

# Novell Client™ for Linux\*

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INSTALLATION AND ADMINISTRATION  
GUIDE (BETA 3)



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[June 8, 2005](#)

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<b>About This Guide</b>	<b>7</b>
<b>1 Understanding the Novell Client for Linux</b>	<b>9</b>
Novell Client for Linux Requirements . . . . .	9
Understanding How Novell Client for Linux Differs from Novell Client for Windows 2000/XP . . . . .	9
Additional Information . . . . .	10
<b>2 Novell Client for Linux Virtual File System</b>	<b>11</b>
Understanding when the Virtual File System Kernel Module Needs to be Compiled. . . . .	11
Additional Things to Consider . . . . .	12
Understanding the Steps to Compiling the Novell Client Virtual File System Kernel Module . . . . .	12
Preparing Workstations to Compile the Virtual File System Kernel Module . . . . .	12
Installing Required Packages from XWindows . . . . .	13
Installing the Required Packages from the Console Terminal . . . . .	14
Compiling the Novell Client Virtual File System Kernel Module. . . . .	15
Compiling the Novell Client Virtual File System Kernel Module After a Kernel Update. . . . .	15
Compiling the Novell Client Virtual File System Kernel Module on Workstations Running a Custom Kernel. . . . .	15
Additional Information . . . . .	16
<b>3 Installing the Novell Client for Linux</b>	<b>17</b>
Installing Novell Client using an Installation Script . . . . .	17
Installing Novell Client Using XWindows . . . . .	17
Adding Novell Client Software to YaST using XWindows. . . . .	18
Installing from XWindows . . . . .	18
Installing Novell Client from the Console Terminal . . . . .	19
Installing from the Console Terminal . . . . .	19
Installing Novell Client using Red Carpet. . . . .	20
Installing Novell Client Using XWindows . . . . .	20
Installing Novell Client from the Console Terminal . . . . .	21
Start/Restart Novell Client for Linux . . . . .	21
Additional Information . . . . .	21
<b>4 Configuring Novell Client for Linux</b>	<b>23</b>
Using Novell Client Configuration Wizard . . . . .	23
Using Configuration Files to Preconfigure Novell Client . . . . .	23
Updating Client Configuration Settings at Any Time . . . . .	24
Additional Information . . . . .	25
<b>5 Managing Login</b>	<b>27</b>
Setting Up Login Scripts . . . . .	27
Setting Up Login Restrictions. . . . .	27
Using OpenSLP to Simplify Login . . . . .	28
Logging In to the Network . . . . .	29
Logging Out of the Network . . . . .	29
<b>6 Managing File Security</b>	<b>31</b>
Checking File or Folder Rights . . . . .	31
Changing Trustee Rights . . . . .	32
Adding a Trustee . . . . .	32
Removing aTrustee. . . . .	32
Combining Multiple Trustees . . . . .	33
<b>7 Uninstalling Novell Client</b>	<b>35</b>
Uninstalling using the YaST Control Center . . . . .	35
Uninstalling using the Install Script . . . . .	35
<b>A Troubleshooting Issues</b>	<b>37</b>

**B** Commands

## About This Guide

This guide describes how to install and configure Novell<sup>®</sup> Client<sup>™</sup> for Linux Beta 3 software.

This guide is intended for network administrators and is divided into the following sections:

- ◆ Chapter 1, “Understanding the Novell Client for Linux,” on page 9
- ◆ Chapter 2, “Novell Client for Linux Virtual File System,” on page 11
- ◆ Chapter 3, “Installing the Novell Client for Linux,” on page 17
- ◆ Chapter 4, “Configuring Novell Client for Linux,” on page 23
- ◆ Chapter 5, “Managing Login,” on page 27
- ◆ Chapter 6, “Managing File Security,” on page 31
- ◆ Chapter 7, “Uninstalling Novell Client,” on page 35
- ◆ Appendix A, “Troubleshooting Issues,” on page 37
- ◆ Appendix B, “Commands,” on page 39

### Additional Documentation

For documentation on known issues, see the *Novell Client for Linux Readme*

For documentation on login scripts, see the *Novell Login Scripts Guide*.

For documentation on the Novell Client tray application, see the *Novell Client for Linux User Guide*.

For documentation on the command line utilities, see the man pages associated with these utilities.

### Documentation Updates

For the latest version of this documentation, see the [Novell Clients online documentation \(http://www.novell.com/documentation/beta/linux\\_client/index.html\)](http://www.novell.com/documentation/beta/linux_client/index.html).

### Documentation Conventions

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

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When a single pathname can be written with a backslash for some platforms or a forward slash for other platforms, the pathname is presented with a backslash. Users of platforms that require a forward slash, such as Linux\*, should use forward slashes as required by your software.



# 1

## Understanding the Novell Client for Linux

Novell Client for Linux software allows users of Linux workstations to access and use all of the services available on servers running Novell eDirectory. Novell Client brings the full power, ease of use, manageability, and security of eDirectory to Linux workstations. Novell Client for Linux fully supports NetWare, OES, and eDirectory services and utilities on a Linux workstation, including integrated messaging, multiprotocol support, management, security, and file and print services.

### Novell Client for Linux Requirements

Novell Client for Linux requires that the workstation be running one of the following:

- ◆ (Preferred) NLD 9 SP2 or later
  - WARNING:** Trimmed down versions of NLD may have problems due to missing packages.
- ◆ NLD 9 SP1
- ◆ SuSe Pro 9.3

If workstations are *not* running NLD 9 SP2, there are additional required packages that must be installed. For more information on the required packages, see [“Preparing Workstations to Compile the Virtual File System Kernel Module” on page 12.](#)

### Understanding How Novell Client for Linux Differs from Novell Client for Windows 2000/XP

The Novell Client for Linux differs in a few ways from the Novell Client for Windows. For users and network administrators who have used the Novell Client for Windows, knowing these differences will help the transition to Linux occur more smoothly.

