

Novell Open Workgroup Suite Small Business Edition

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INSTALLATION AND
ADMINISTRATION GUIDE

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About This Guide

Novell® Open Workgroup Suite Small Business Edition (NOWS SBE) is the first workgroup suite for small businesses that provides organizations with a flexible solution based on proven, open standards based software. The Novell suite features a simple, yet customizable installation process along with remote management capabilities. This means that solution providers can remotely manage their small business customers' IT infrastructures, thus reducing costs and improving service.

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- ◆ Chapter 2, “Getting Started,” on page 17
- ◆ Chapter 3, “Directory Services (eDirectory),” on page 25
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Audience

This guide is intended for Novell Open Workgroup Suite Small Business Edition administrators.

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

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For the most recent version of the *Novell Open Workgroup Suite Small Business Edition Administration and Installation Guide*, visit the [Novell Documentation Web site \(http://www.novell.com/documentation/news/\)](http://www.novell.com/documentation/news/).

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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* or UNIX* , should use forward slashes as required by your software.

Understanding NOWS SBE

1

- ◆ [Section 1.1, “Overview,” on page 11](#)
- ◆ [Section 1.2, “Product Components,” on page 11](#)
- ◆ [Section 1.3, “Requirements,” on page 13](#)
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1.1 Overview

Novell® Open Workgroup Suite Small Business Edition (NOWS SBE) is the first workgroup suite for small businesses that provides organizations with a flexible solution based on proven, open standards based software. The Novell suite features a simple, yet customizable installation process along with remote management capabilities. This means that solution providers can remotely manage their small business customers’ IT infrastructures, thus reducing costs and improving service.

The Novell Open Workgroup Suite Small Business Edition also has a newly developed integration layer that makes it easier for resellers and service providers to integrate their specialized products into a solution. The suite is supported by popular business software applications certified to work with SUSE® Linux Enterprise. Novell Open Workgroup Suite Small Business Edition includes Novell Groupwise® for e-mailing and calendaring; Novell Open Enterprise Server (OES) for advanced storage management, user and rights administration, and clustering and failover capabilities; SUSE Linux Enterprise Desktop from Novell for complete desktop productivity; and the Novell edition of the popular office productivity suite, OpenOffice.org, for Windows and Linux.

1.2 Product Components

Novell Open Workgroup Suite Small Business Edition includes a comprehensive collection of services and applications that provide small offices with all the networking capabilities that are in a corporate setting. The following solutions and features are part of the suite.

- ◆ [Section 1.2.1, “Backup, Restore, and Recovery,” on page 11](#)
- ◆ [Section 1.2.2, “Business Applications,” on page 12](#)
- ◆ [Section 1.2.3, “Collaboration Groupware and Messaging,” on page 12](#)
- ◆ [Section 1.2.4, “File, Print, and Fax,” on page 12](#)
- ◆ [Section 1.2.5, “Security Management,” on page 12](#)
- ◆ [Section 1.2.6, “Systems Management,” on page 13](#)

1.2.1 Backup, Restore, and Recovery

- ◆ **Personal File Backup (iFolder):** iFolder™ is a simple and secure storage solution that enables you to back up, access, and manage your personal files from anywhere, at anytime. After you have installed iFolder, you simply save your files locally—as you have always done—and Novell iFolder automatically updates the files on your network server and delivers them to the other machines you use.

Network Backup (Amanda): Amanda allows you to set up a single backup server to back up multiple hosts to a tape or disk-based storage system. Amanda uses native dump and GNU tar facilities and can back up a large number of workstations and servers running various versions of Linux, UNIX or Microsoft* Windows* operating systems.

1.2.2 Business Applications

- ♦ **OpenOffice:** OpenOffice is a full-featured office suite. It includes a word processing, presentations, spreadsheets, and databases.

1.2.3 Collaboration Groupware and Messaging

- ♦ **E-Mail and Collaboration (GroupWise):** GroupWise has a set of tools that will keep your employees connected to clients and each other. The system comes with e-mail, calendaring, and instant messaging to be set up according to your company needs.

1.2.4 File, Print, and Fax

- ♦ **Print Services (iPrint):** iPrint is a network printing service so everyone can print at a centralized location. iPrint extends print services securely across multiple networks and operating systems.
- ♦ **Windows File and Print Sharing (Samba):** The Samba file and print sharing service for Windows enables you to configure your network with the security of Linux and still be able to access files on your Windows servers.
- ♦ **Fax Server (HylaFAX):** HylaFAX is the leading fax server for UNIX-like computer systems. It uses a client-server design and supports the sending and receiving of faxes as well as text pages, on any scale from low to very high volumes, making use of large numbers of modems if necessary.

1.2.5 Security Management

- ♦ **Anti-Virus (ClamAV):** Clam AntiVirus is an anti-virus toolkit for UNIX, designed especially for e-mail scanning on mail gateways. It provides a number of utilities, including a flexible and scalable multi-threaded daemon, a command line scanner, and an advanced tool for automatic database updates. The core of the package is an anti-virus engine available in the form of a shared library.
- ♦ **VPN Server (OpenVPN):** OpenVPN is a component that enables your users to work remotely. A Virtual Private Network (VPN) allows users to connect securely to your internal business network and conduct business transactions with the same functionality as they do within the office.
- ♦ **Firewall (IPTables):** A firewall is a hardware or software device that is configured to permit, deny, or proxy data through a computer network that has different levels of trust. Novell Open Workgroup Suite Small Business Edition includes a fully configurable firewall service to keep out unwanted traffic and intruders.

1.2.6 Systems Management

- ♦ **Dynamic Local User:** If you have Windows on desktops, you can use the Dynamic Local User component to synchronize the Novell Client™ with the Windows client so that login is seamless to your users.
- ♦ **Directory Services (eDirectory):** eDirectory™ manages user identities and is the core of all rights and privileges in your NOWS SBE network.
- ♦ **Helpdesk:** Help your administrators track trouble calls and give your end users the ability to submit trouble tickets without picking up the phone.
- ♦ **Management Tools (iManager):** This is a role-based tool for network and systems management of your environment through a consolidated Web interface.
- ♦ **DHCP:** Dynamic Host Configuration Protocol (DHCP) enables your server to dynamically assign IP address as clients need them instead of statically assigning an IP address to each of the clients.
- ♦ **DNS:** Dynamic Name Server (DNS) is a service to link a common name to an IP address for easy location and searching of resources over TCP/IP.
- ♦ **VPN Server (OpenVPN):** Remote Access software to securely connect to your company files when away from the office.
- ♦ **Remote Desktop (TightVNC):** This software gives your administrators the ability to remotely manage and assist end users with questions and tasks.

1.3 Requirements

The hardware being used for installation must be in the tested and approved hardware list. Support is only available to those who install on the tested and approved hardware.

- ♦ [Section 1.3.1, “Approved and Tested Hardware List,” on page 13](#)
- ♦ [Section 1.3.2, “Server Requirements,” on page 13](#)
- ♦ [Section 1.3.3, “Desktop Operating System and Browser Requirements,” on page 14](#)

1.3.1 Approved and Tested Hardware List

- ♦ For a list of tested and approved hardware, see [YES CERTIFIED \(http://developer.novell.com/yessearch/\)](http://developer.novell.com/yessearch/).

1.3.2 Server Requirements

The following server requirements are based on OES server requirements.

Table 1-1 *Server Requirements*

Server Components	Minimum Requirements	Recommended Requirements
Server	Server-class computer with Pentium* II or AMD* K7 450 Mhz processor (Bootable DVD-ROM drive)	Server-class computer with Pentium III, Pentium III Xeon*, Pentium 4, Intel* Xeon 700 Mhz, AMD K8 CPUs (Athlon64 and Opteron*), Intel EM64T or higher processor (Bootable DVD-ROM drive)
Memory	512 RAM	1 GB of RAM
Disk Space	10 GB of unpartitioned disk space	Additional disk space might be required, depending on which OES components are selected and how they are used.

1.3.3 Desktop Operating System and Browser Requirements

Table 1-2 *Desktop and Browser Requirements*

Desktop Operating System	Browser
Windows 2000	NA
Windows XP	Internet Explorer 7 or higher
Windows Vista*	Internet Explorer 7 or higher
SUSE Linux Desktop (SLED) 10	Mozilla* Firefox* 2.0x
Mac OS* X	Mozilla* Firefox* for Macintosh* 2.0x

NOTE: IE 6 is not supported.

1.4 Planning for the NOWS SBE Install

When planning your installation of Novell Open Workgroup Suite Small Business Edition, keep these items in mind prior to installation.

- ◆ [Section 1.4.1, “Server,” on page 15](#)
- ◆ [Section 1.4.2, “Installing Two NICs with NOWS SBE,” on page 15](#)
- ◆ [Section 1.4.3, “Firewall \(IPTables \),” on page 15](#)
- ◆ [Section 1.4.4, “Component Install Order,” on page 16](#)
- ◆ [Section 1.4.5, “Creating a New Directory,” on page 16](#)
- ◆ [Section 1.4.6, “NetWork Backup \(Amanda\),” on page 16](#)
- ◆ [Section 1.4.7, “E-Mail and Collaboration \(GroupWise\),” on page 16](#)
- ◆ [Section 1.4.8, “Helpdesk,” on page 16](#)

1.4.1 Server

By accepting the default partitioning information, the installation overwrites all existing files on the server. Change this configuration if you plan to install NOWS SBE on an existing partition. Verify that the server does not see any partitions or devices that you do not want to be formatted and wiped. If components are installed while connected to a Storage Area Network (SAN), it has the potential to wipe out any partitions and data that it sees.

You also need to make sure that your server is plugged into a network where DHCP is installed.

1.4.2 Installing Two NICs with NOWS SBE

When you install and configure a NOWS SBE server, do not configure the second network interface card (NIC) until you have completed the installation and configured the primary NIC through the Web configuration tool. After the initial Web configuration is complete, you can then use YaST to configure the second NIC.

NOTE: Because you will be routing traffic through the server, be sure to enable *IP Forwarding* when configuring the second NIC.

1.4.3 Firewall (IPTables)

Below is a table with the typical ports that need to be opened on your firewall for each component.

Table 1-3 Port Numbers

Component	Port Type	Port Number
Amanda	UPD	10080
iManager	TCP	80, 443
Samba	UDP	631, 135, 137, 138, 139, 445
Samba	TCP	137, 138, 139
iFolder	TCP	80, 443
GroupWise	TCP	25, 80, 443, 110, 143, 993, 1677, 7100, 7101, 7102, 7180, 71, 81, 8200, 8312, 8300, 9850
DNS	UDP, TCP	53, 953
ClamAV	TCP	3310
OpenVPN	NA	NA
HylaFAX	TCP	4557, 4559
Helpdesk	TCP	80, 443
iPrint	TCP	80, 443, 631
IPTables	TCP	8181, 22, 8182

Component	Port Type	Port Number
eDirectory	NCP	389, 636, 427, 524, 8008, 8009, 8028, 8030, 8180, 9009
eDirectory	TCP	524
DHCP	UDP	67

1.4.4 Component Install Order

Begin component installation with eDirectory, then install iManager. You need iManager to manage iPrint, iFolder, and Helpdesk, as well as GroupWise.

If you are choosing to install MailScanner and GroupWise, be sure to install in this order:

1. GroupWise
2. MailScanner

1.4.5 Creating a New Directory

Before you create a new eDirectory tree, you should define a naming standard. A consistent naming scheme provides a guideline for network administrators who will add, modify, or move objects within the eDirectory tree. For additional information, see the [eDirectory Documentation Web site \(http://www.novell.com/documentation/edir88/index.html?page=/documentation/edir88/edir88/data/acavuul.html\)](http://www.novell.com/documentation/edir88/index.html?page=/documentation/edir88/edir88/data/acavuul.html).

1.4.6 NetWork Backup (Amanda)

This component requires a tape drive to send your backups. For information about supported tape drives, see the [Amanda Documentation Web site \(http://amanda.sourceforge.net/fomserve/cache/1.html\)](http://amanda.sourceforge.net/fomserve/cache/1.html).

1.4.7 E-Mail and Collaboration (GroupWise)

If you are installing GroupWise and MailScanner, when you install the GroupWise Internet Assistant (GWIA) you are given the opportunity to assign GWIA a different port (the default is 26) so that the two programs do not conflict. Incoming mail from the Internet to the GroupWise system is then accepted by MailScanner on port 25 (SMRP's default), scanned, and delivered to GWIA, which accepts non-standard mail on port 26.

1.4.8 Helpdesk

You need an e-mail account designated for notifications and workflows for the Helpdesk component. You can use an existing account or create one named `support@yourdomain.com` or `helpdesk@yourdomain.com`.

Getting Started

2

- ♦ [Section 2.1, “Installing Novell Workgroup Suite Small Business Edition,” on page 17](#)
- ♦ [Section 2.2, “Administering the Novell Open Workgroup Suite Small Business Edition,” on page 20](#)
- ♦ [Section 2.3, “Configuring Components,” on page 23](#)

2.1 Installing Novell Workgroup Suite Small Business Edition

If you have a NOWS SBE DVD, go to [Section 2.1.1, “Using YaST to Install the Novell Open Workgroup Suite Small Business Edition,” on page 17](#). If you want to install the Novell® Open Workgroup Suite Small Business Edition without the DVD or if you do not have DVD drive, follow the directions in [Section 2.1.2, “Using the NOWS SBE DVD to Install the Novell Open Workgroup Suite Small Business Edition,” on page 18](#)

- ♦ [Section 2.1.1, “Using YaST to Install the Novell Open Workgroup Suite Small Business Edition,” on page 17](#)
- ♦ [Section 2.1.2, “Using the NOWS SBE DVD to Install the Novell Open Workgroup Suite Small Business Edition,” on page 18](#)

2.1.1 Using YaST to Install the Novell Open Workgroup Suite Small Business Edition

- 1 Use a standard SUSE® Linux Enterprise Server (SLES) 9 or SLES 9 SP3 disc to boot up your computer.
- 2 You are directed to the initial (GRUB) setup menu; use the arrow keys to select *Installation*.
- 3 Press F3, specify the desired network server type used to connect to the installation server, then specify your connection settings.
- 4 Type the following so it appears in Boot Options:

```
x11i=fbdev autoyast=PATH_TO_AUTOYAST.XML.
```

The format for *PATH_TO_AUTOYAST.XML* will look similar to the following for HTTP servers: `http://www.example.com/nowssbe/autoyast.xml`. For other server types, see Novell documentation.
- 5 Press the Enter key to continue with install. During installation the NOWS-copyMedia package might fail, but can be safely ignored.
- 6 If the `/opt/media/nows` directory exists, erase the contents. If the directory does not exist, create it.
- 7 Over the network, using a portable storage device, copy the `i386`, `i586`, `i686`, `noarch`, and `nosrc` directories from the media onto the NOWS SBE server in `/opt/media/nows`.

