the remote console, enter the name of the NCF file you created.

When the file has finished processing, a message appears indicating that the connection has been lost.
- 9** Close the remote session by clicking the upper left corner of the RConsoleJ window and selecting Close.
- 10** (Optional) Open a new remote console connection with the server.



Novell Trademarks

Access Manager is a registered trademark of Novell, Inc. in the United States and other countries.

Advanced NetWare is a trademark of Novell, Inc.

AlarmPro is a registered trademark of Novell, Inc. in the United States and other countries.

AppNotes is a registered service mark of Novell, Inc. in the United States and other countries.

AppNotes is a registered service mark of Novell, Inc. in the United States and other countries.

AppTester is a registered service mark of Novell, Inc. in the United States and other countries.

BrainShare is a registered service mark of Novell, Inc. in the United States and other countries.

C-Worthy is a trademark of Novell, Inc.

C3PO is a trademark of Novell, Inc.

CBASIC is a registered trademark of Novell, Inc. in the United States and other countries.

Certified NetWare Administrator in Japanese and CNA-J are service marks of Novell, Inc.

Certified NetWare Engineer in Japanese and CNE-J are service marks of Novell, Inc.

Certified NetWare Instructor in Japanese and CNI-J are service marks of Novell, Inc.

Certified Novell Administrator and CNA are service marks of Novell, Inc.

Certified Novell Engineer is a trademark and CNE is a registered service mark of Novell, Inc. in the United States and other countries.

Certified Novell Salesperson is a trademark of Novell, Inc.

Client 32 is a trademark of Novell, Inc.

ConnectView is a registered trademark of Novell, Inc. in the United States and other countries.

Connectware is a registered trademark of Novell, Inc. in the United States and other countries.

Corsair is a registered trademark of Novell, Inc. in the United States and other countries.

CP/Net is a registered trademark of Novell, Inc. in the United States and other countries.

Custom 3rd-Party Object and C3PO are trademarks of Novell, Inc.

DeveloperNet is a registered trademark of Novell, Inc. in the United States and other countries.

Documenter's Workbench is a registered trademark of Novell, Inc. in the United States and other countries.

ElectroText is a trademark of Novell, Inc.

Enterprise Certified Novell Engineer and ECNE are service marks of Novell, Inc.

Envoy is a registered trademark of Novell, Inc. in the United States and other countries.

EtherPort is a registered trademark of Novell, Inc. in the United States and other countries.

EXOS is a trademark of Novell, Inc.

Global MHS is a trademark of Novell, Inc.

Global Network Operations Center and GNOC are service marks of Novell, Inc.

Graphics Environment Manager and GEM are registered trademarks of Novell, Inc. in the United States and other countries.

GroupWise is a registered trademark of Novell, Inc. in the United States and other countries.

GroupWise XTD is a trademark of Novell, Inc.

Hardware Specific Module is a trademark of Novell, Inc.

Hot Fix is a trademark of Novell, Inc.

InForms is a trademark of Novell, Inc.

Instructional Workbench is a registered trademark of Novell, Inc. in the United States and other countries.

Internetwork Packet Exchange and IPX are trademarks of Novell, Inc.

IPX/SPX is a trademark of Novell, Inc.

IPXODI is a trademark of Novell, Inc.

IPXWAN is a trademark of Novell, Inc.

LAN WorkGroup is a trademark of Novell, Inc.

LAN WorkPlace is a registered trademark of Novell, Inc. in the United States and other countries.

LAN WorkShop is a trademark of Novell, Inc.

LANalyzer is a registered trademark of Novell, Inc. in the United States and other countries.

LANalyzer Agent is a trademark of Novell, Inc.

Link Support Layer and LSL are trademarks of Novell, Inc.

MacIPX is a registered trademark of Novell, Inc. in the United States and other countries.

ManageWise is a registered trademark of Novell, Inc. in the United States and other countries.

Media Support Module and MSM are trademarks of Novell, Inc.

Mirrored Server Link and MSL are trademarks of Novell, Inc.

Mobile IPX is a trademark of Novell, Inc.