- ◆ Novell Client for Linux can be installed and upgraded using either the YaST and Red Carpet installation methods. In addition, the Client Configuration Wizard allows you to set up a configuration file that can be used to preconfigure workstations during installation. There is no Automatic Client Upgrade available on Linux. For more information, see [Chapter 3, “Installing the Novell Client for Linux,” on page 17.](#)
- ◆ Novell Client Login is not integrated in to initial workstation login. Once you are logged in to the workstation, you must log in from the Novell tray application. Additionally, this means that there is no username or password synchronization with the workstation username and password.
- ◆ When a user logs in to a local workstation and then opens a remote SSH session and logs in as the same user, the network resources are available to the user.

- ◆ The NMAS login is not integrated in to the Novell Client for Linux login screen so the default login sequence cannot be set in the Novell Client Login screen. However, the Novell Client for Linux can use the NMAS login methods to authenticate.
- ◆ Novell Client for Linux uses OpenSLP whereas Windows uses Novell's implementation of SLP. The network administrator must set up OpenSLP before users can see trees, contexts, and servers in the Novell Client Login window. Because Linux uses OpenSLP, the implementation is different and the user's experience will be different. For more information, see [“Using OpenSLP to Simplify Login” on page 28](#).
- ◆ Novell Client for Linux does not use the Dynamic Local User or Location Profiles that were available in Windows.
- ◆ Both a graphical user interface and command line utilities are available to complete client actions like mapping drives, setting trustee rights, and copying files.
- ◆ Novell Client for Linux uses XTier.
- ◆ Novell has been able to port the vast majority of login script functionality over to the Linux platform. This means that the login scripts you create in your network will work for both Windows users and Linux users with very little difference in functionality.

Some difference do exist. For example, mapped drives are created by creating symbolic links and search drives are not available on Linux.

Other small differences are created by the inherit difference between Windows and Linux. All the differences and issues are listed in the [Novell Login Scripts Guide](#).

## Additional Information

- ◆ [Chapter 2, “Novell Client for Linux Virtual File System,” on page 11](#)
- ◆ [Chapter 3, “Installing the Novell Client for Linux,” on page 17](#)
- ◆ [Chapter 4, “Configuring Novell Client for Linux,” on page 23](#)
- ◆ [Chapter 5, “Managing Login,” on page 27](#)
- ◆ [Chapter 6, “Managing File Security,” on page 31](#)
- ◆ [Chapter 7, “Uninstalling Novell Client,” on page 35](#)

# 2

## Novell Client for Linux Virtual File System

Novell® Client™ for Linux differs from previous Novell Clients in order to work on the Linux platform. In Windows, the Novell Client loaded a single binary that worked on multiple operating system platforms without modifications. The Novell Client for Linux has a Virtual File System that consists of a kernel module (`novfs.ko`) that runs as part of the Linux kernel and a daemon (`novfsd`) that runs in the user space. Both components must be running on the workstation for the client to connect to the network.

The daemon can run on any of the supported Linux platforms without modification. The kernel, however, is kernel-version-dependent and can only run on NLD 9 SP2 without modification because it is included in the NLD 9 SP2 distribution. This is why NLD 9 SP2 is listed as the preferred platform version for Novell Client for Linux.

This section explains how to determine if you need to compile the kernel and how to install the required packages and compile the kernel.

- ♦ [“Understanding when the Virtual File System Kernel Module Needs to be Compiled” on page 11](#)
- ♦ [“Preparing Workstations to Compile the Virtual File System Kernel Module” on page 12](#)
- ♦ [“Compiling the Novell Client Virtual File System Kernel Module” on page 15](#)

### Understanding when the Virtual File System Kernel Module Needs to be Compiled

If you are *not* running NLD 9 SP2 or have modified your kernel in any way, you must compile the Novell Client Virtual File System Kernel Module (`novfs.ko`) in order for the Novell Client to run on that workstation. In order to compile the `novfs.ko` kernel, specific packages must be installed on the workstation.

The following is a list of the instances when you must compile the Novell Client Virtual File System Kernel Module (`novfs.ko`):

- ♦ If you are running a previous versions NLD 9
- ♦ If you are running SuSE Pro 9.3
- ♦ If you patched the NLD 9 SP2 kernel for any reason
- ♦ If you have previously compiled the Novell Client Virtual File System Kernel Module (`novfs.ko`) and then have made changes to the kernel
- ♦ If you have a custom kernel of any of the supported versions including NLD 9 SP2
- ♦ If kernel updates are pushed to the workstation via Red Carpet automatically

In all these instances, you must recompile the Novell Client Virtual File System Kernel Module (`novfs.ko`) to ensure that it is compatible with the Linux kernel version on your workstation.

However, when later shipping versions of NLD are provided by Novell, the Novell Client Virtual File System Kernel Module (novfs.ko) is installed and you will not need to recompile since the module is included in the kernel.

## Additional Things to Consider

There are two things to note when discussing the need to compile the Novell Client Virtual File System Kernel Module:

- ◆ Compiling the Novell Client Virtual File System Kernel Module is done on one workstation. If you are deploying the Novell Client for Linux to multiple workstations, you can compile the kernel module on one workstation and then use any of your software distribution channels to deploy the updated Novell Client for Linux to workstations.
- ◆ Under certain conditions, your version of novfs.ko could be revved back when you install a new kernel module. This happens because novfs.ko is part of the NLD 9 SP2. For example, if you downloaded a patched version of novfs.ko, installed it and then later you installed an NLD 9 SP2 update to your kernel, the Novell Client Virtual File System Kernel Module patch may be overwritten. You would have to reinstall the novfs.ko patch and recompile the kernel in order to ensure that the kernel module and the kernel were compiled.

If possible, the best way to simplify Novell Client for Linux deployment is to run NLD 9 SP2 on the workstation and not to update the kernel unless it is to the next shipping version of NLD. However if your workstation is running one of the other supported platforms or if you must update your kernel, see [Chapter 2, “Novell Client for Linux Virtual File System,” on page 11](#) for specific instructions on what packages are required and how to compile the Novell Client Virtual File System Kernel Module.