After copying, the directory should look like this:

```
sbsDP:/opt/media/nows # ls -la
total 89
```

```

drwxr-xr-x 8 root root    192 Aug 30 07:08
drwxr-xr-x 4 root root     96 Aug 30 06:53
drwxr-xr-x 2 root root   3384 Aug 30 2007 i386
drwxr-xr-x 2 root root  75048 Aug 30 07:04 i586
drwxr-xr-x 2 root root   752 Aug 30 2007 i686
drwxr-xr-x 2 root root  13072 Aug 30 2007 noarch
drwxr-xr-x 2 root root   344 Aug 30 2007 nosrc
drwxr-xr-x 3 root root   120 Aug 30 2007 setup

```

8 Run the following command: `/opt/simba/modules/sbs/bin/copyMedia.sh`.

9 Reboot the server and continue with [Step 3 on page 18](#).

2.1.2 Using the NOWS SBE DVD to Install the Novell Open Workgroup Suite Small Business Edition

- 1** Insert the NOWS SBE DVD into the DVD drive.
- 2** After installation, your computer will reboot. When it boots up, perform the following steps before doing any further configuration or component installation.
- 3** Boot the server. You will be presented with the a splash screen, and then the installation screen. Click *Installation*.

NOTE: Do not change the software packages or configurations in YaST. Doing so causes your installation to fail.

- 4** The server starts the installation process, then stops at the installation summary screen. To accept system defaults, click *Accept*; otherwise, click *Change* to modify settings.
- 5** Click *Accept* to continue with the installation.
The installation copies the files required to install the SUSE Linux Enterprise server and related service packs. You are also presented with a status screen so you can monitor the time remaining on the installation. You have approximately 20 minutes before the next intervention is necessary.
- 6** When the base installation of the server completes, enter the IP address that is presented on the screen. The rest of the server configuration is Web-browser-based.
- 7** (Conditional) If you receive an IP address of `https://127.0.0.1:8181`, or `https://:8181` instead of a valid IP address, complete the following steps to fix the problem:

7a Verify that you are connected to the network with your DHCP server.

7b At the command line, log in as `root` without a password.

The rest of the installation process is completed from a Web browser. Refer to [Section 1.3, “Requirements,” on page 13](#) for information on supported browsers.

7c Enter the following command: `/etc/init.d/network restart`.

- 8** The first page you are presented with is the End User License Agreement (EULA). Read through the agreement and click *I Agree* to advance to the next page.

The next page is where you set up the network settings for your NOWS SBE server.

- 9** Enter the host name for your server and verify the remaining network information. The IP address, netmask, gateway, and DNS address should be those provided by your DHCP server. Verify that this is accurate. The netmask and gateway can be changed to match that of your

network. The DNS entry should be the IP address of your DNS server. Specify the host name you want to name your server. Keep in mind that you should not include special characters in the name of your server. The Domain should match the name of your Internet domain name.

- ♦ **IP Address:** The address should be the one from the initial setup of your server operating system. Verify that this is accurate.
- ♦ **Netmask:** Verify the netmask from your network.
- ♦ **Gateway:** Verify the gateway from your network.
- ♦ **DNS Entry:** Verify the IP address of your DNS server.
- ♦ **Host:** Specify a name for your server. Keep in mind that you should not include special characters in the name of your server.
- ♦ **Domain:** Verify your Internet domain name.

10 After you have specified the pertinent information, click the *Next* button to continue. This takes a moment to set up.

11 After your network settings have been specified, you are advanced to the License Key page. Specify your *Contact E-mail* address and the license key that was provided to you, then click *Next*.

12 Click *Check for Updates*, to check for updates to the system and components. This process goes out to the Internet to check for updates. Make sure you have an active Internet connection for this process. If updates are found, select *Install Updates* to install the latest updates.

Be sure not to browse away from this page while the updates are installing.

13 Click *Next* to continue with installation.

14 On the User Information page, specify the password information for the administrator login. You have two options:

- ♦ **Basic setup.** Specify a password for the NOWS SBE Administrator. The server root password is set to be the same.
- ♦ **Advanced Mode.** Click the link labeled *Advanced Mode*, which allows you to specify a separate password for the NOWS SBE Administrator (sbsadmin) and for the server admin (root).

The difference between these two passwords is that the NOWS SBE Administrator password enables you to add, remove, and configure components on your NOWS SBE server from the NOWS SBE administration console. The server (root) password is what you use to configure or update your server from the console. If you do not choose to make each password different, then the passwords are the same as the NOWS SBE Administrator password you have chosen. Passwords must be at least five characters long and cannot include any special characters.

15 Click *Next* to continue with installation.

You are now directed to the Available Software page. This section is optional. You are not required to install any of the components at this time. If you do not install the components, you will have the opportunity to add components from the NOWS SBE administration console later. The components have been grouped together with similar software types for easy location of what you need to install.

16 Click *Next*, then click *Install* to proceed to the NOWS SBE administration login.

17 Click the *Continue to Administration* button.

18 To log in to the administration page, specify the username of the administrator and the password you chose during the installation, then click *Login*.

You are taken to the NOWS SBE administration console. The NOWS SBE administration console is where you install components.

From this page, you can manage your server, environment, and users. If you grant users access to the NOWS SBE administration console with user privileges, they can get needed resources for their desktop computers.

- 19 To log out, click the red button next to *You are logged in as*. This logs you out of the session and brings you back to the login screen.

NOTE: For the remainder of the installation process, you will be installing components from the NOWS SBE administration console.

2.2 Administering the Novell Open Workgroup Suite Small Business Edition

The NOWS SBE administration page gives you the tools to install, uninstall, configure, and update components. In addition, it provides you with Help links to assist you with any questions you might have about your new NOWS SBE server.

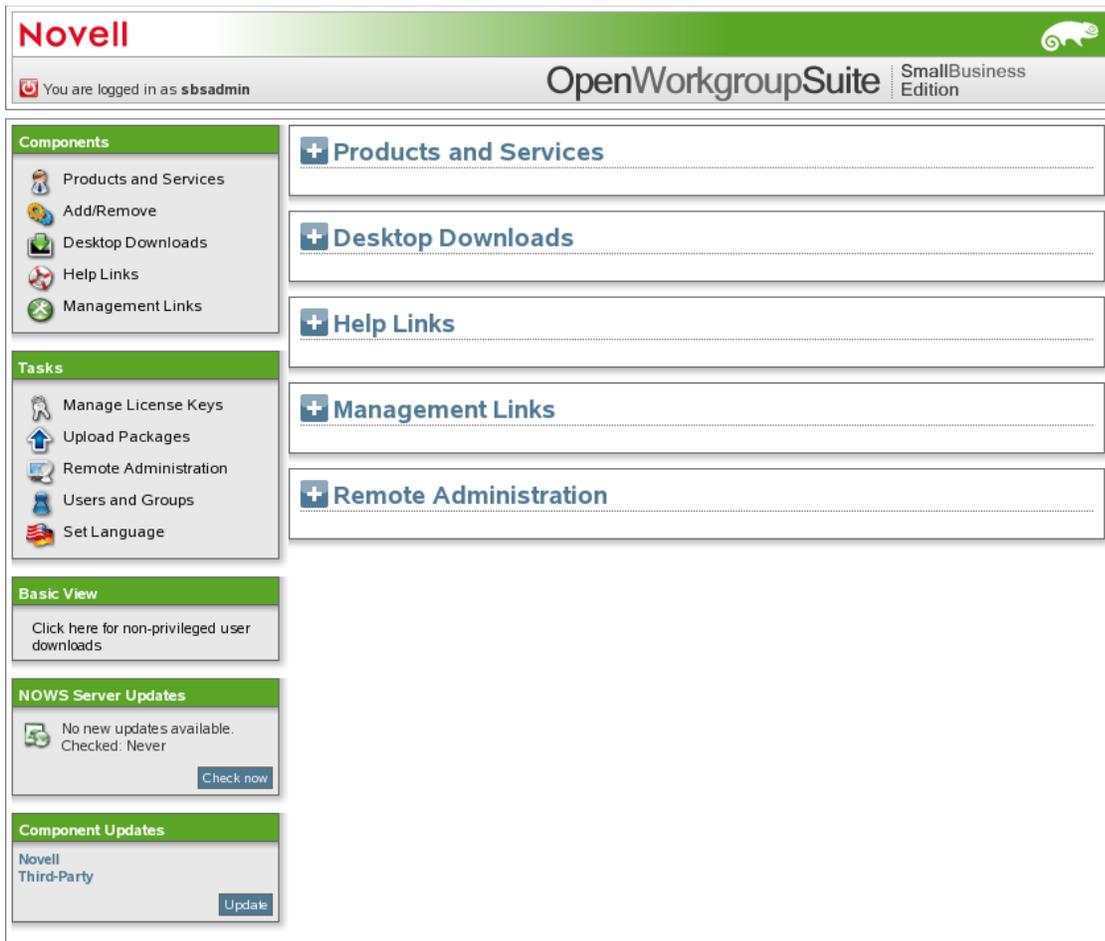
- ◆ [Section 2.2.1, “Components Panel,” on page 20](#)
- ◆ [Section 2.2.2, “Tasks Panel,” on page 22](#)
- ◆ [Section 2.2.3, “Basic View Panel,” on page 23](#)
- ◆ [Section 2.2.4, “Server Updates Panel,” on page 23](#)
- ◆ [Section 2.2.5, “Component Updates,” on page 23](#)

2.2.1 Components Panel

In the *Components* panel, you have the following menu items listed:

- ◆ *Products and Services* enables you to view what you have installed.
- ◆ The *Add/Remove* link enables you to install and uninstall components.
- ◆ *Desktop Downloads* enables you and your business community to install products and services they will use on their computers, such as collaboration tools and file and print services.
- ◆ *Help Links* provides access to documentation.
- ◆ *Management Links* provides access to other management consoles that you will use to manage your Novell Open Workgroup Suite Small Business Edition environment.

Figure 2-1 Components Panel



Products and Services

When you click *Products and Services*, you can view additional information on the installed components. Under *Select Component*, click the component's name to populate the *Administrative Console*, *Helplinks*, and *Desktop Downloads*.

Add/Remove

This link allows you to add and remove components. To view all components, click *All* under *Available Software*. You can also view components in the following categories: *Backup Restore and Recovery*, *Business Applications*, *Collaboration Groupware and Messaging*, *File Print and Fax*, *Security Management*, and *Systems Management*. To uninstall a component, click *Uninstall* under *Installed Software*.

When each component is uninstalled, specific actions are taken to disable the component from your server.

Desktop Downloads

This link allows you to search for desktop applications that can be installed on the user desktops. Under *Choose Operating System*, specify the appropriate operating systems you are using. Under

Choose Component, select the component you are searching for. You can also specify a keyword for your search.

Help Links

Click *Help Links* to view additional links to documentation sites. Under *Choose Component*, specify a component. You can also specify a keyword for your search.

Management Links

Click *Management Links* to view helpful management links. Under *Filter Component*, specify the desired component. You can also specify a keyword for your search.

2.2.2 Tasks Panel

- ◆ [“Manage License Keys” on page 22](#)
- ◆ [“Upload Packages” on page 22](#)
- ◆ [“Remote Administration” on page 22](#)
- ◆ [“Users and Groups” on page 22](#)
- ◆ [“Set Language” on page 22](#)

Manage License Keys

The license key for your copy of Novell Open Workgroup Suite Small Business Edition is saved here.

To update your key or add a key for the first time, specify your e-mail address and current license key, then click *Validate Key*.

Upload Packages

To receive component downloads and updates, click *Novell*, *Third-Party*, and *Upload*.

To add a new update package, click, then click *Start Upload*.

NOTE: Updates should be done only through the Administrative interface.

Remote Administration

Manage your remote access and desktop downloads.

Users and Groups

Manage and view users and groups.

Set Language

Specify the language for the NOWS SBE administration console.

2.2.3 Basic View Panel

Click here for non-privileged user downloads. These are the desktop downloads that your end users will see. This view can help in assisting your end users with desktop download questions.

2.2.4 Server Updates Panel

Novell Open Workgroup Suite Small Business Administration server updates are available through the Server Updates panel. Click the *Check now* button to check for updates for all components.

2.2.5 Component Updates

On the Component Updates menu panel, you can check for recent updates for Novell and third-party components. Click *Novell* to check for component updates from Novell. Click *Third-Party* to check for component updates from third-party clients.

2.3 Configuring Components

Use this interface to add and remove components from your server. On the left side of the NOWS SBE administration page, under the *Components* section, select *Add or Remove*. Under *Available Software*, click *All*. A list of possible component installations appear. To install a component, click the *Install* button for that component.

You should begin your component download with eDirectory™ and iManager. These two software components help you to manage many of the remaining components.

Figure 2-2 Add/Remove Software

The screenshot shows the Novell OpenWorkgroupSuite Small Business Edition administration console. The top navigation bar includes the Novell logo, the user name 'sbsadmin', and the product name 'OpenWorkgroupSuite Small Business Edition'. The left sidebar contains several menu sections: 'Components' with links for Products and Services, Add/Remove, Desktop Downloads, Help Links, and Management Links; 'Tasks' with links for Manage License Keys, Upload Packages, Remote Administration, and Users and Groups; 'Client Users' with a link for View General User Interface; and 'NOWS Server Updates' with a link for Checking for available Updates... The main content area is titled 'Add/Remove Open Workgroup Suite Software' and contains two sections: 'Installed Software' (currently empty) and 'Available Software' (listing categories like All, Backup Restore and Recovery, Business Applications, Collaboration Groupware and Messaging, File Print and Fax, Security Management, and Systems Management). At the bottom left, there is a language dropdown set to 'Polish' and a 'Change Language' button.