Multiple Link Interface and MLI are trademarks of Novell, Inc.

Multiple Link Interface Driver and MLID are trademarks of Novell, Inc.

My World is a registered trademark of Novell, Inc. in the United States and other countries.

N-Design is a registered trademark of Novell, Inc. in the United States and other countries.

Natural Language Interface for Help is a trademark of Novell, Inc.

NDS Manager is a trademark of Novell, Inc.

NE/2 is a trademark of Novell, Inc.

NE/2-32 is a trademark of Novell, Inc.

NE/2T is a trademark of Novell, Inc.

NE1000 is a trademark of Novell, Inc.

NE1500T is a trademark of Novell, Inc.

NE2000 is a trademark of Novell, Inc.

NE2000T is a trademark of Novell, Inc.

NE2100 is a trademark of Novell, Inc.

NE3200 is a trademark of Novell, Inc.

NE32HUB is a trademark of Novell, Inc.

NEST Autoroute is a trademark of Novell, Inc.

NetExplorer is a trademark of Novell, Inc.

NetNotes is a registered trademark of Novell, Inc. in the United States and other countries.

NetSync is a trademark of Novell, Inc.

NetWare is a registered trademark of Novell, Inc. in the United States and other countries.

NetWare 3270 CUT Workstation is a trademark of Novell, Inc.

NetWare 3270 LAN Workstation is a trademark of Novell, Inc.

NetWare 386 is a trademark of Novell, Inc.

NetWare Access Server is a trademark of Novell, Inc.

NetWare Access Services is a trademark of Novell, Inc.

NetWare Application Manager is a trademark of Novell, Inc.

NetWare Application Notes is a trademark of Novell, Inc.

NetWare Asynchronous Communication Services and NACS are trademarks of Novell, Inc.

NetWare Asynchronous Services Interface and NASI are trademarks of Novell, Inc.

NetWare Aware is a trademark of Novell, Inc.

NetWare Basic MHS is a trademark of Novell, Inc.

NetWare BranchLink Router is a trademark of Novell, Inc.

NetWare Care is a trademark of Novell, Inc.

NetWare Communication Services Manager is a trademark of Novell, Inc.

NetWare Connect is a registered trademark of Novell, Inc. in the United States.

NetWare Core Protocol and NCP are trademarks of Novell, Inc.

NetWare Distributed Management Services is a trademark of Novell, Inc.

NetWare Document Management Services is a trademark of Novell, Inc.

NetWare DOS Requester and NDR are trademarks of Novell, Inc.

NetWare Enterprise Router is a trademark of Novell, Inc.

NetWare Express is a registered service mark of Novell, Inc. in the United States and other countries.

NetWare Global Messaging and NGM are trademarks of Novell, Inc.

NetWare Global MHS is a trademark of Novell, Inc.

NetWare HostPrint is a registered trademark of Novell, Inc. in the United States.

NetWare IPX Router is a trademark of Novell, Inc.

NetWare LANalyzer Agent is a trademark of Novell, Inc.

NetWare Link Services Protocol and NLSP are trademarks of Novell, Inc.