## Understanding the Steps to Compiling the Novell Client Virtual File System Kernel Module

Compiling the Novell Client Virtual File System Module takes three steps:

- 1** Ensuring that the right packages are installed on your workstation so that the the kernel module can be compiled.  
See [“Preparing Workstations to Compile the Virtual File System Kernel Module” on page 12](#).
- 2** Installing the Novell Client software so that the kernel module pieces are on the workstation.  
See [“Installing the Novell Client for Linux” on page 17](#).
- 3** Compiling the Novell Client Virtual File System Kernel Module.  
See [“Compiling the Novell Client Virtual File System Kernel Module” on page 15](#).

## Preparing Workstations to Compile the Virtual File System Kernel Module

Before you can compile the Novell Client Virtual File System Kernel Module, the workstation must have several packages installed in order to compile the kernel module.

**NOTE:** If you are required to compile the kernel module even though you are running NLD 9 SP2, complete these steps. For more information on when you must compile even though you are running NLD 9 SP2, see [“Additional Things to Consider” on page 12](#).

The following packages must be installed before you compile the Novell Client Virtual File System Kernel Module:

- ◆ gcc
- ◆ kernel-source
- ◆ kernel-syms
- ◆ make
- ◆ gettext (installed by default)
- ◆ libgcj (installed by default)

**NOTE:** If you update your Linux kernel version at any time, you must repeat these steps, install the Novell Client, and then compile the Novell Client kernel loadable module (novfs.ko) again so that it matches the new kernel version and reinstall the Novell Client for Linux. See [“Installing the Novell Client for Linux” on page 17](#) and [“Novell Client for Linux Virtual File System” on page 11](#). ONE OR THE OTHER Reinstall-uninstall all the stuff is taken off and during the all client settings wiped out.

After you have installed the required packages, install Novell Client for Linux.

## Installing Required Packages from XWindows

If workstations are *not* running NLD 9 SP2, you must install the required packages and compile the kernel before installing Novell Client for Linux.

### Launching the YaST Control Center

- 1** From the System menu, select Administrator Settings.
- 2** In the Run as Root window, type the root password, then click OK.
- 3** Proceed to [“Adding the Required Packages” on page 13](#).

### Adding the Required Packages

- 1** Select the Software tabbed page and then select Install and Remove Software.
- 2** In the Filter menu, select Search.
- 3** Type gcc in the Search field and then click Search.
- 4** Select the gcc package.
- 5** Type kernel-source in the Search field and then click Search.
- 6** Select the kernel-source package for installation.  
**WARNING:** The version of the kernel-source package you select for installation must match the version of the kernel currently installed on the Linux machine
- 7** Type kernel-syms in the Search field and then click Search.  
**WARNING:** The version of the kernel-syms package you select for installation must match the version of the kernel currently installed on the Linux machine
- 8** Select the kernel-syms package for installation.
- 9** Type make in the Search field and then click Search.
- 10** Select the make package for installation.
- 11** Click Accept to install all of the selected packages.

YaST displays the progress of the package installation.

- 12** (Conditional) If a dialog informs you that other package selection have been made to resolve dependencies, click Continue.
- 13** (Conditional) If a dialog prompts you to insert the Novell Linux Desktop CD, put the cd in the CD-ROM drive and then click OK.
- 14** After all the packages have been installed, select Close to close the YaST Control center.
- 15** Proceed to [“Installing the Novell Client for Linux” on page 17.](#)
- 16** When the installation is complete, proceed to [“Compiling the Novell Client Virtual File System Kernel Module” on page 15.](#)

## Installing the Required Packages from the Console Terminal

If workstations are *not* running NLD 9 SP2, you must install the required packages and compile the kernel before installing Novell Client for Linux.

### Launching the YaST Control Center

- 1** Launch the YaST Control Center by entering the following to display the YaST Control Center:  
**Launch** `/sbin/yast`
- 2** Proceed to [“Adding the Required Packages” on page 14.](#)

### Adding the Required Packages

- 1** Select Software, then select Install and Remove Software.
- 2** Select Filters and then select Search.
- 3** Enter gcc in the Search field and then press Enter.
- 4** Select the gcc package for installation and press Enter.  
The Plus (+) key appears next to the gcc package in the list.
- 5** Type Filters and then select Search.
- 6** Type kernel-source in the Search field and then press Enter.
- 7** Select the kernel-source package for installation and press Enter.  
The Plus (+) key appears next to the kernel-source package in the list.  
**WARNING:** The version of the kernel-source package you select for installation must match the version of the kernel currently installed on the Linux machine.
- 8** Type kernel-syms in the Search field and then press Enter.  
**WARNING:** The version of the kernel-syms package you select for installation must match the version of the kernel currently installed on the Linux machine.
- 9** Select the kernel-syms package for installation and then press Enter.
- 10** Type make in the Search field and then press Enter.
- 11** Select the make package for installation and then press Enter.
- 12** Select Accept to install all of the selected packages, then press Enter.  
YaST displays the progress of the package installation.

- 13** (Conditional) If a dialog prompts you to insert the Novell Linux Desktop CD, put the cd in the CD-ROM drive and then press Enter.
- 14** After all the packages have been installed, select Close to close the YaST Control center.
- 15** Proceed to [“Installing the Novell Client for Linux” on page 17.](#)
- 16** When the installation is complete, proceed to [“Compiling the Novell Client Virtual File System Kernel Module” on page 15.](#)

## Compiling the Novell Client Virtual File System Kernel Module

Depending on whether or not you have a standard kernel that has been updated or a custom kernel that needs to have the Novell Client Virtual File System kernel module added, the steps to compiling the Novell Client Virtual File System Kernel differ.

### Compiling the Novell Client Virtual File System Kernel Module After a Kernel Update

If you have updated the kernel on the workstation, you must compile the Novell Client virtual file system kernel module so that it works with the updated kernel.

**IMPORTANT:** If you have updated your kernel, make sure you restart the workstation before compiling the Novell Client Virtual File System Kernel module.