Directory Services (eDirectory)

3

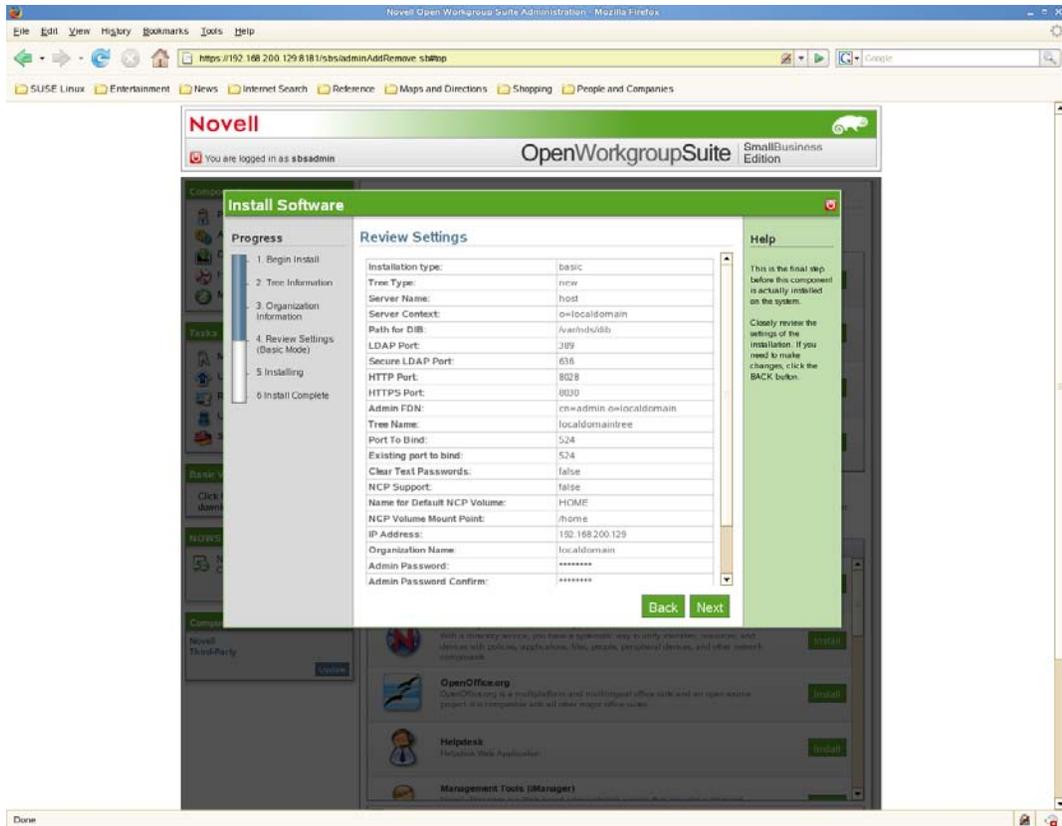
To start the eDirectory™ component install, click *Install* from under *Available Components*, then decide which installation type you want to use.

- ♦ **Basic:** Installs a new eDirectory tree.
- ♦ **Advanced - New Tree:** Installs a new eDirectory tree with more options.
- ♦ **Advanced - Existing Tree:** Installs this server into an existing eDirectory tree.
- ♦ **Advanced - Use Remote Tree:** Use this option when there is already an eDirectory installed on a dedicated server and you want components that depend on eDirectory to point to the existing tree.
- ♦ [Section 3.1, “Installing eDirectory Basic,” on page 25](#)
- ♦ [Section 3.2, “Installing eDirectory Advanced - New Tree,” on page 26](#)
- ♦ [Section 3.3, “Installing eDirectory Advanced - Existing Tree,” on page 28](#)
- ♦ [Section 3.4, “Installing eDirectory Advanced - Remote Tree,” on page 30](#)
- ♦ [Section 3.5, “Post-Installation,” on page 31](#)

3.1 Installing eDirectory Basic

This option installs a new eDirectory tree on your server with default options.

- 1** In the components section of the Nows SBE administration page, click *Install* for eDirectory.
- 2** Select the *Basic* installation, then click *Next*.
- 3** Specify a name for the new eDirectory tree. Do not use special characters when naming your tree.
- 4** Specify an organization name for your eDirectory.
This will be the name of the eDirectory container that the server is installed into. Do not use special characters when specifying your organization name.
- 5** Review the settings. To make changes, click the *Back* button. To proceed with the installation, click *Next*.



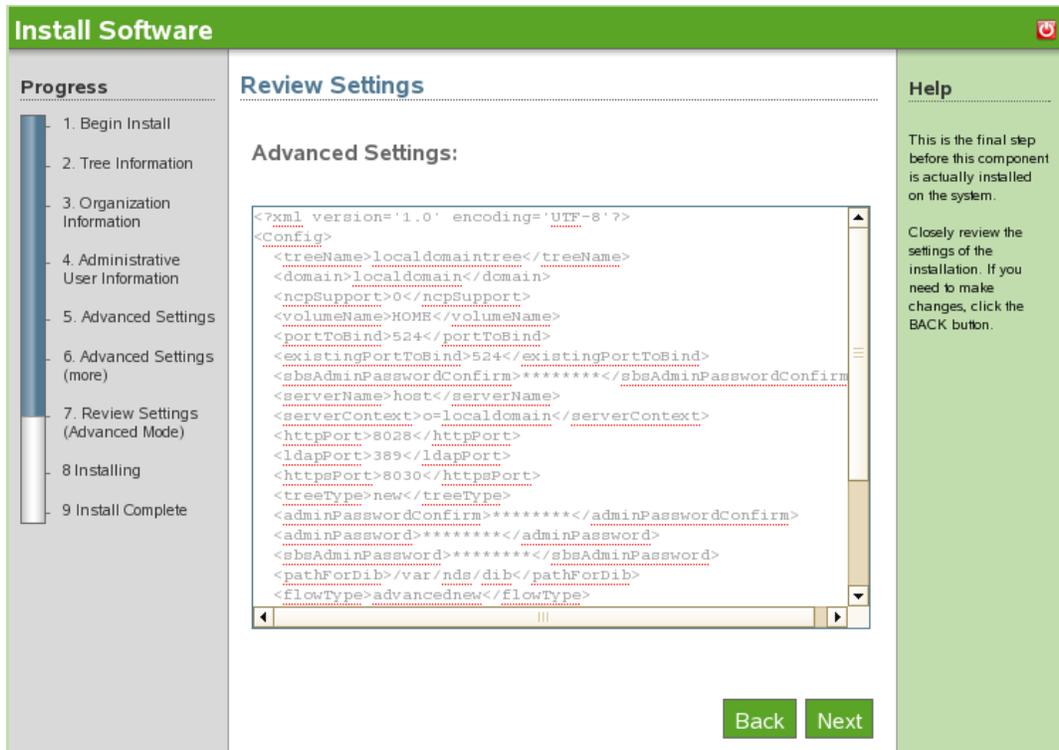
- 6 Basic eDirectory installation is now complete. Click *Finish* to return to the available components page. eDirectory is now listed on the installed software list and can be launched from the eDirectory administration link.

3.2 Installing eDirectory Advanced - New Tree

This option installs a new eDirectory tree on your server, and allows you to specify many of the parameters, such as server context and LDAP ports.

- 1 In the components section of the NOWS SBE administration page, click *Install* for eDirectory.
- 2 Click *Advanced-New Tree*, then click *Next*.
- 3 Specify the eDirectory tree name. Do not use special characters when specifying your tree name.
- 4 Specify your organization name. This will be the name of the eDirectory container that the server is installed into. Do not use special characters when specifying your organization name.
- 5 Specify your administrative information. Do not use special characters when specifying your password.
 - ♦ **Administrator Password:** Password of the eDirectory administrator user.
 - ♦ **Administrator Password Confirm:** Retype the password for the eDirectory administrator user.
 - ♦ **SBS Administrator Password:** The password for the SBS administrator user.

- ♦ **SBS Administrator Password Confirm:** Retype the password for the eDirectory administrator user.
- 6 Specify the advanced settings for your server. Do not use special characters, except for hyphens, when specifying the server name.
- ♦ **Server Name:** Specify the name of the server you are adding to the tree.
 - ♦ **Server Context:** Specify the server context. The server will be added to the tree in the specified context.
 - ♦ **Path for DIB:** Specify the directory path where the database files are to be stored.
 - ♦ **LDAP Port:** Specify the TCP port number on the LDAP server, such as 389. Fill in the field only if you know the correct information; otherwise, leave it blank.
 - ♦ **Secure LDAP Port:** Specify the secure port number on the LDAP server, such as 636. Fill in the field only if you know the correct information; otherwise, leave it blank.
 - ♦ **HTTP Port:** Specify the HTTP clear port number, such as 8028. Fill in this field only if you know the correct information; otherwise, leave it blank.
 - ♦ **HTTPS Port:** Specify the HTTP secure port number, such as 8030. Fill in this field only if you know the correct information; otherwise, leave it blank.
- 7 Specify NCP settings if you want to enable access to NCP™ volumes via the Novell Client™ or other NCP aware utilities.
- ♦ **NCP Support:** Enables NCP support on native Linux file systems (not NSS).
 - ♦ **Name for Default NCP Volume:** If *NCP Support* is enabled, a volume with this name is created.
 - ♦ **NCP Volume Mount Point:** Specify the location on the file system where the NCP volume will reside if NCP support is enabled.
- 8 Review the settings. To make changes, you can edit the XMPL text directly to specify additional advanced settings as needed. To proceed with the installation, click *Next*.



- 9 The Advanced eDirectory - New Tree install is now complete. Click *Finish* to return to the available components page. eDirectory is now listed on the installed software list.

3.3 Installing eDirectory Advanced - Existing Tree

- 1 In the components section of the NOWS SBE administration page, click *Install* for eDirectory.
- 2 To proceed with the Advanced installation, click *Advanced-Existing Tree*, then click *Next*.
- 3 Specify existing tree information.
 - ♦ **Tree Name:** Specify the name of your existing eDirectory tree.
 - ♦ **IP Address of Existing Server:** Specify the IP address of the server that is already hosting the tree.
- 4 Specify the organization name.
- 5 Specify your administrative information. Do not use special characters when specifying your password.
 - ♦ **Administrator Password:** Password of the eDirectory administrator user.
 - ♦ **Administrator Password Confirm:** Retype the password for the eDirectory administrator user.
 - ♦ **SBS Administrator Password:** The password for the SBS administrator user.
 - ♦ **SBS Administrator Password Confirm:** Retype the password for the eDirectory administrator user.

- 6 Specify the advanced settings for your server. Do not use special characters, except for hyphens, when specifying server name.
 - ♦ **Server Name:** Specify the name of the server you are adding to the tree.
 - ♦ **Server Context:** Specify the server context. The server will be added to the tree in the specified context.
 - ♦ **Path for DIB:** Specify the directory path where the database files are to be stored.
 - ♦ **LDAP Port:** Specify the TCP port number on the LDAP server, such as 389. Fill in the field only if you know the correct information; otherwise, leave it blank.
 - ♦ **Secure LDAP Port:** Specify the secure port number on the LDAP server, such as 636. Fill in the field only if you know the correct information; otherwise, leave it blank.
 - ♦ **HTTP Port:** Specify the HTTP clear port number, such as 8028. Fill in this field only if you know the correct information; otherwise, leave it blank.
 - ♦ **HTTPS Port:** Specify the HTTP secure port number, such as 8030. Fill in this field only if you know the correct information; otherwise, leave it blank.
- 7 Specify NCP settings if you want to enable access to NCP volumes via the Novell Client or other NCP aware utilities.
 - ♦ **NCP Support:** Enables NCP support on top native Linux file systems (not NSS)
 - ♦ **Name for Default NCP Volume:** If *NCP Support* is enabled, a volume with this name is created.
 - ♦ **NCP Volume Mount Point:** Specify the location on the file system where the NCP volume will reside if NCP support is enabled.
- 8 Review the settings. To make changes, you can edit the XML text directly to specify additional advanced settings as needed. To proceed with the installation, click *Next*.

Install Software

Progress

1. Begin Install
2. Exiting Tree Information
3. Organization Information
4. Administrative User Information
5. Advanced Settings
6. Advanced Settings (more)
7. Advanced Settings (more)
8. Review Settings (Advanced Mode)
9. Installing
10. Install Complete

Review Settings

Advanced Settings:

```
<?xml version='1.0' encoding='UTF-8'?>
<Config>
  <treeName>localdomaintree</treeName>
  <domain>localdomain</domain>
  <ncpSupport>0</ncpSupport>
  <volumeName>HOMB</volumeName>
  <portToBind>524</portToBind>
  <existingPortToBind>524</existingPortToBind>
  <sbsAdminPasswordConfirm>*****</sbsAdminPasswordConfirm>
  <timeServerIP>192.168.200.129</timeServerIP>
  <serverName>host</serverName>
  <serverContext>o=localdomain</serverContext>
  <httpPort>8028</httpPort>
  <ldapPort>389</ldapPort>
  <httpsPort>8030</httpsPort>
  <treeType>new</treeType>
  <adminPasswordConfirm>*****</adminPasswordConfirm>
  <adminPassword>*****</adminPassword>
  <sbsAdminPassword>*****</sbsAdminPassword>
  <pathForDib>/var/nds/dib</pathForDib>
</Config>
```

Help

This is the final step before this component is actually installed on the system.

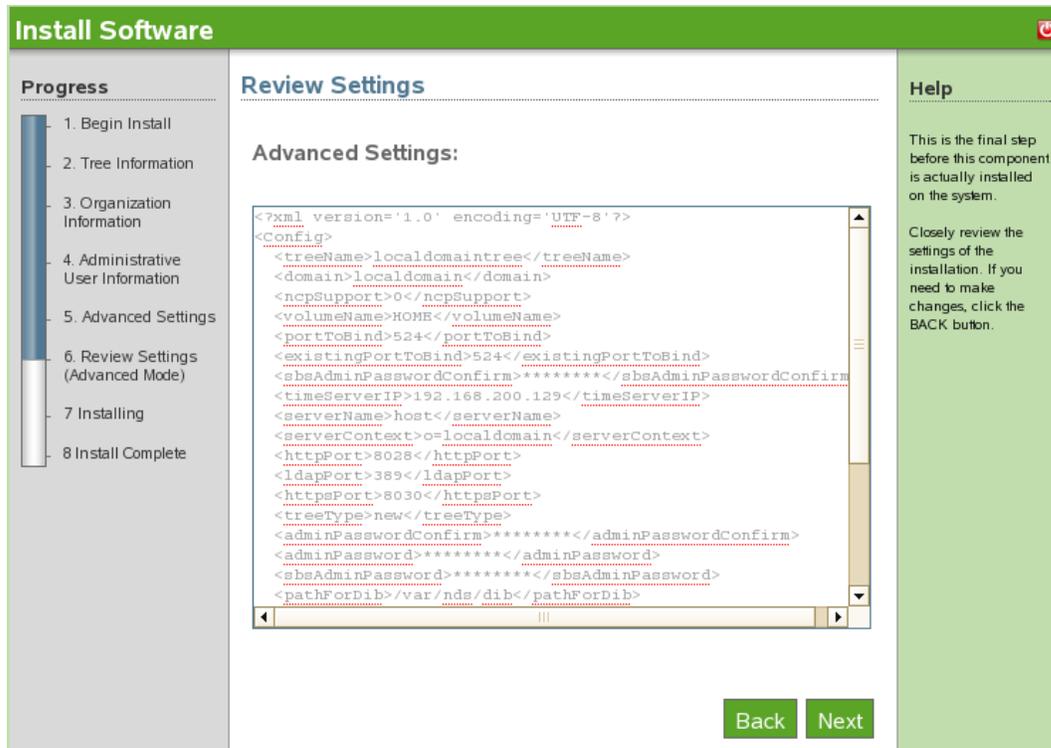
Closely review the settings of the installation. If you need to make changes, click the BACK button.