NetWare Link/ATM is a trademark of Novell, Inc.
NetWare Link/Frame Relay is a trademark of Novell, Inc.
NetWare Link/PPP is a trademark of Novell, Inc.
NetWare Link/X.25 is a trademark of Novell, Inc.
NetWare Loadable Module and NLM are trademarks of Novell, Inc.
NetWare LU6.2 is trademark of Novell, Inc.
NetWare Management Agent is a trademark of Novell, Inc.
NetWare Management System and NMS are trademarks of Novell, Inc.
NetWare Message Handling Service and NetWare MHS are trademarks of Novell, Inc.
NetWare MHS Mailslots is a registered trademark of Novell, Inc. in the United States and other countries.
NetWare Mirrored Server Link and NMSL are trademarks of Novell, Inc.
NetWare Mobile is a trademark of Novell, Inc.
NetWare Mobile IPX is a trademark of Novell, Inc.
NetWare MultiProtocol Router and NetWare MPR are trademarks of Novell, Inc.
NetWare MultiProtocol Router Plus is a trademark of Novell, Inc.
NetWare Name Service is trademark of Novell, Inc.
NetWare Navigator is a trademark of Novell, Inc.
NetWare Peripheral Architecture is a trademark of Novell, Inc.
NetWare Print Server is a trademark of Novell, Inc.
NetWare Ready is a trademark of Novell, Inc.
NetWare Requester is a trademark of Novell, Inc.
NetWare Runtime is a trademark of Novell, Inc.
NetWare RX-Net is a trademark of Novell, Inc.
NetWare SFT is a trademark of Novell, Inc.
NetWare SFT III is a trademark of Novell, Inc.
NetWare SNA Gateway is a trademark of Novell, Inc.
NetWare SNA Links is a trademark of Novell, Inc.
NetWare SQL is a trademark of Novell, Inc.
NetWare Storage Management Services and NetWare SMS are trademarks of Novell, Inc.
NetWare Telephony Services is a trademark of Novell, Inc.
NetWare Tools is a trademark of Novell, Inc.
NetWare UAM is a trademark of Novell, Inc.
NetWare WAN Links is a trademark of Novell, Inc.

NetWare/IP is a trademark of Novell, Inc.

NetWire is a registered service mark of Novell, Inc. in the United States and other countries.

Network Navigator is a registered trademark of Novell, Inc. in the United States.

Network Navigator - AutoPilot is a registered trademark of Novell, Inc. in the United States and other countries.

Network Navigator - Dispatcher is a registered trademark of Novell, Inc. in the United States and other countries.

Network Support Encyclopedia and NSE are trademarks of Novell, Inc.

Network Support Encyclopedia Professional Volume and NSEPro are trademarks of Novell, Inc.

NetWorld is a registered service mark of Novell, Inc. in the United States and other countries.

Novell is a service mark and a registered trademark of Novell, Inc. in the United States and other countries.

Novell Alliance Partners Program is a collective mark of Novell, Inc.

Novell Application Launcher is a trademark of Novell, Inc.

Novell Authorized CNE is a trademark and service mark of Novell, Inc.

Novell Authorized Education Center and NAEC are service marks of Novell, Inc.

Novell Authorized Partner is a service mark of Novell, Inc.

Novell Authorized Reseller is a service mark of Novell, Inc.

Novell Authorized Service Center and NASC are service marks of Novell, Inc.

Novell BorderManager is a trademark of Novell, Inc.

Novell BorderManager FastCache is a trademark of Novell, Inc.

Novell Client is a trademark of Novell, Inc.

Novell Corporate Symbol is a trademark of Novell, Inc.

Novell Customer Connections is a registered trademark of Novell, Inc. in the United States.

Novell Directory Services and NDS are registered trademarks of Novell, Inc. in the United States and other countries.

Novell Distributed Print Services is a trademark and NDPS is a registered trademark of Novell, Inc. in the United States and other countries.

Novell ElectroText is a trademark of Novell, Inc.

Novell Embedded Systems Technology is a registered trademark and NEST is a trademark of Novell, Inc. in the United States and other countries.

Novell Gold Authorized Reseller is a service mark of Novell, Inc.

Novell Gold Partner is a service mark of Novell, Inc.

Novell Labs is a trademark of Novell, Inc.

Novell N-Design is a registered trademark of Novell, Inc. in the United States and other countries.

Novell NE/2 is a trademark of Novell, Inc.

Novell NE/2-32 is a trademark of Novell, Inc.

Novell NE3200 is a trademark of Novell, Inc.

Novell Network Registry is a service mark of Novell, Inc.

Novell Platinum Partner is a service mark of Novell, Inc.

Novell Press is a trademark of Novell, Inc.

Novell Press Logo (teeth logo) is a registered trademark of Novell, Inc. in the United States and other countries.

Novell Replication Services is a trademark of Novell, Inc.

Novell Research Reports is a trademark of Novell, Inc.

Novell RX-Net/2 is a trademark of Novell, Inc.