- 1** From the terminal, login as root.
- 2** Type the following command:  

```
cd /opt/novell/ncl/src/novfs directory
```
- 3** Type the following command:  

```
./make
```

The Novell Client Virtual File System Module is updated to match your custom kernel.

### Compiling the Novell Client Virtual File System Kernel Module on Workstations Running a Custom Kernel

If you have a custom kernel on the workstation, you must compile the Novell Client Virtual File System kernel module so that it works with the custom kernel.

**IMPORTANT:** If you have updated your kernel, make sure you restart the workstation before compiling the Novell Client Virtual File System Kernel module.

- 1** From the terminal, login as root.
- 2** Type the following command:  

```
cd /opt/novell/ncl/src/novfs directory
```
- 3** Type the following command:  

```
./m
```

The Novell Client Virtual File System Module is updated to match your custom kernel.

## Additional Information

- ◆ [Chapter 3, “Installing the Novell Client for Linux,” on page 17](#)
- ◆ [Chapter 4, “Configuring Novell Client for Linux,” on page 23](#)
- ◆ [Chapter 5, “Managing Login,” on page 27](#)
- ◆ [Chapter 6, “Managing File Security,” on page 31](#)
- ◆ [Chapter 7, “Uninstalling Novell Client,” on page 35](#)

# 3

## Installing the Novell Client for Linux

This section explains how to install Novell® Client™ for Linux software on one workstation and includes the following sections:

- ♦ “Installing Novell Client using an Installation Script” on page 17
- ♦ “Installing Novell Client Using XWindows” on page 17
- ♦ “Installing Novell Client from the Console Terminal” on page 19
- ♦ “Installing Novell Client using Red Carpet” on page 20
- ♦ “Start/Restart Novell Client for Linux” on page 21

**WARNING:** Before proceeding with the installation, make sure that you have configured your workstation correctly. See [Chapter 2, “Novell Client for Linux Virtual File System,” on page 11](#).

### Installing Novell Client using an Installation Script

An installation script is provided at the root of the Novell Client CD called `ncl_install.bsh`. This script can be used to install, verify installation, and uninstall the Novell Client directly from the command prompt using documented RPM commands rather than using the other automated installation methods. This same script is copied to the `/opt/novell/ncl/bin` directory during the installation of the Client, for later use to verify or uninstall the Client.

To install using the installation script, type the following command in the command terminal:

```
./ncl_install.bsh install
```

To force the installation using the installation script, type the following command in the command terminal:

```
./ncl_install.bsh install force
```

To test the installation using the installation script, type the following command in the command terminal:

```
./ncl_install.bsh install test
```

To verify the installation using the installation script, type the following command in the command terminal:

```
./ncl_install.bsh verify
```

### Installing Novell Client Using XWindows

**WARNING:** If you are updating the Novell Client software from Beta 2, make sure you uninstall the Beta 2 software before you install Beta 3. See [“Uninstalling Novell Client” on page 35](#). Also, make sure you have all the required packages. Additional packages are required in Beta 3. See [“Novell Client for Linux Virtual File System” on page 11](#). Then follow the installation instructions in [“Installing from XWindows” on page 18](#).

Installing the Novell Client using XWindows requires that you complete the following tasks:

- 1** “Adding Novell Client Software to YaST using XWindows” on page 18.
- 2** “Installing from XWindows” on page 18.
- 3** “Start/Restart Novell Client for Linux” on page 21

## Adding Novell Client Software to YaST using XWindows

- 1** Launch the YaST Control Center
  - 1a** From the System menu, select Administrator Settings.
  - 1b** In the Run as Root window, type the root password, then click OK.
- 2** Select the Software tabbed page in the left column to activate it and then select Change Source of Installation in the right column.
- 3** Click Add.
- 4** Select the Novell Client source file location (CD or Local Directory only for Beta 3), and specify the location, then click Finish.

**NOTE:** YaST allows you to choose other installation sources such as FTP, HTTP, Samba, NFS, and DVD. These other sources have not been tested with the installation of Beta 3 but may work. You may want to try these other sources in your testing of Beta 3.

YaST adds the new installation source and displays it in the Software Source Media list. You must now install the software.

## Installing from XWindows

**WARNING:** If you are updating the Novell Client software from Beta 2, make sure you uninstall the Beta 2 software before you install Beta 3. See “Uninstalling Novell Client” on page 35. Also, make sure you have all the required packages. Additional packages are required in Beta 3. See “Novell Client for Linux Virtual File System” on page 11. Then follow the installation instructions in “Installing from XWindows” on page 18.

- 1** Launch the YaST Control Center
  - 1a** From the System menu, select Administrator Settings.
  - 1b** In the Run as Root window, type the root password, then click OK.
- 2** Select the Software tabbed page in the left column to activate it and then select Install and Remove Software in the right column.
- 3** Change the filter to Selections.
- 4** Check the Novell Client for Linux checkbox to automatically select all of the packages for installation.
- 5** Click Accept to install all of the selected packages.

The installation begins.
- 6** Start Novell Client for Linux.

See “Start/Restart Novell Client for Linux” on page 21.

You may want to customize your Novell Client Options such as the placement of the Novell Client tray application on the Desktop or in the apps tray. This can be done from the Novell Client tray application.

## Installing Novell Client from the Console Terminal

**WARNING:** If you are updating the Novell Client software from Beta 2, make sure you uninstall the Beta 2 software before you install Beta 3. See “[Uninstalling Novell Client](#)” on page 35. Also, make sure you have all the required packages. Additional packages are required in Beta 3. See “[Novell Client for Linux Virtual File System](#)” on page 11. Then follow the installation instructions in “[Installing from the Console Terminal](#)” on page 19.

You can install or update the Novell Client from the Console Terminal.

**IMPORTANT:** You must be logged in as the root user to install from the Console Terminal.

Make sure you “[Start/Restart Novell Client for Linux](#)” on page 21 after you install the Novell Client.