Back **Next**

- 9 The Advanced eDirectory - Existing Tree install is complete. Click *Finish* to go back to the available components page. eDirectory is now listed on the installed software list.

3.4 Installing eDirectory Advanced - Remote Tree

- 1 In the components section of the NOWS SBE administration page, click *Install* for eDirectory.
- 2 To proceed with the Advanced installation, click *Advanced-Remote Tree*, then click *Next*.
- 3 Specify existing tree information.
 - ♦ **Tree Name:** Specify the name of your existing eDirectory tree.
 - ♦ **IP Address of Existing Server:** Specify the IP address of the server that is already hosting the tree.
- 4 Specify the organization name.
- 5 Specify your administrative information. Do not use special characters when specifying your password.
 - ♦ **Administrator Password:** Password of the eDirectory administrator user.
 - ♦ **Administrator Password Confirm** Retype the password for the eDirectory administrator user.
 - ♦ **SBS Administrator Password:** The password for the SBS administrator user.
 - ♦ **SBS Administrator Password Confirm:** Retype the password for the eDirectory administrator user.
- 6 Specify LDAP settings. Do not use special characters, except for hyphens, when specifying the server name.
 - ♦ **LDAP Port:** Specify the TCP port number on the LDAP server, such as 389. Fill in the field only if you know the correct information; otherwise, leave it blank.
 - ♦ **Secure LDAP Port:** Specify the secure port number on the LFAP server, such as 636. Fill in the field only if you know the correct information; otherwise, leave it blank.
- 7 Review the settings. To make changes, you can edit the XMPL text directly to specify additional advanced settings as needed. To proceed with the installation, click *Next*.



8 The Advanced eDirectory - Remote Tree install is now complete. Click *Finish* to return to the available components page. eDirectory is now listed on the installed software list.

3.5 Post-Installation

eDirectory is managed by using iManager, which can be accessed through the *eDirectory Administration* link in the Components panel or through various administration links, such as *Users and Groups*.

- ◆ [Section 3.5.1, “Desktop Download,” on page 31](#)
- ◆ [Section 3.5.2, “ConsoleOne,” on page 32](#)
- ◆ [Section 3.5.3, “Helpful Links,” on page 32](#)

3.5.1 Desktop Download

- 1 Log in to the NOWS SBE console.
- 2 Click *Products and Services*.
- 3 On the *Select Component* panel, click *Directory Services (eDirectory)*.
- 4 Under *Desktop Downloads*, click the link.
- 5 To save the install to your computer, click *Save to Disk*, then click *OK*.
- 6 After the download has completed, click the `novell-client-1.2-SLES10.tar.gz` file on your desktop, then click *Extract Here*. The eDirectory component is now downloaded to your desktop.

3.5.2 ConsoleOne

ConsoleOne® is an alternate tool for managing eDirectory. It is also provided if a needed task is not available in iManager.

ConsoleOne resides in the `/usr/ConsoleOne/bin` directory.

- 1 Click the tree icon to log in to ConsoleOne.

3.5.3 Helpful Links

For additional information on administering eDirectory, see the [eDirectory Administration Guide](http://www.novell.com/documentation/edir873/edir873/data/a2iii88.html) (<http://www.novell.com/documentation/edir873/edir873/data/a2iii88.html>).

For additional information on administering eDirectory with ConsoleOne, see the [ConsoleOne online documentation](http://www.novell.com/documentation/consol13/) (<http://www.novell.com/documentation/consol13/>).

For additional information on the Novell Windows Client, see the [Novell Windows Client online documentation](http://www.novell.com/products/clients/windows/xp2000/overview.html) (<http://www.novell.com/products/clients/windows/xp2000/overview.html>).

Management Tools (iManager)

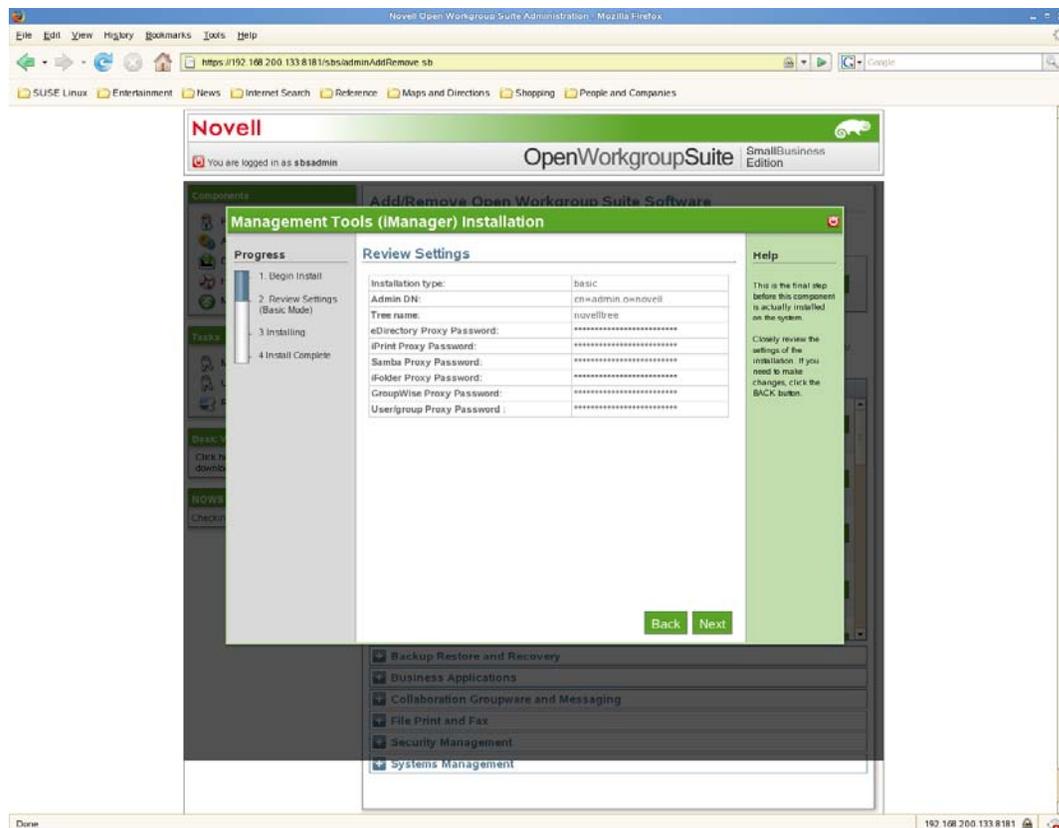
4

iManager is the administration interface for eDirectory™. iManager uses a simple list of roles, which you can click to reveal tasks. This is a role-based tool for network and systems management in your environment.

- ◆ Section 4.1, “Installing iManager Basic,” on page 33
- ◆ Section 4.2, “Installing iManager Advanced,” on page 34
- ◆ Section 4.3, “Post-Installation,” on page 34

4.1 Installing iManager Basic

- 1 Click *Install* from under *Available Components*.
- 2 Click *Basic*, then click *Next*.
- 3 Closely review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.



- 4 The Basic iManager installation is now complete. Click *Finish* to return to the available components page. iManager is now listed on the installed software list and can be launched from the iManager administration link.

4.2 Installing iManager Advanced

- 1 Click *Install* from *Available Components*.
- 2 Click *Advanced*, then click *Next*.
- 3 Specify the tree iManager should connect to.
 - ♦ **Admin DN:** The admin DN formatted with dots, for example: cn=admin.o=mycompany.
 - ♦ **Tree Name:** The name of the tree to connect to.
- 4 review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.
- 5 The Advanced iManager install is now complete. To proceed to the available components page, click *Finish*. iManager is now listed on the installed software list and can be launched from the iManager administration link.

4.3 Post-Installation

- ♦ [Section 4.3.1, “iManager Features,” on page 34](#)
- ♦ [Section 4.3.2, “How to Create Users, Groups, and Designate the NOWS SBE Administrator,” on page 34](#)
- ♦ [Section 4.3.3, “Helpful Links,” on page 35](#)

4.3.1 iManager Features

iManager is now available and can be launched with rights to perform specific tasks from the following links (if the component is installed):

- ♦ Users and Groups
- ♦ iFolder™ Administration
- ♦ eDirectory Administration
- ♦ iPrint Administration
- ♦ Samba Administration

iManager can be launched with all available roles and tasks from the iManager Administration link; however, you must authenticate as an administrator to access all available tasks.

iManager can also be launched directly from the [iManager Web site \(https://server-ip/nps/iManager.html\)](https://server-ip/nps/iManager.html).

4.3.2 How to Create Users, Groups, and Designate the NOWS SBE Administrator

- 1 Log in to the NOWS SBE console.
- 2 Click *Products and Services*.
- 3 Under *Select Component*, click *iManager Administration*. This launches the iManager login page.
- 4 Log in to iManager with your network admin login, for example cn= admin., o= localdomain.

- 5 After login, you are taken to the iManager console. Follow the links to create users, groups, and designate the NOWS SBE Administrator. A NOWS SBE Administrator has administrator access for all NOWS SBE components.

For more information on how to designate users, see the [iManager Web Site \(http://www.novell.com/documentation/imanager25/index.html?page=/documentation/imanager25/imanager_admin_25/data/boblyft.html\)](http://www.novell.com/documentation/imanager25/index.html?page=/documentation/imanager25/imanager_admin_25/data/boblyft.html).

4.3.3 Helpful Links

For additional administrator information, see the [iManager Administration Guide Web site \(http://www.novell.com/documentation/imanager25/index.html?page=/documentation/imanager25/imanager_admin_25/data/hk42s9ot.html\)](http://www.novell.com/documentation/imanager25/index.html?page=/documentation/imanager25/imanager_admin_25/data/hk42s9ot.html).

Personal File Backup (iFolder)

5

iFolder™ is a simple and secure storage solution that enables you to back up, access, and manage your personal files from anywhere, at anytime. After you have installed iFolder, you simply save your files locally as you have always done, and Novell iFolder automatically updates the files on your network server and delivers them to the other machines you use.

- ♦ Section 5.1, “Installing iFolder Basic,” on page 37
- ♦ Section 5.2, “Installing iFolder Advanced,” on page 38
- ♦ Section 5.3, “Post-Installation,” on page 39

5.1 Installing iFolder Basic

- 1 Click *Install* from *Available Components*.
- 2 Click *Basic*, then click *Next*.
- 3 Specify your iFolder server name.
 - ♦ **System Name:** The name assigned to the iFolder sever.
 - ♦ **System Description:** An optional description of this iFolder server.
- 4 Closely review the settings. If you need to make a change, click *Back*. To proceed with the installation, click *Next*.

Personal File Backup (iFolder) Installation

Progress

1. Begin Install
2. iFolder Server Name
3. Review Settings (Basic Mode)
4. Installing
5. Install Complete

Review Settings

Installation type:	basic
System name:	Personal File Backup
Web services URL:	http://localhost
System description:	Store, backup, and manage your personal files from anywhere at any time
System store path:	/var/opt/novell/iffolder3
LDAP URL:	ldaps://192.168.200.133:636
LDAP Admin DN:	cn=admin,o=novell
LDAP Admin DN:	*****
LDAP Proxy Context:	o=novell
System Admin Password:	*****
System Admin DN:	cn=admin,o=novell
Naming attribute:	cn
Web site alias:	/iffolder

Help

This is the final step before this component is actually installed on the system.

Closely review the settings of the installation. If you need to make changes, click the BACK button.

[Back](#) [Next](#)

- 5 The iFolder install is complete. Click *Finish* to proceed to available software page. iFolder is now listed on the installed software list and can be launched from the iFolder administration link.

5.2 Installing iFolder Advanced

- 1 Click *Install* from *Available Components*.
- 2 Select *Advanced*, then click *Next*.
- 3 Specify your iFolder server name.
 - ♦ **System Name:** The name assigned to the iFolder sever.
 - ♦ **System Description:** An optional description of this iFolder server.
- 4 Specify the settings for your LDAP services. LDAP is used for user authentication and authorization.
 - ♦ **LDAP URL:** The LDAP URL is the server address that iFolder authenticates against.
 - ♦ **LDAP Admin DN:** The admin user DN for the LDAP server. For example: cn= admin, o=treename.
 - ♦ **LDAP Proxy:** Where iFolder should create its proxy user in the directory.
 - ♦ **System Admin DN:** The distiguished name for an iFolder-specific administrator user. This user will be created if it does not exist.
- 5 Click *Next* to continue your iFolder install.
- 6 Review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.

Personal File Backup (iFolder) Installation

Progress

1. Begin Install
2. iFolder Server Name
3. Server Parameters
4. LDAP Settings
5. Review Settings (Advanced Mode)
6. Installing
7. Install Complete

Review Settings

Advanced Settings:

```
<?xml version='1.0' encoding='UTF-8' ?>
<Config>
  <ldapAdminDN>cn=admin,o=novell</ldapAdminDN>
  <ldapProxyContext>o=novell</ldapProxyContext>
  <namingAttrib>cn</namingAttrib>
  <installError>
</installError>
  <ldapUrl>ldaps://192.168.200.133:636</ldapUrl>
  <ldapAdminPassword>password</ldapAdminPassword>
  <systemDesc>Store, backup, and manage your persona
  <systemAdminPassword>password</systemAdminPassword>
  <systemName>Personal File Backup</systemName>
  <webAlias>/ifolder</webAlias>
  <flowType>advanced</flowType>
  <webServicesURL>http://localhost</webServicesURL>
  <systemStorePath>/var/opt/novell/ifolder3</systemS
  <systemAdminDN>cn=admin,o=novell</systemAdminDN>
</Config>
```

Help

This is the final step before this component is actually installed on the system.

Closely review the settings of the installation. If you need to make changes, click the BACK button.

Back **Next**

- 7 The iFolder installation is now complete. Click *Finish* to proceed to installed software page. iFolder is now listed on the installed software list and can be launched from the iFolder Administration link.