Novell Service Partner is a trademark of Novell, Inc.

Novell Storage Services is a trademark of Novell, Inc.

Novell Support Connection is a registered trademark of Novell, Inc. in the United States and other countries.

Novell Technical Services and NTS are service marks of Novell, Inc.

Novell Technology Institute and NTI are registered service marks of Novell, Inc. in the United States and other countries.

Novell Virtual Terminal and NVT are trademarks of Novell, Inc.

Novell Web Server is a trademark of Novell, Inc.

Novell World Wide is a trademark of Novell, Inc.

NSE Online is a service mark of Novell, Inc.

NTR2000 is a trademark of Novell, Inc.

Nutcracker is a registered trademark of Novell, Inc. in the United States and other countries.

OnLAN/LAP is a registered trademark of Novell, Inc. in the United States and other countries.

OnLAN/PC is a registered trademark of Novell, Inc. in the United States and other countries.

Open Data-Link Interface and ODI are trademarks of Novell, Inc.

Open Look is a registered trademark of Novell, Inc. in the United States and other countries.

Open Networking Platform is a registered trademark of Novell, Inc. in the United States and other countries.

Open Socket is a registered trademark of Novell, Inc. in the United States.

Packet Burst is a trademark of Novell, Inc.

PartnerNet is a registered service mark of Novell, Inc. in the United States and other countries.

PC Navigator is a trademark of Novell, Inc.

PCOX is a registered trademark of Novell, Inc. in the United States and other countries.

Perform3 is a trademark of Novell, Inc.

Personal NetWare is a trademark of Novell, Inc.

Pervasive Computing from Novell is a registered trademark of Novell, Inc. in the United States and other countries.

Portable NetWare is a trademark of Novell, Inc.

Presentation Master is a registered trademark of Novell, Inc. in the United States and other countries.

Print Managing Agent is a trademark of Novell, Inc.

Printer Agent is a trademark of Novell, Inc.

QuickFinder is a trademark of Novell, Inc.

Red Box is a trademark of Novell, Inc.

Reference Software is a registered trademark of Novell, Inc. in the United States and other countries.

Remote Console is a trademark of Novell, Inc.

Remote MHS is a trademark of Novell, Inc.

RX-Net is a trademark of Novell, Inc.

RX-Net/2 is a trademark of Novell, Inc.

ScanXpress is a registered trademark of Novell, Inc. in the United States and other countries.

Script Director is a registered trademark of Novell, Inc. in the United States and other countries.

Sequenced Packet Exchange and SPX are trademarks of Novell, Inc.

Service Response System is a trademark of Novell, Inc.

Serving FTP is a trademark of Novell, Inc.

SFT is a trademark of Novell, Inc.

SFT III is a trademark of Novell, Inc.

SoftSolutions is a registered trademark of SoftSolutions Technology Corporation, a wholly owned subsidiary of Novell, Inc.

Software Transformation, Inc. is a registered trademark of Software Transformation, Inc., a wholly owned subsidiary of Novell, Inc.

SPX/IPX is a trademark of Novell, Inc.

StarLink is a registered trademark of Novell, Inc. in the United States and other countries.

Storage Management Services and SMS are trademarks of Novell, Inc.

Technical Support Alliance and TSA are collective marks of Novell, Inc.

The Fastest Way to Find the Right Word is a registered trademark of Novell, Inc. in the United States and other countries.

The Novell Network Symbol is a trademark of Novell, Inc.

Topology Specific Module and TSM are trademarks of Novell, Inc.

Transaction Tracking System and TTS are trademarks of Novell, Inc.

Universal Component System is a registered trademark of Novell, Inc. in the United States and other countries.

Virtual Loadable Module and VLM are trademarks of Novell, Inc.

Writer's Workbench is a registered trademark of Novell, Inc. in the United States and other countries.

Yes, It Runs with NetWare (logo) is a trademark of Novell, Inc.

Yes, NetWare Tested and Approved (logo) is a trademark of Novell, Inc.

ZENworks is a trademark of Novell, Inc.