### Installing from the Console Terminal

**WARNING:** If you are updating the Novell Client software from Beta 2, make sure you uninstall the Beta 2 software before you install Beta 3. See “[Uninstalling Novell Client](#)” on page 35. Also, make sure you have all the required packages. Additional packages are required in Beta 3. See “[Novell Client for Linux Virtual File System](#)” on page 11. Then follow the installation instructions in “[Installing from XWindows](#)” on page 18.

It should also be noted that if you installed previously from a location and you are installing an update, you must select a new source of installation. YaST cannot use the old location.

- 1 Launch the YaST Control Center by entering the following to display the YaST Control Center:

```
Launch /sbin/yast
```

- 2 Select Software and then select Change Source of Installation.

- 3 Select Add.

- 4 Select the Novell Client source file location (CD or Local Directory only for Beta 3), and specify the location, then select OK.

**NOTE:** YaST allows you to choose other installation sources such as FTP, HTTP, Samba, NFS, and DVD. These other sources have not been tested with the installation of Beta 3 but may work. You may want to try these other sources in your testing of Beta 3.

- 5 Select Software and then select Install and Remove Software.

- 6 Change the filter to Selections.

- 7 Select the Novell Client for Linux to select all of the packages for installation, then press enter. The Plus (+) key appears next to the Novell Client for Linux package in the list.

- 8 Select Accept to update all the selected packages.

YaST displays the progress of the package installation.

- 9 After all the packages have been installed, select Quit to close the YaST Control center.

- 10 Start Novell Client for Linux.

See “[Start/Restart Novell Client for Linux](#)” on page 21.

YaST updates the new installation source and displays it in the Software Source Media list.

## Installing Novell Client using Red Carpet

**WARNING:** If you are updating the Novell Client software from Beta 2, make sure you uninstall the Beta 2 software before you install Beta 3. See [“Uninstalling Novell Client” on page 35](#). Also, make sure you have all the required packages. Additional packages are required in Beta 3. See [“Novell Client for Linux Virtual File System” on page 11](#). Then follow the installation instructions in [“Installing from XWindows” on page 18](#).

## Installing Novell Client Using XWindows

### Launching Red Carpet

- 1 From the System menu, select Software Updates.
- 2 In the Run as Root window, type the root password, then click OK.
- 3 Select the Software tabbed page in the left column to activate it and then select Change Source of Installation in the right column.

### Activating the Required Red Carpet Service

- 1 From the Edit Menu, select Services.
- 2 Click Add Service.
- 3 Enter the Service URL included in the Beta information.
- 4 Click OK.  
The staging service is added to the Services list
- 5 Click Close.
- 6 From the File Menu, select Activate.
- 7 Select the Beta staging service in the Service list.
- 8 Enter your email address in the Email field.
- 9 Enter the activation code included in the Beta information.
- 10 Click Activate.

### Subscribe to the Novell Client for Linux Channel

- 1 Click Channels.
- 2 Select the channel included in the Beta information.
- 3 Click Close.

### Select the Novell Client for Linux Packages for Installation

- 1 Click the Available Software tabbed page.
- 2 Select the channel included in the Beta information.
- 3 Select all of the displayed packages.
- 4 Click Mark for Installation.

### Install Novell Client for Linux

- 1 Click Run Now.

- 2** Click Continue on the Dependency Resolution dialog box.  
Red Carpet displays the progress of the package installation
- 3** After all the packages have been installed, click OK on the Transaction Finished dialog and quit Red Carpet.

## Installing Novell Client from the Console Terminal

- 1** Activate the required Red Carpet service by entering:

```
rug sa https://beta_URL
```

- 2** Select the Novell Client for Linux packages for installation by entering:

```
rug sub beta_package_name
```

- 3** Do one of the following to install or upgrade the Novell Client for Linux.

- ♦ To install, enter the following:

```
launch rug in --beta_package_name
```

- ♦ To upgrade, enter the following:

```
launch rug up beta_package_name
```

rug will list all the packages to be installed or upgraded, type y to continue.

rug will display the progress of the package installation.

## Start/Restart Novell Client for Linux

There are several options to start or restart the Novell Client for Linux.

- ♦ **Restarting the Linux Workstation:** This is the best way to ensure that the Novell Client for Linux is completely restarted.
- ♦ **Manually Starting Novell Client:** Open a terminal session and log in as root (su). Then type the following two commands, selecting the appropriate command based in whether or not this is a new installation or an update:

```
For New Installations: ./novell/ncl/bin/ncl_control.bsh start
```

```
For Updates: ./novell/ncl/bin/ncl_control.bsh restart
```

If either of these commands displays any errors, you will need to restart the Linux machine.

In addition, `./novell/ncl/bin/ncl_control.bsh status` will show whether the NCL drivers are loaded properly or not.

## Additional Information

- ♦ [Chapter 4, “Configuring Novell Client for Linux,” on page 23](#)
- ♦ [Chapter 5, “Managing Login,” on page 27](#)
- ♦ [Chapter 6, “Managing File Security,” on page 31](#)
- ♦ [Chapter 7, “Uninstalling Novell Client,” on page 35](#)



# 4

## Configuring Novell Client for Linux

This chapter explains the two ways that Novell Client for Linux provides to configure client settings on the workstation.

- ♦ “Using Novell Client Configuration Wizard” on page 23
- ♦ “Using Configuration Files to Preconfigure Novell Client” on page 23

### Using Novell Client Configuration Wizard

Novell Client for Linux includes a Novell Client Configuration Wizard to simplify the process of configuring your Novell Client.

- 1 Do one of the following:
  - ♦ From the Novell Client tray application, select System Settings.
  - ♦ Launch YaST and select Novell Client from the Network Services list.
- 2 Select the client configuration wizard pages that contain the settings you need to configure.
- 3 Click Start Wizard.
- 4 Follow the instructions in the left panel to configure Novell Client settings.
- 5 When finished, click Finish.

Any changes you make to the Client settings are written to a set of conf files in the `/etc/opt/novell/ncl` directory. These conf files are then used by the Client.