5.3 Post-Installation

- ♦ Section 5.3.1, “iFolder Web Client Desktop Download,” on page 39
- ♦ Section 5.3.2, “iFolder Administration Desktop Download,” on page 39

5.3.1 iFolder Web Client Desktop Download

- 1 Log in to the Nows SBE console.
- 2 Select *Products and Services*.
- 3 Under *Select Component*, click *Personal File Backup (iFolder)*.
- 4 Under *Administrative Console*, click *iFolder Client*. You are directed to the iFolder Web Client login page.
- 5 Specify the username and password, then click *Log In*.

For additional iFolder information, see the [iFolder online documentation \(http://www.novell.com/documentation/ifolder3/index.html?page=/documentation/ifolder3/user/data/prerequisites.html\)](http://www.novell.com/documentation/ifolder3/index.html?page=/documentation/ifolder3/user/data/prerequisites.html).

5.3.2 iFolder Administration Desktop Download

- 1 Log in to the Nows SBE console.
- 2 Select *Products and Services*.
- 3 Under *Select Component*, click *Personal File Backup (iFolder)*.
- 4 Under *Administrative Console*, click *iFolder Administration*. You are directed to the iManager login page.
- 5 Specify the username and password, then click *Log In*.

For additional iManager information, see the [iManager online documentation \(http://www.novell.com/documentation/imanager25/index.html?page=/documentation/imanager25/imanager_admin_25/data/bob1yft.html\)](http://www.novell.com/documentation/imanager25/index.html?page=/documentation/imanager25/imanager_admin_25/data/bob1yft.html).

Network Backup (Amanda)

6

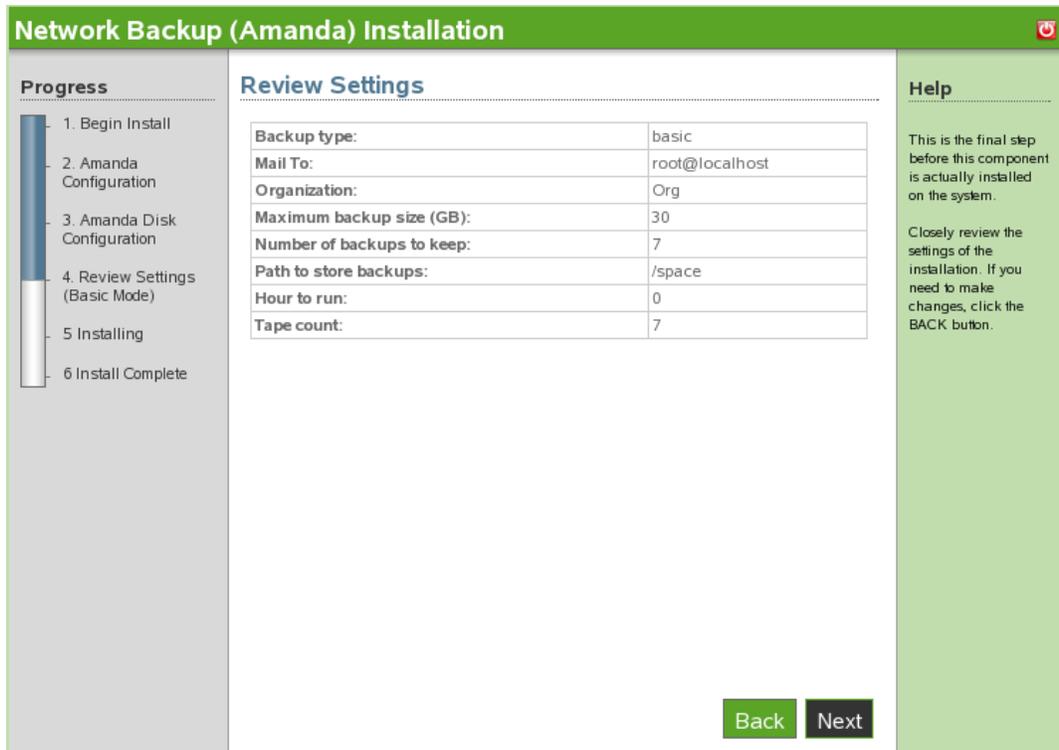
Amanda, or Advanced Maryland Automatic Network Disk Archiver, is an archiving tool that is able to back up data residing on a single server, or multiple computers on a network, to a tape or disk-based storage system. Amanda uses native dump and GNU tar facilities and can back up a large number of workstations and servers running various versions of Linux, UNIX, or Microsoft Windows operating systems.

For more information, see the [Amanda documentation site \(http://www.amanda.org/docs/amanda-docs.html\)](http://www.amanda.org/docs/amanda-docs.html).

- ♦ [Section 6.1, “Installing Amanda Basic,” on page 41](#)
- ♦ [Section 6.2, “Installing Amanda Advanced,” on page 42](#)
- ♦ [Section 6.3, “Post-Installation,” on page 43](#)

6.1 Installing Amanda Basic

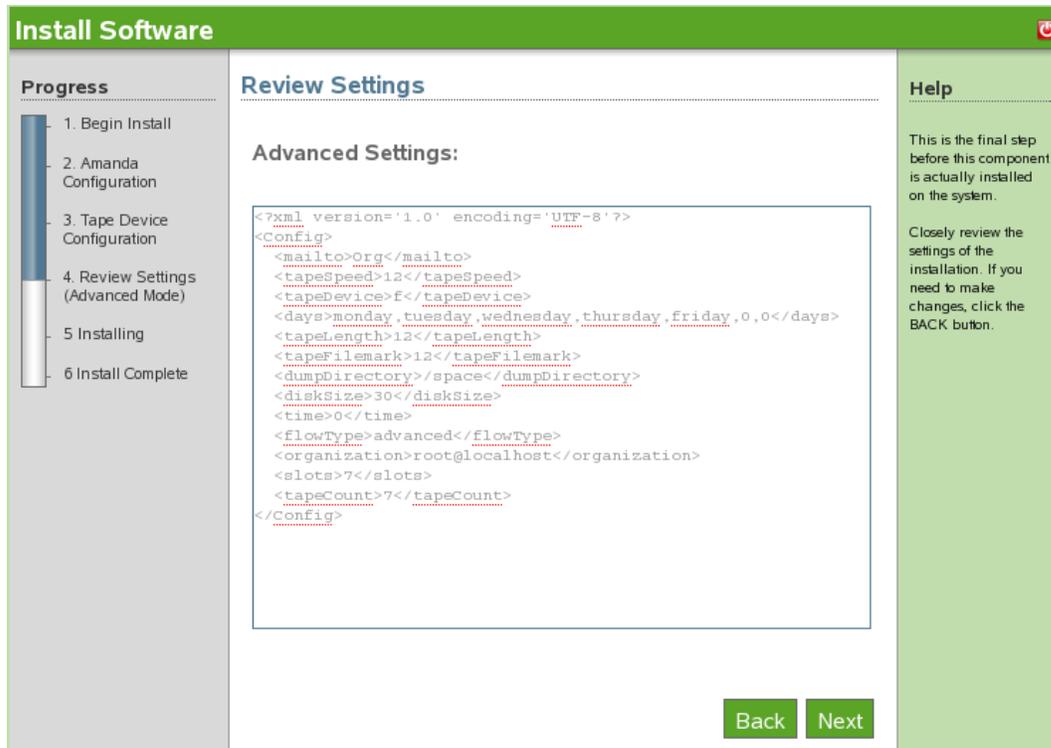
- 1 Click *Install* under *Available Components*.
- 2 Click *Hard-Disk Backup (Basic)*, then click *Next*.
- 3 Specify your network backup configurations for Amanda.
 - ♦ **Organization:** Title of backup reports.
 - ♦ **Mail To:** A comma-separated list of recipients for e-mail reports.
 - ♦ **Days to Backup:** Select the days the backups will run.
 - ♦ **Hours to Run:** Select the hours that backups will run.
- 4 Specify your disk backup.
 - ♦ **Maximum Backup Size (GB):** The size of the virtual backup tapes in gigabytes. This is the maximum amount of data that can be backed up during each cycle.
 - ♦ **Number of Backups to Keep:** This is the total number of backups to store at one time.
 - ♦ **Path to Store Backups:** The Linux path to your storage device.
- 5 Review the settings of the installation. To make a change, click *Back*. To proceed with the installation, click *Next*.



- 6 The Amanda Basic installation is now complete. Click *Finish* to proceed to the installed software page. Amanda is now listed on the installed software list and can be launched from the Amanda administration link.

6.2 Installing Amanda Advanced

- 1 Click *Install* under *Available Components*.
- 2 Select *Tape Backup (Advanced)*, then click *Next*.
- 3 Specify your network back up configurations for Amanda.
 - ♦ **Organization:** Title of backup reports.
 - ♦ **Mail To:** A comma-separated list of recipients for e-mail reports.
 - ♦ **Days to Backup:** Select the days the backups will run.
 - ♦ **Hours to Run:** Select the hours that backups will run.
- 4 Specify the properties for your particular tape type. You can use the [Amanda Web site \(http://amanda.sourceforge.net/cgi-bin/fom?file=46\)](http://amanda.sourceforge.net/cgi-bin/fom?file=46) as a resource.
 - ♦ **Tape Device:** The path to the local tape device.
 - ♦ **Tape Length (kbytes):** The Filemark in kilobytes of your tape media.
 - ♦ **Tape Filemark (kbytes):** The Filemark in kilobytes of your tape media.
 - ♦ **Tape Speed (kbytes):** The Filemark in kilobytes of your tape media.
 - ♦ **Tape Count:** The number of tapes in your Filemark in kilobytes of your tape media.
- 5 Review the settings of the installation. To make a change, click *Back*. To proceed with the installation, click *Next*.



- 6 The Amanda Basic installation is now complete. Click *Finish* to proceed to the available software page. Amanda is now listed on the installed software list and can be launched from the Amanda administration link.

6.3 Post-Installation

- ♦ Section 6.3.1, “Labeling Tapes,” on page 43
- ♦ Section 6.3.2, “Backup Scheduling and Configuration,” on page 44

6.3.1 Labeling Tapes

This needs to be done after installation of Amanda in tape mode.

- 1 Su to user amandabackup.
- 2 Write `DailySet1-XX` on the tape, where *XX* is the number of the tape.
- 3 Load the tape into the drive.
- 4 Run the command `amlabel DailySet DailySet1-XX`.

You need to change tapes manually before backup time. Amanda does not overwrite the wrong tape, so the appropriate tape must be inserted prior to the selected backup time.

If you are using a tape changer, you need to set the tape changer manually. Setting up the tape changer is very specific to the device. For more information, see the [Amanda manual \(http://www.amanda.org/docs/tapechangers.html\)](http://www.amanda.org/docs/tapechangers.html).

6.3.2 Backup Scheduling and Configuration

For more information about administering software, see the [Amanda documentation site \(http://www.amanda.org/docs/install.html#id325444\)](http://www.amanda.org/docs/install.html#id325444).

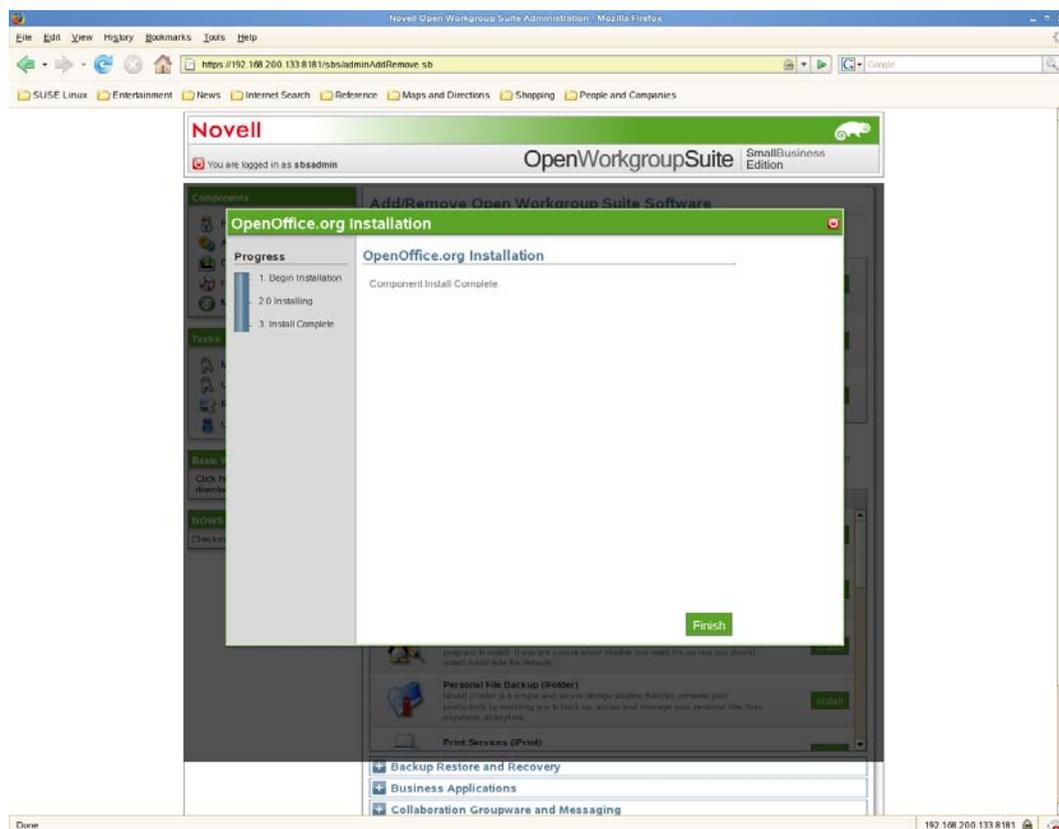
OpenOffice

7

OpenOffice is a full-featured office suite. It includes word processing, presentations, spreadsheets, and databases.

7.1 Installing OpenOffice Basic

- 1 Click *Install* from *Available Components*.
- 2 Click *Basic*, then click *Next*.
- 3 To proceed with the installation, click *Next*.



- 4 The OpenOffice installation is now complete. Click *Finish* to return to the available software page. OpenOffice is now listed on the installed software list and shows up as an available application in the Desktop Downloads panel for your users.

7.2 Post-Installation

OpenOffice is now available from Desktop Downloads for installation to a Windows client.

NOTE: There is no desktop download for the Linux client, because SUSE[®] Linux Enterprise Desktop (SLED) includes OpenOffice.

For additional information regarding OpenOffice installation, see the [OpenOffice online documentation \(http://documentation.openoffice.org\)](http://documentation.openoffice.org).

E-Mail Collaboration and Groupware (GroupWise)

8

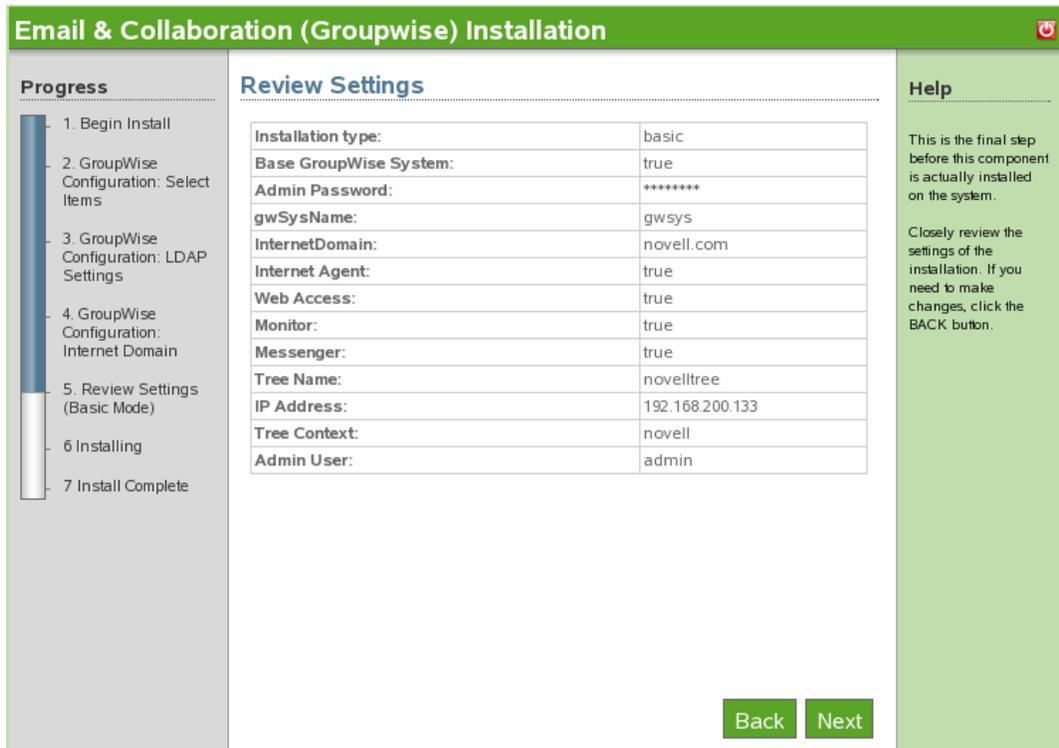
GroupWise® has a set of tools that keep your employees connected to clients and each other. The system comes with e-mail, calendaring, and instant messaging to set up according to your company needs.

For additional GroupWise information, see the [GroupWise documentation Web site \(http://www.novell.com/documentation/gw7/index.html\)](http://www.novell.com/documentation/gw7/index.html).

- ♦ [Section 8.1, “Installing GroupWise Basic,” on page 47](#)
- ♦ [Section 8.2, “Installing Groupwise Advanced,” on page 48](#)
- ♦ [Section 8.3, “Post-Installation,” on page 49](#)

8.1 Installing GroupWise Basic

- 1 Click *Install* from *Available Components*.
- 2 Select *Basic*, then click *Next*.
- 3 Select your GroupWise configuration items.
 - ♦ **Base GroupWise System:** The base GroupWise system includes the mail server with thick client support.
 - ♦ **Internet Agent:** Required for sending e-mail.
 - ♦ **Web Access:** Web-based mail client.
 - ♦ **Monitor:** Administrative monitoring server activity.
 - ♦ **Messenger:** Instant messenger server.
- 4 Specify your GroupWise LDAP settings.
 - ♦ **Tree Name:** Specify a name for your eDirectory™ tree.
 - ♦ **IP Address:** Specify the IP address for your eDirectory tree.
 - ♦ **Tree Context:** Specify a name for your eDirectory domain.
 - ♦ **Admin User:** Specify the name of your admin user.
 - ♦ **Admin Password:** Specify a password for your admin user.
 - ♦ **gwSysName:** Specify the name of your GroupWise system.
- 5 Specify your Internet Domain. For example: novell.com.
- 6 Review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.

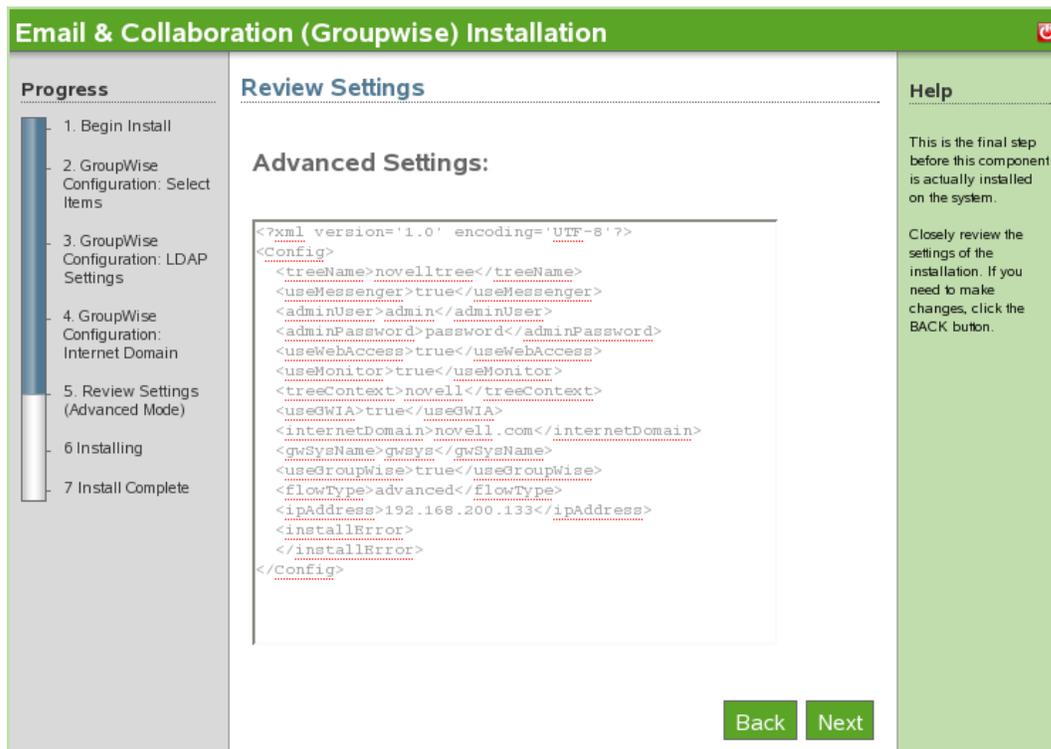


- 7 The GroupWise basic install is now complete. Click *Finish* to proceed to the Add/Remove Software page. GroupWise is now listed on the installed software list.

8.2 Installing Groupwise Advanced

- 1 Click *Install* from *Available Components*.
- 2 Select *Advanced*, then click *Next*.
- 3 Select your GroupWise configuration items.
 - ♦ **Base GroupWise System:** The base GroupWise system includes the mail server with thick client support.
 - ♦ **Internet Agent:** Required for Internet e-mail addresses.
 - ♦ **Web Access:** Web-based mail client.
 - ♦ **Monitor:** Administrative monitoring server activity.
 - ♦ **Messenger:** Instant messenger server.
- 4 Specify your GroupWise LDAP settings.
 - ♦ **Tree Name:** Specify a name for your eDirectory tree.
 - ♦ **IP Address:** Specify the IP address for your eDirectory tree.
 - ♦ **Tree Context:** Specify a name for your eDirectory domain.
 - ♦ **Admin User:** Specify the name of your admin user.
 - ♦ **Admin Password:** Specify a password for your admin user.
 - ♦ **gwSysName:** Specify the name of your GroupWise system.
- 5 Specify your business Internet Domain, for example, novell.com.

- Review the settings of the installation. To make a change, click *Back*. To proceed with the installation, click *Next*.



- The GroupWise advanced install is now complete. Click *Finish* to proceed to the Add/Remove Software page. GroupWise is now listed on the installed software list. The GroupWise client now appears in the Desktop Downloads panel for end users.

8.3 Post-Installation

- Section 8.3.1, “GroupWise Client Desktop Download,” on page 49
- Section 8.3.2, “GroupWise Instant Messenger Desktop Download,” on page 50
- Section 8.3.3, “Installing ConsoleOne for Advanced Administrative Tasks,” on page 50
- Section 8.3.4, “Configuring WebAccess,” on page 50
- Section 8.3.5, “Using GroupWise Monitor,” on page 51
- Section 8.3.6, “Considerations for using MailScanner,” on page 51

8.3.1 GroupWise Client Desktop Download

- Log in to the NOWS SBE console.
- Click *Products and Services*.
- Under *Select Component* panel, click *E-Mail Collaboration and Groupware (GroupWise)*.
- Under the *Desktop Downloads*, click *GroupWise Client Software*.
- To save the install to your computer, click *Save to Disk*, then click *OK*.

- 6 After download has completed, click file ending in .gz on your desktop, then click *Extract Here*. The GroupWise Client Software component is now downloaded to your desktop.

8.3.2 GroupWise Instant Messenger Desktop Download

- 1 Log in to the NOWS SBE console.
- 2 Click *Products and Services*.
- 3 Under *Select Component* panel, click *E-Mail Collaboration and Groupware (GroupWise)*.
- 4 Under the *Desktop Downloads*, click *Instant Messenger Software*.
- 5 To save the install to your computer, click *Save to Disk*, then click *OK*.
- 6 After download has completed, click file ending in .gz on your desktop, then click *Extract Here*. The Instant Messenger Software component is now downloaded to your desktop.

8.3.3 Installing ConsoleOne for Advanced Administrative Tasks

GroupWise is administered by using ConsoleOne[®], a Java*-based tool for managing your network and its resources. When you create your GroupWise system, GroupWise snap-ins are added to your ConsoleOne installation and GroupWise objects are created in Novell[®] eDirectory. As you manage your GroupWise system, you use ConsoleOne to create additional GroupWise objects, modify GroupWise object properties, and so on.

NOTE: Because the GroupWise snap-ins to ConsoleOne are required in order to work with GroupWise objects, you cannot use other network management tools, such as Novell iManager, to administer your GroupWise system. Also, you should not use older network management tools, such as NetWare[®] Administrator, to administer your GroupWise system, unless your GroupWise system includes legacy gateways that require such tools to administer the corresponding Gateway objects and their properties.

Because GroupWise is a cross-platform product, you might have components of your GroupWise system located on NetWare servers, Linux servers, and Windows servers. You can run ConsoleOne on Windows or Linux to manage GroupWise domains and post offices located on any of these platforms.

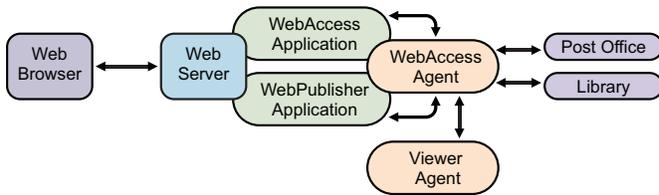
- ♦ [ConsoleOne on Windows \(http://www.novell.com/documentation/gw7/gw7_admin/index.html?page=/documentation/gw7/gw7_admin/data/bwmb48w.html\)](http://www.novell.com/documentation/gw7/gw7_admin/index.html?page=/documentation/gw7/gw7_admin/data/bwmb48w.html)
- ♦ [ConsoleOne on Linux \(http://www.novell.com/documentation/gw7/gw7_admin/index.html?page=/documentation/gw7/gw7_admin/data/bwmb48w.html\)](http://www.novell.com/documentation/gw7/gw7_admin/index.html?page=/documentation/gw7/gw7_admin/data/bwmb48w.html)
- ♦ [ConsoleOne in a Multi-Platform Environment \(http://www.novell.com/documentation/gw7/gw7_admin/index.html?page=/documentation/gw7/gw7_admin/data/bwmb48w.html\)](http://www.novell.com/documentation/gw7/gw7_admin/index.html?page=/documentation/gw7/gw7_admin/data/bwmb48w.html)

8.3.4 Configuring WebAccess

During setup you are given the opportunity to assign GWIA a different port, 26, so that the two programs do not conflict. Incoming mail from the Internet to the GroupWise system is then accepted by MailScanner on port 25 (SMRP's default), scanned, then delivered to GWIA, which accepts non-standard mail on port 26.

For directions on component configuration, see the [GroupWise Administration Guide Web site](http://www.novell.com/documentation/gw7/gw7_userweb/data/front_page.html) (http://www.novell.com/documentation/gw7/gw7_userweb/data/front_page.html).

Figure 8-1 *WebAccess Components: Simplified*



8.3.5 Using GroupWise Monitor

For administrative information on using the GroupWise Monitor, see the [GroupWise Documentation Web site](http://www.novell.com/documentation/gw7/gw7_admin/index.html?page=/documentation/gw7/gw7_admin/data/a7q51ga.html) (http://www.novell.com/documentation/gw7/gw7_admin/index.html?page=/documentation/gw7/gw7_admin/data/a7q51ga.html)

8.3.6 Considerations for using MailScanner

Installing GroupWise first is preferred.

Print Services (iPrint)

9

iPrint extends print services securely across multiple networks and operating systems.

For more information, see the [iPrint online documentation \(http://www.novell.com/documentation/oes/print-services.html#print-services\)](http://www.novell.com/documentation/oes/print-services.html#print-services).

- ♦ [Section 9.1, “Installing iPrint Basic,” on page 53](#)
- ♦ [Section 9.2, “Post-Installation,” on page 54](#)

NOTE: There is no Advanced Install option for iPrint.

9.1 Installing iPrint Basic

- 1 Click *Install* from *Available Components*
- 2 Click *Basic*, then click *Next*.
- 3 Review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.
- 4 The iPrint installation is now complete. Click *Finish* to proceed to available software page. iPrint is now listed on the installed software list and can be launched from the iPrint administration link.

Novell 

You are logged in as **sbsadmin** **OpenWorkgroupSuite** **Small Business Edition**

Components

-  Products and Services
-  Add/Remove
-  Desktop Downloads
-  Help Links
-  Management Links

Tasks

-  Manage License Keys
-  Upload Packages
-  Remote Administration
-  Users and Groups

Basic View

[Click here for non-privileged user downloads](#)

NOWS Server Updates

Checking for available Updates...

Add/Remove Open Workgroup Suite Software

The following software is installed on this server. Select Uninstall to remove the software from the server.