**IMPORTANT:** In Beta 3, the settings on the File Browser and Tray Application page are written to the conf file successfully but they are not used by those applications. This will be fixed for the open beta.

### Using Configuration Files to Preconfigure Novell Client

Novell Client for Linux allows you to apply preconfigured client settings contained in one or more preconfigured conf files. This option works similar to the unattend file that can be used to configure Novell Client for Windows.

Preconfiguring Novell Client for Linux requires a spec file and a bash script found in the `/add-on/novell-client-conf` directory of the Client.

- 1 Create the preconfigured settings using the Novell Client Configuration Wizard.  
See “Using Novell Client Configuration Wizard” on page 23.
- 2 Copy the resulting conf files to the `add-on/novell-client-conf` directory.

Depending on the settings you preconfigured, you will need to copy one or more of the following files:

Configuration Settings	Conf File Path and Name
Login Settings	/etc/opt/novell/ncl/login.conf
Protocol Settings	/etc/opt/novell/ncl/protocol.conf
File Browser Settings	/etc/opt/novell/ncl/file_browser.conf
Novell Client Tray Application Settings	/etc/opt/novell/ncl/tray_app.conf
SLP Configuration Settings	/etc/opt/novell/ncl/slp.conf

**3** Run the `make_novell-client-conf_rpm.bsh` script.

This creates the `novell-client-conf.rpm` using all of the conf files contained in the `add-on/novell-client-conf` directory.

**4** Do one of the following to install the preconfigured settings contained in the `novell-client-conf.rpm`:

- ♦ **Install Manually from the Command Prompt:** Type `rpm -i novell-client-conf.rpm` at the command prompt
- ♦ **Install using the Provided `ncl_install.bsh` Script:** When you launch the `ncl_install.bsh` script, it will look for the `novell-client-conf.rpm` in the `add-on/novell-client-conf` directory and add it to the list of rpms that it installs as part of the Client.
- ♦ **Install with the Novell Client using Red Carpet:** Include the `novell-client-conf.rpm` in the channel with the rest of the Novell Client rpms and it will be installed with them.
- ♦ **Install with the Novell Client using YaST:** Add the location of the newly created `novell-client-conf.rpm` to the list of Installation Sources in YaST (add a Local Directory in the Change Source of Installation option and point it to the directory containing the `novell-client-conf.rpm`). When the YaST install runs, the `novell-client-conf.rpm` will be added as one of the rpms in the Novell Client selection.

**TIP:** The configuration settings can be updated on the workstation using this method at any time. See [“Updating Client Configuration Settings at Any Time” on page 24](#).

The conf files contained in the rpm are copied into the `/etc/opt/novell/ncl` directory, overwriting the files of the same name that already exist there.

The installation then copies the `slp.conf` file to the `/etc` directory, overwriting that file as well.

**TIP:** Backup copies of the existing files are made so that you can revert back to the old files if you need to.

## Updating Client Configuration Settings at Any Time

Any time you need to update Novell Client settings on a workstation, you can use the Configuration Wizard to

**1** Create the preconfigured settings using the Novell Client Configuration Wizard.

See [“Using Novell Client Configuration Wizard” on page 23](#).

**2** Copy the resulting conf files to the `add-on/novell-client-conf` directory.

Depending on the settings you preconfigured, you will need to copy one or more of the following files:

Configuration Settings	Conf File Path and Name
Login Settings	/etc/opt/novell/ncl/login.conf
Protocol Settings	/etc/opt/novell/ncl/protocol.conf
File Browser Settings	/etc/opt/novell/ncl/file_browser.conf
Novell Client Tray Application Settings	/etc/opt/novell/ncl/tray_app.conf
SLP Configuration Settings	/etc/opt/novell/ncl/slp.conf

**3** Run the `make_novell-client-conf_rpm.bsh` script.

This creates the `novell-client-conf.rpm` using all of the conf files contained in the `add-on/novell-client-conf` directory.

**4** Add the location of the newly created `novell-client-conf.rpm` to the list of Installation Sources in YaST (add a Local Directory in the Change Source of Installation option and point it to the directory containing the `novell-client-conf.rpm`). When the YaST install runs, the `novell-client-conf.rpm` will be added as one of the rpms in the Novell Client selection.

The conf files contained in the rpm are copied into the `/etc/opt/novell/ncl` directory, overwriting the files of the same name that already exist there.

The installation then copies the `slp.conf` file to the `/etc` directory, overwriting that file as well.

**TIP:** Backup copies of the existing files are made so that you can revert back to the old files if you need to.

## Additional Information

- ♦ [Chapter 5, “Managing Login,” on page 27](#)
- ♦ [Chapter 6, “Managing File Security,” on page 31](#)
- ♦ [Chapter 7, “Uninstalling Novell Client,” on page 35](#)



# 5

## Managing Login

You can customize the client login environment to suit your network and have greater control over what users can access during login.

- ◆ [“Setting Up Login Scripts” on page 27](#)
- ◆ [“Setting Up Login Restrictions” on page 27](#)
- ◆ [“Logging In to the Network” on page 29](#)
- ◆ [“Logging Out of the Network” on page 29](#)

### Setting Up Login Scripts

When a user successfully logs in to the network, one or more login scripts are executed which automatically set up the workstation environment. Login scripts are similar to batch files and are executed by Novell<sup>®</sup> Login. You can use login scripts to map drives and search drives to directories, display messages, set environment variables, and execute programs or menus.

Login Scripts were originally created for use with the Novell Client for Windows. However, Novell Client for Linux can take advantage of the majority of the functionality available in Windows. This means that the login scripts you created for Windows workstations can also be used with Linux workstations without having to modify them. This means that you only have to administer one set of login scripts.

Because login scripts are very flexible and dynamic, offer a high degree of customization, and are cross-platform, you will want to customize the scripts to optimize workstation login to your network. For more information on setting up login scripts, see the *Novell Login Scripts Guide*.