Installed Software	
	OpenOffice.org is a multiplatform and multilingual office suite and an open source project. It is compatible with all other major office suites. Uninstall
	Helpdesk Helpdesk Web Application. Uninstall
	Management Tools (iManager) Novell iManager is a Web based administration console that provides customized access to network administration utilities and content from virtually any location in the world. Uninstall
	Anti-Virus (ClamAV) AntiVirus will help reduce risk and protect network assets. AntiVirus is an important program to install. If you are unsure about whether you need this service you should install it and take the defaults. Uninstall
	Personal File Backup (iFolder) Novell iFolder is a simple and secure storage solution that can increase your productivity by enabling you to back up, access and manage your personal files from anywhere, at anytime. Uninstall
	Print Services (iPrint) Novell iPrint extends print services securely across multiple networks and operating systems. Uninstall

The following software is available to install on this server. Select install to add the software to the server.

Available Software	
+ All	
+ Backup Restore and Recovery	
+ Business Applications	
+ Collaboration Groupware and Messaging	
+ File Print and Fax	
+ Security Management	
+ Systems Management	

9.2 Post-Installation

- ◆ [Section 9.2.1, “Creating a Driver Store,” on page 54](#)
- ◆ [Section 9.2.2, “Creating a Print Manager,” on page 55](#)
- ◆ [Section 9.2.3, “Creating a Printer,” on page 55](#)
- ◆ [Section 9.2.4, “Installing Printer from /ipp and Print,” on page 55](#)

9.2.1 Creating a Driver Store

You need only one Driver Store for your iPrint system; however, depending on your network setup, you can add additional Driver Stores. A Driver Store must be created in order to create a Print Manager.

- 1 In iManager, click *iPrint > Create Driver Store*.
- 2 Fill in the fields.

Click *Help* for explanations about the fields.

3 Click *OK*.

After the Driver Store is created, the daemon is loaded on the server, and you can start uploading drivers.

9.2.2 Creating a Print Manager

You need to create at least one Print Manager for your print system; however, depending on your network setup, you can create additional Print Managers, for example, across a WAN link. The Print Manager must be running in order to create printers.

NOTE: The Print Manager creates a URL for each printer based on the print manager configuration. When you create the print manager, you can specify an IP address or DNS name for the iPrint Service. You should always use a DNS name because using an IP address causes users to delete and reinstall printers if the IP address changes.

- 1** In iManager, click *iPrint > Create Print Manager*.
- 2** Fill in the fields. Click the help for explanations about the fields.
- 3** Leave the *Start Print Manager after Creation* check box checked.

If you do not do this, you must start the Print Manager by using *Manage Print Manager > Manager Control* in iManager or entering `/etc/init.d/novell-ipsmd start` at a command prompt.

4 Click *OK*.

After the Driver Store is created, the daemon is loaded on the server and you can start adding printer drivers.

9.2.3 Creating a Printer

Before you can create a printer, you must first create a Print Manager on your server.

- 1** In iManager, click *iPrint > Create Printer*.
- 2** Follow the prompts and fill in the fields. Click the help for explanations about the fields.
- 3** Click *Next*, then select the drivers for this printer.

If the printer drivers for this printer are not listed, you can still create the printer. After the printer is created, add the printer drivers to the Driver Store and then associate the drivers to the printer by clicking *Manage Printer > Drivers*.

4 Click *Next* to create the printer.

9.2.4 Installing Printer from /ipp and Print

See the following iPrint documentation to install and distribute iPrint printers:

- ♦ [iPrint Printer List Web site \(http://www.novell.com/documentation/oes/iprint_lx/index.html?page=/documentation/oes/iprint_lx/data/boeyibx.html#boeyibx\)](http://www.novell.com/documentation/oes/iprint_lx/index.html?page=/documentation/oes/iprint_lx/data/boeyibx.html#boeyibx)
- ♦ [Location-Based Printing Web site \(http://www.novell.com/documentation/oes/iprint_lx/index.html?page=/documentation/oes/iprint_lx/data/boeyibx.html#boeyibx\)](http://www.novell.com/documentation/oes/iprint_lx/index.html?page=/documentation/oes/iprint_lx/data/boeyibx.html#boeyibx)

Windows File and Print Sharing (Samba)

10

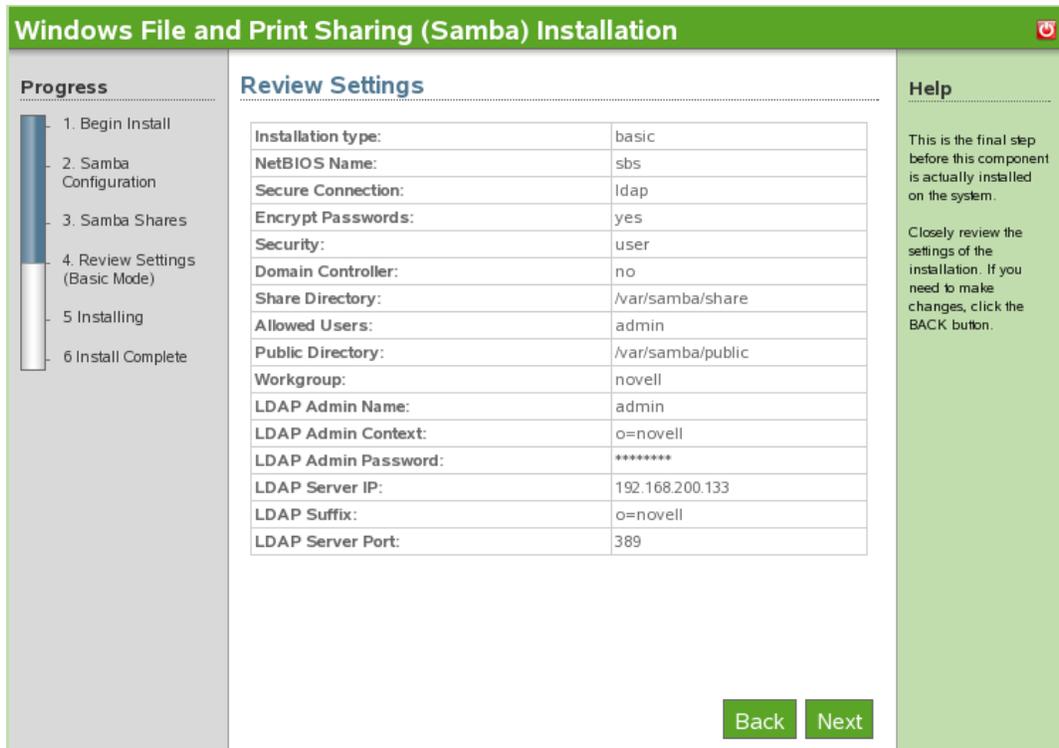
The Samba file and print sharing service for Windows enables you to configure your network with the security of Linux and still be able to access files on your Windows servers.

For more information, see the [Samba online documentation \(http://www.novell.com/documentation/oes/samba_admin/data/bookinfo.html\)](http://www.novell.com/documentation/oes/samba_admin/data/bookinfo.html).

- ♦ [Section 10.1, “Installing Samba Basic,” on page 57](#)
- ♦ [Section 10.2, “Installing Samba Advanced,” on page 58](#)
- ♦ [Section 10.3, “Post-Installation,” on page 59](#)

10.1 Installing Samba Basic

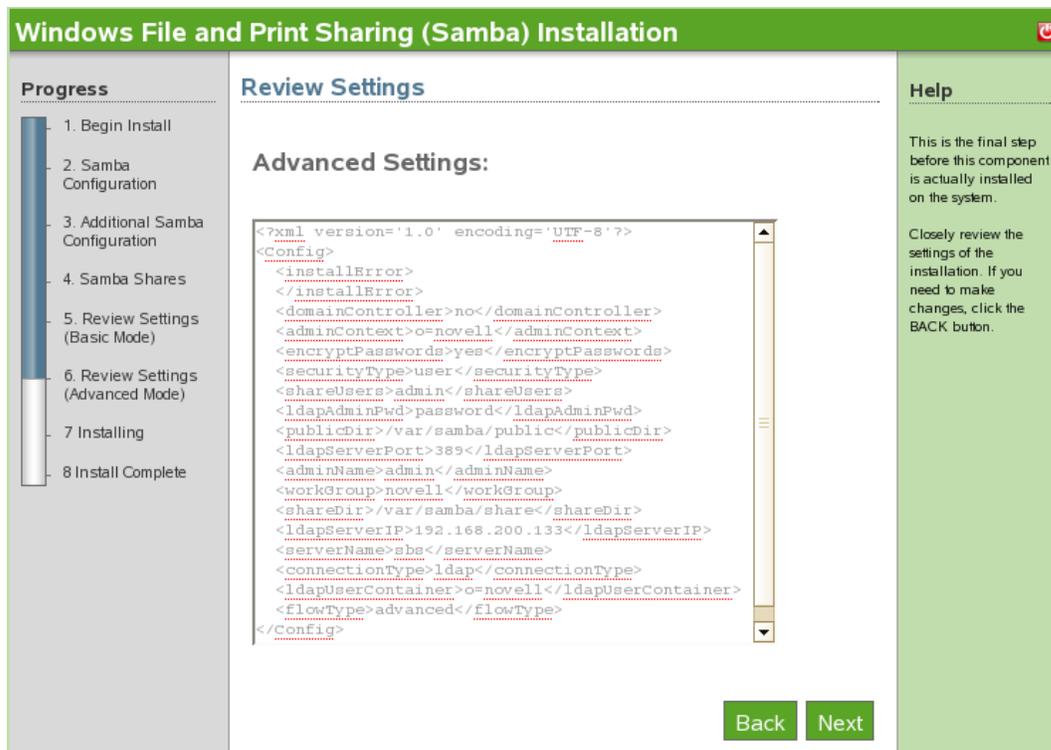
- 1 Click *Install* from *Available Components*.
- 2 Click *Basic*, then click *Next*.
- 3 Specify the LDAP configurations for your system.
 - ♦ **Workgroup:** Specify the name of the workgroup that your server belongs to.
 - ♦ **LDAP Suffix:** Specify the base LDAP suffix. This is where the samba Domain object is stored.
 - ♦ **Domain Controller:** Specify if Samba should act as the Primary Domain Controller (PDC).
- 4 Review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.



- 5 The Samba installation is now complete. Click *Finish* to proceed to the available software page. Samba is now listed on the installed software list and can be launched from the administration link.

10.2 Installing Samba Advanced

- 1 Click *Install* from *Available Components*.
- 2 Click *Advanced*, then click *Next*.
- 3 Specify the LDAP configurations for your system.
 - ♦ **NetBIOS Name:** Specify the NetBIOS name of the server. The first part of the host's DNS name can be used as the NetBIOS name.
 - ♦ **Workgroup or Domain Name:** Specify the name of the workgroup or domain that your server belongs to or will host.
 - ♦ **LDAP Admin Name:** Specify the name of the LDAP admin that has supervisory rights.
 - ♦ **LDAP Context:** Specify the context of the admin user in your eDirectory™ tree.
 - ♦ **LDAP Admin Password:** Specify the password for the LDAP admin whose distinguished name is specified above.
 - ♦ **User Container:** Specify the base LDAP container for users. This is where the sambaDomain object is stored
 - ♦ **Emulate NT4 Domain Controller:** Select this option to enable Samba to emulate an NT4 Primary Domain Controller.
- 4 Review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.



- 5 The Samba advanced installation is now complete. Click *Finish* to proceed to the available software page. Samba is now listed on the installed software list and can be launched from the Samba administration link.

10.3 Post-Installation

- ◆ Section 10.3.1, “Creating a Samba User,” on page 59
- ◆ Section 10.3.2, “Creating a Group,” on page 60
- ◆ Section 10.3.3, “Assigning a Password,” on page 60
- ◆ Section 10.3.4, “Enabling Groups for LUM (Linux User Management),” on page 60
- ◆ Section 10.3.5, “Enabling a User for LUM,” on page 60
- ◆ Section 10.3.6, “Enabling a User for Samba,” on page 61
- ◆ Section 10.3.7, “Enabling a Domain,” on page 61
- ◆ Section 10.3.8, “Launching Samba from the Administration Link,” on page 61

10.3.1 Creating a Samba User

- 1 In iManager, click *Roles and Tasks* on the top menu panel.
- 2 In the menu tab on the left, click *Users*, then click *Create User*.
- 3 Specify user information, then click *OK*.

10.3.2 Creating a Group

- 1 In iManager, click *Groups*, then click *Create Group*.
- 2 Specify the group name and context.
Context is the location in eDirectory tree. It is recommended that the user has the same context as the group.
- 3 Click *OK*.

10.3.3 Assigning a Password

- 1 In iManager, click *Password*, then click *Password Policies*.
- 2 Click *Samba Default Password Policy*, then click *Edit*.
- 3 From the drop-down menu, click *Policy Assignment*.
- 4 Click the *Object Selector* icon.
- 5 Assign the password policy to either the Organizational Unit that the user is in or assign it to the specific user object.
- 6 Click *OK*.
- 7 Click *Apply*.

10.3.4 Enabling Groups for LUM (Linux User Management)

- 1 In iManager, click *Linux User Management*, then click *Enable Groups for Linux*.
- 2 Click *Object Selector* and choose the group that you want to enable for LUM.
- 3 Select check box labeled *Linux-enable all users in these groups*, then click *Next*.
- 4 Click *Object Selector*, then locate your Linux Workstation object.
- 5 Click *OK*.
- 6 Click *Next*.
- 7 Click *Finish*, then click *OK*.

10.3.5 Enabling a User for LUM

- 1 In iManager, click *Linux User Management*, then click *Enable Users for Linux*.
- 2 Click *Object Selector* and choose the user that you want to enable for LUM.
- 3 Click *OK*.
- 4 Click *Next*.
- 5 Specify the user's primary group.
- 6 Click *Next*.
- 7 Select *Linux Workstation*, then click *Next*.
- 8 Click *Finish*, then click *OK*.

10.3.6 Enabling a User for Samba

- 1 In iManager, click *Samba Management*, then click *Enable Linux User for Samba*.
- 2 To select a LUM user, click *Object Selector*.
- 3 Select the user, then click *OK*.
- 4 To have the user authenticate to Samba through eDirectory, click *OK*. Otherwise, click *Cancel*.
- 5 Specify that Universal Password to be used for Samba login. Confirm the password, then click *OK*.
- 6 Click *OK*.

10.3.7 Enabling a Domain

Complete this procedure if you chose to set up this server as a Primary Domain Controller.

- 1 Log in to the NOWS SBE console.
- 2 Click *Product and Services*, then click *Windows File and Print Sharing (Samba)*.
- 3 Click the *Novell Samba Wiki* link under *Help Links*. Follow the directions from the Novell documentation site.