### Setting Up Login Restrictions

Login restrictions are limitations on user accounts that control access to the network. These restrictions can be set by an administrator in Novell iManager or ConsoleOne<sup>®</sup> for each user’s eDirectory User object and include the following:

- ◆ Requiring a password
  - You can specify its minimum length, whether it must be changed and how often, whether it must be unique, and whether the user can change it.
- ◆ Setting the number of logins with expired password and the number of incorrect login attempts allowed
- ◆ Setting account limits such as an account balance or expiration date
- ◆ Limiting disk space for each user by specifying the maximum blocks available for each user on a volume

- ◆ Specifying the number of simultaneous connections a user can have
- ◆ Specifying (by node address) which workstations users can log in on
- ◆ Restricting the times when users can log in (you can assign all users the same hours, or you can restrict users individually)

When a user violates login restrictions by entering an incorrect password or the exceeding the number of logins with an expired password, the account is disabled and no one can log in using that username. This prevents unauthorized users from logging in.

For specific information on setting these restrictions, see the online help located in iManager or ConsoleOne.

## Using OpenSLP to Simplify Login

The service location protocol (SLP) was developed so that networking applications such as Novell Client for Linux could discover the existence, location, and configuration of networked services in enterprise networks. Without SLP, users must supply the host name or network address of the service that they want to access.

Because SLP makes the existence, location, and configuration of certain services known to all clients in the local network, Novell Client for Linux can use the information distributed to simplify login. In the case of Novell Client, having SLP set up allows users to see the trees, contexts and servers available to them when they use the Novell Client for Linux Login screen. When they click the Browse button, a list of available trees, contexts, or servers appears and they can select the appropriate ones. For example, instead of having to remember an IP address or DNS name for a server, users can select the server's name from a list of available servers.

SLP must be activated and set up on your Novell servers in order for the Novell Client to take advantage of it. For more information, see “Configure and Administer” in the *Administrative Documentation for OES manual* ([http://www.novell.com/documentation/oes/index.html?page=/documentation/oes/oes\\_home/data/btshgxf.html](http://www.novell.com/documentation/oes/index.html?page=/documentation/oes/oes_home/data/btshgxf.html)).

In addition, SLP is not set up by default on Linux workstations. Novell Client for Linux includes a Novell Client Configuration Wizard to simplify the process of configuring your SLP and other Novell Client configuration options.

To set up SLP, complete the following steps:

- 1** Run the Novell Client Configuration Wizard and select the SLP Configuration page.  
See “Using Novell Client Configuration Wizard” on page 23.
- 2** When the SLP Configuration page appears, enter the following SLP information for your network:
  - ◆ Enter the Scope List
  - ◆ Enter the Directory Agent's IP address or DNS name
  - ◆ Check Broadcast Only
  - ◆ Leave the Default Max Results
- 3** Complete the Novell Client Configuration Wizard.
- 4** Log out of the workstation.
- 5** Log in to the workstation.

- 6** From the Novell tray application, select Novell Login.
- 7** Enter your username and password.
- 8** Click the Tree button and then select the correct tree from the list.

The list of trees is populated by SLP. Seeing the list of trees displayed means that SLP is configured and running on your network.

**TIP:** If this list does not appear, you have not correctly configured SLP.

- 9** Click the Contest button and then select the correct context from the list.
- 10** Click the Server button and then select the correct server from the list.
- 11** Click OK.

The Novell Client Configuration Wizard provides only basic SLP configuration since this is all that is required by the client. However, if other applications on your workstation require more advanced settings, you can modify the `/etc/slp.conf` file to set advanced settings.

For more information on advanced SLP configuration, check the [OpenSLP Web site \(http://www.openslp.org\)](http://www.openslp.org). In addition, the `file:/usr/share/doc/packages/openslp/*` directory contains all available documentation on SLP, including a README.SuSE containing the SUSE LINUX details, the RFCs, and two introductory HTML documents. RFC 2609 deals with the syntax of the service URLs used in greater detail and RFC 2610 deals with DHCP via SLP.

## Logging In to the Network

- 1** Do one of the following:
  - ◆ From the Novell Client tray application, select Novell Login.
  - ◆ Select Programs > Novell > Novell Login.
- 2** Enter your user name and password, then click Advanced.
- 3** Enter the Tree, Context and Server information for the server you want to connect to.

You can enter a DNS name or an IP address for the Server.

You can browse a list of available trees, contexts, and servers by clicking their associated buttons.
- 4** (Conditional) To clear and existing connections before logging in, check Clear current connections.
- 5** (Conditional) To run login scripts during this login session, select the Script tab and then select the options needed to run the login scripts.
- 6** Click OK.

## Logging Out of the Network

- 1** From the Novell Client tray application, select Novell Logout.
- 2** Do one of the following:
  - 2a** If you are logged in to only one tree, click Logout.
  - 2b** If you are logged in to multiple trees, select the tree or server that you want to log out of and then click Clear Connections.



# 6

## Managing File Security

Novell® OES and NetWare® networks restrict access to network files and folders based on user accounts. For example, a user connected to the network using the Administrator account might be able to delete or rename a file that other users can only open and edit.

The Novell file system keeps track of the rights that users have to files and directories on the network. When users try to access any file on the network, Novell File Services (NFS) either grants access or prohibits certain things that users can do with the file.

It is important to note that Linux file rights do not correlate with NFS file rights. When you copy a file over from a Linux workstation to a Novell server, the only right that is preserved is the Read-Only attribute. This also occurs if you copy files from one server to another using any method other than NCOPY from the command terminal.

For more information on the specific rights on NetWare and OES servers, see “Understand” in the *Storage for File Services* section of the *Administrative Documentation for OES* manual ([http://www.novell.com/documentation/oes/index.html?page=/documentation/oes/oes\\_home/data/bseke41.html](http://www.novell.com/documentation/oes/index.html?page=/documentation/oes/oes_home/data/bseke41.html)).

Rights are granted and revoked by creating trustee assignments. For more information, see “Changing Trustee Rights” on page 32.

This section explains the following:

- ♦ “Checking File or Folder Rights” on page 31
- ♦ “Changing Trustee Rights” on page 32
- ♦ “Combining Multiple Trustees” on page 33

### Checking File or Folder Rights

**IMPORTANT:** This feature is not fully functional in Beta 3.

- 1** Right-click the file or folder that you want to check.
- 2** Do one of the following:
  - ♦ **On GNOME:** Select Novell Properties.
  - ♦ **On KDE and SuSe Pro:** Select Applications > Novell Properties.
- 3** Click the Novell Rights tabbed page.
- 4** View the information.

The Trustees list shows the users or groups that have been granted rights to work with this file or folder. For a folder, the trustees rights to the folder also apply to all the files and folders it contains unless the rights are explicitly redefined at the file or subfolder level.

The rights that each trustee has are shown by checkmarks under the letters. If you are viewing the properties of multiple files, the trustees and rights shown are the combined trustees and rights for all the files.

Inherited Rights and Filters displays all the inherited rights and filters that apply to this file or folder

Effective Rights displays your effective rights for this file or folder.

- 5 Click OK.

## Changing Trustee Rights

**IMPORTANT:** This feature is not fully functional in Beta 3.

You must have the Access Control right to change trustee assignments.

- 1 Right-click the file or folder that you want to check.
- 2 Do one of the following:
  - ♦ **On GNOME:** Select Novell Properties.
  - ♦ **On KDE and SuSe Pro:** Select Applications > Novell Properties.
- 3 Click the Novell Rights tabbed page.
- 4 Select the trustee you want to change rights for from the Trustees list.
- 5 Check or uncheck the boxes associated with the rights you want to assign to this trustee.
- 6 Click OK.

Trustee assignments override inherited rights.

To change an Inherited Rights Filter, click the Inherited Rights and Filters button on the NetWare Rights property page.

## Adding a Trustee

You must have the Access Control right to add a trustee.

- 1 Right-click the file or folder that you want to check.
- 2 Do one of the following:
  - ♦ **On GNOME:** Select Novell Properties.
  - ♦ **On KDE and SuSe Pro:** Select Applications > Novell Properties.
- 3 Click the Novell Rights tabbed page.
- 4 Locate the user eDirectory object that you want to add as a trustee.
- 5 Click Add.
- 6 Click OK.

## Removing a Trustee

You must have the Access Control right to delete a trustee.

- 1 Right-click the file or folder that you want to check.

- 2** Do one of the following:
  - ◆ **On GNOME:** Select Novell Properties.
  - ◆ **On KDE and SuSe Pro:** Select Applications > Novell Properties.
- 3** Click the Novell Rights tabbed page.
- 4** Select the trustee you want to delete from the Trustees list.
- 5** Click Remove.
- 6** Click OK.

## Combining Multiple Trustees

**IMPORTANT:** This feature is not fully functional in Beta 3.

As an administrator, you might need to apply the same trustee assignments to a group of selected files. You can combine trustee assignments by selecting the Combine Multiple Trustees option on the NetWare Rights page.

For example, Kim is a trustee of FILEA and FILEB. Kim has Read, File Scan, and Access Control rights for FILEA and Read and File Scan rights for FILEB. Nancy has Read and File Scan rights for FILEA.

If you give a new user named Jack Read, Write and File Scan rights for both FILEA and FILEB and, at the same time, you want to give similar trustee rights for Kim and Nancy, check Combine Multiple Trustees. The following rights are the assigned:

- ◆ Kim has Read and File Scan rights to both FILEA and FILEB. Her Access Control right is lost because the combined rights are taken from the rights given to Jack.
- ◆ Nancy has Read and File Scan rights to both FILEA and FILEB. She has gained Read and File Scan rights to FILEB because the combined rights are taken from the rights given to Jack.
- ◆ Jack has Read, Write, and File Scan rights to both FILEA and FILEB.

- 1** Highlight all the files or folders that you want to combine rights for
- 2** Right-click the files or folders, then select one of the following:
  - ◆ **On GNOME:** Select Novell Properties.
  - ◆ **On KDE and SuSe Pro:** Select Applications > Novell Properties.
- 3** Click the Novell Rights tabbed page.
- 4** Select the Combine Multiple Trustees Checkbox.
- 5** Click OK.



# 7

## Uninstalling Novell Client

This section explains how to uninstall Novell Client for Linux

### Uninstalling using the YaST Control Center

- 1** Launch the YaST Control Center
  - 1a** From the System menu, select Administrator Settings.
  - 1b** In the Run as Root window, type the root password, then click OK.
- 2** Select the Software tabbed page in the left column to activate it and then select Install and Remove Software in the right column.
- 3** Change the filter to Selections.
- 4** Check the Novell Client for Linux checkbox until a trash can appear. This automatically selects all of the packages that need to be deleted.
- 5** Click Accept to delete all of the selected packages.

YaST displays the progress of the uninstall.

### Uninstalling using the Install Script

To uninstall Novell Client for Linux using the installation script, type the following command in the command terminal:

```
./ncl_install.bsh uninstall
```

To test the uninstall using the installation script, type the following command in the command terminal:

```
./ncl_install.bsh uninstall test
```



# A Troubleshooting Issues

This appendix provides troubleshooting information for known issues related to Novell® Client™ for Linux.

**TIP:** If you do not find a solution to your issue here, check the *Novell Client for Linux Readme* as well as the [Novell Technical Support Web site \(http://support.novell.com\)](http://support.novell.com).



# B

## Commands

The Novell Client for Linux provides a set of command line utilities that are available at the console terminal. To locate the list of command line utilities included with Novell Client for Linux, look in the following location:

```
/opt/novell/ncl/bin
```

Each of the utilities has a man page associated with it that contains information on the utility such as a definition, useage, and samples. You can access a man page for a specific utility by entering the following:

```
man utility_name
```

For example, **man ncl\_tray**.

In the man pages, move up and down with the PgUp and PgDn keys. Move between the beginning and the end of a document with Home and End. End this viewing mode by pressing Q. Learn more about the man command itself with **man man** command.