10.3.8 Launching Samba from the Administration Link

- 1 Log in to the NOWS SBE console.
- 2 Click *Management Links*.
- 3 From the drop-down menu, click *Windows File and Print Sharing (Samba)*, then click *Search*.
- 4 Click *Samba - Samba Administration*.

HylaFAX is the leading fax server for UNIX-like computer systems. It uses a client-server design and supports the sending and receiving of faxes as well as text pages, on any scale from low to very high volumes, making use of large numbers of modems if necessary.

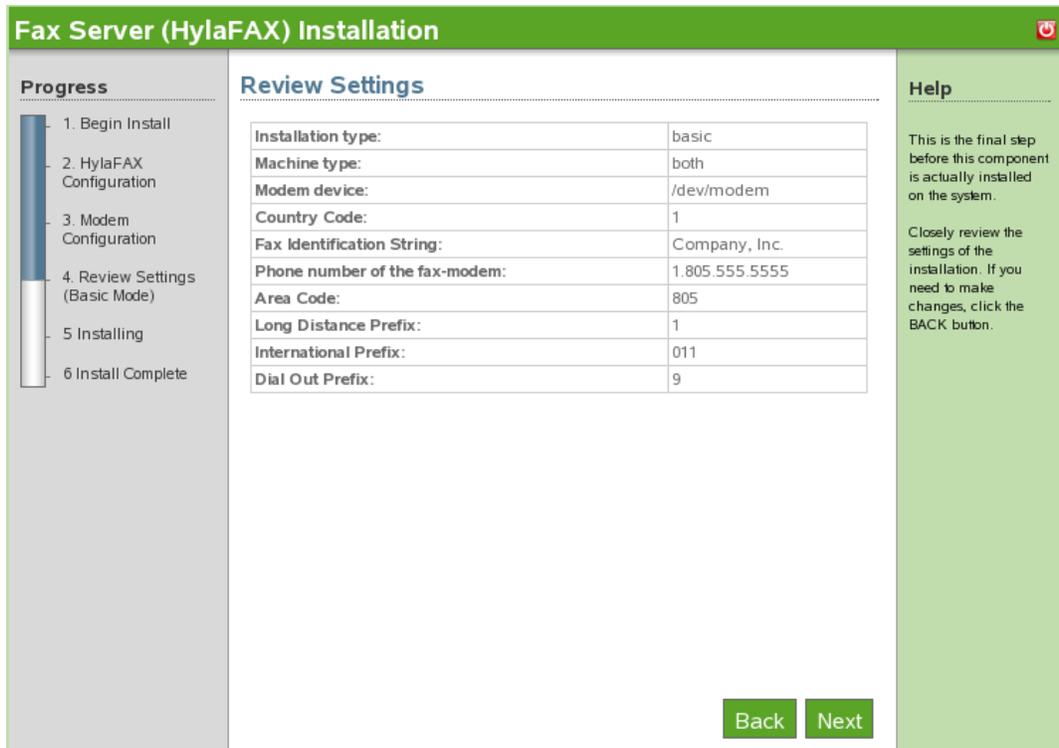
For more information, see the [HylaFAX documentation site \(http://www.hylafax.org/content/How-To\)](http://www.hylafax.org/content/How-To).

- ♦ [Section 11.1, “Installing HylaFAX Basic,” on page 63](#)
- ♦ [Section 11.2, “Installing HylaFAX Advanced,” on page 64](#)
- ♦ [Section 11.3, “Post-Installation,” on page 65](#)

11.1 Installing HylaFAX Basic

To start the component download section, Next decide if you would like the Basic or Advanced installation. The set of questions you will be asked will differ depending on your choice. Installation instructions will start with Basic, followed by Advanced.

- 1 Click *Install* under *Available Components*.
- 2 Click *Basic*, then click *Next*.
- 3 Specify the HylaFAX configuration settings.
 - ♦ **Machine Type:** This is the identification that is sent out with each Fax. For example, a good choice would be your company name.
 - ♦ **Fax Identification String:** Select *Send and Receive* if you are using this machine to both send and receive faxes. Select *Set Only* if you do not have a dedicated phone line or only want to send faxes from your machine.
 - ♦ **Country Code:** Country code of your fax server.
 - ♦ **Area Code:** Area code of your fax server.
 - ♦ **Long Distance Prefix:** Long-distance prefix for your fax server.
 - ♦ **International Prefix:** The prefix you need for an international call.
 - ♦ **Dial Out Prefix:** Specify a number here if the fax modem needs to specify a number to go outside of your internal phone network.
- 4 Specify the modem configurations.
 - ♦ **Modem Device:** the TTY port of your fax modem is a serial port modem. It is probably something like `/dev/ttyS1`. If this is an internal or built-in modem, Linux modem drivers need to be configured.
 - ♦ **Phone Number of the Fax-modem:** Phone number of the fax modem.
- 5 Review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.

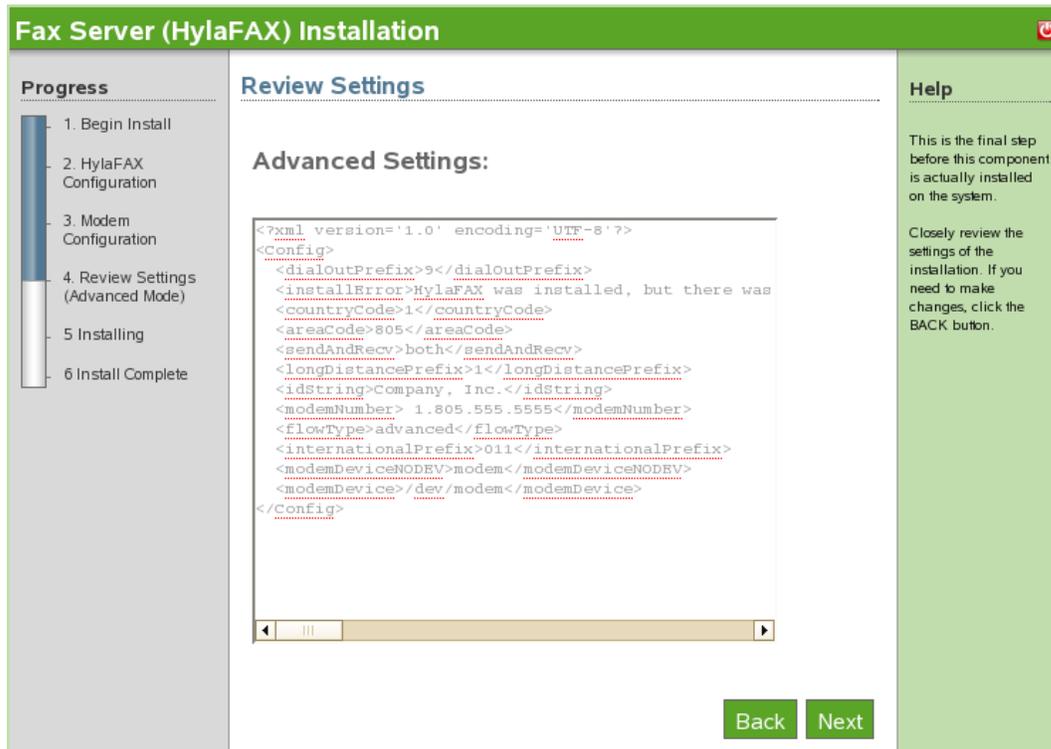


- 6 The HylaFAX installation is now complete. Click *Finish* to proceed to the available software page. HylaFAX is now listed on the installed software list and can be launched from the HylaFAX administration link.

11.2 Installing HylaFAX Advanced

- 1 Click *Install* under *Available Components*.
- 2 Click *Advanced*, then click *Next*.
- 3 Specify the HylaFAX configuration settings.
 - ♦ **Machine Type:** This is the identification that will be sent out with each Fax. For example, a good choice would be your company name.
 - ♦ **Fax Identification String:** Select *Send and Receive* if you are using this machine to both send and receive faxes. Select *Set Only* if you do not have a dedicated phone line or only want to send faxes from your machine.
 - ♦ **Country Code:** Country code of your fax server.
 - ♦ **Area Code:** Area code of your fax server.
 - ♦ **Long Distance Prefix:** Long distance prefix for your fax server.
 - ♦ **International Prefix:** The prefix you need for an international call.
 - ♦ **Dial Out Prefix:** Specify a number here if the fax modem needs to specify a number to go outside of your internal phone network.

- 4 Specify the modem configurations.
 - ♦ **Modem Device:** The TTY port of your fax modem is a serial port modem. It is probably something like /dev/ttyS1. If this is an internal or built-in modem, drivers need to be configured.
 - ♦ **Phone Number of the Fax-modem:** Phone number of the fax modem.
- 5 Review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.



- 6 The HylaFAX installation is now complete. Click *Finish* to proceed to the available software page. HylaFAX is now listed on the installed software list and can be launched from the administration link.

11.3 Post-Installation

HylaFAX requires that Java is already installed. For additional information, see the [Java Web site \(http://java.sun.com\)](http://java.sun.com).

- ♦ [Section 11.3.1, “Desktop Download for Linux,” on page 65](#)
- ♦ [Section 11.3.2, “Desktop Download for OS X and Windows,” on page 66](#)

11.3.1 Desktop Download for Linux

- 1 Log in to the NOWS SBE console.
- 2 Click *Products and Services*.
- 3 Under *Select Component*, click *Fax Server (HylaFAX)*.
- 4 Under *Desktop Downloads and Linux*, click *JHylaFAX*.

- 5 Open a command prompt and type `java -jar jhylaFax-1.3.10-app.jar` to launch JHylaFAX.

11.3.2 Desktop Download for OS X and Windows

- 1 Log in to the NOWS SBE console.
- 2 Click *Products and Services*.
- 3 Under *Select Components*, click *Fax Server (HylaFAX)*.
- 4 Under *Desktop Downloads*, click *JHylaFAX* for OS X or Windows.
- 5 Follow download procedures to download JHylaFax to your desktop.
- 6 To launch JHylaFAX, click the JHylaFAX icon.

MailScanner scans all e-mail for viruses, spam and attacks against security vulnerabilities, and plays a major role in the security of a network.

For additional information, see the [MailScanner documentation site \(http://www.nk.ca/mailscanner/docs.html\)](http://www.nk.ca/mailscanner/docs.html).

- ♦ [Section 12.1, “Installing MailScanner Basic,” on page 67](#)
- ♦ [Section 12.2, “Installing MailScanner Advanced,” on page 67](#)
- ♦ [Section 12.3, “Post-Installation,” on page 67](#)

12.1 Installing MailScanner Basic

- 1 Click *Install* under *Available Components*.
- 2 Click *Basic*, then click *Next*.
- 3 Review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.
- 4 The MailScanner basic installation is complete. Click *Finish* to proceed to the available software page. MailScanner is now listed on the installed software list and can be launched from the MailScanner administration link

12.2 Installing MailScanner Advanced

- 1 Click *Install* under *Available Components*.
- 2 Select *Advanced*, then click *Next*.
- 3 Specify the settings that are best for your business needs, then click *Next*.
- 4 Review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.
- 5 The MailScanner advanced installation is now complete. Click *Finish* to proceed to the Add/Remove Software page. MailScanner is now listed on the installed software list.

12.3 Post-Installation

- ♦ [Section 12.3.1, “Configuring MailScanner to Scan Mail,” on page 67](#)
- ♦ [Section 12.3.2, “Helpful Links,” on page 67](#)

12.3.1 Configuring MailScanner to Scan Mail

After MailScanner is installed it automatically scans your mail for harmful viruses.

12.3.2 Helpful Links

For considerations for using MailScanner with GroupWise see the [MailScanner documentation site \(http://www.nk.ca/mailscanner/docs.html\)](http://www.nk.ca/mailscanner/docs.html).

Anti-Virus (ClamAV)

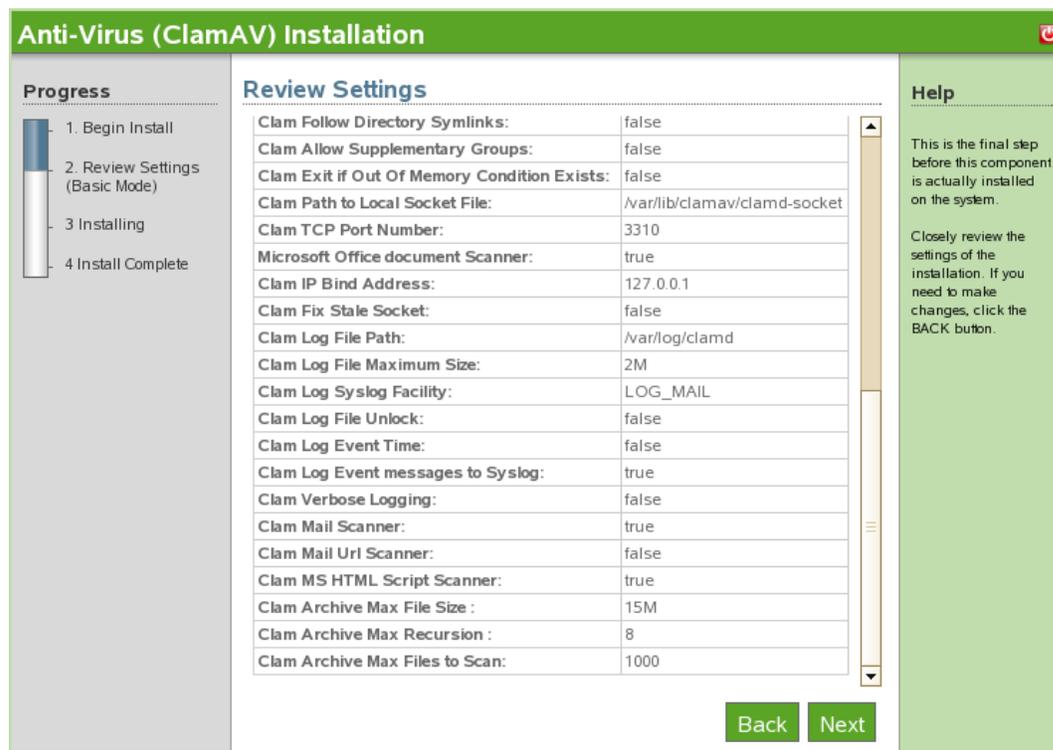
13

Clam AntiVirus is an anti-virus toolkit for UNIX, designed especially for e-mail scanning on mail gateways. It provides a number of utilities, including a flexible and scalable multi-threaded daemon, a command line scanner, and an advanced tool for automatic database updates. The core of the package is an anti-virus engine available in the form of a shared library.

For additional information, see the [ClamAV documentation site \(http://www.clamav.net/doc/latest/clamdoc.pdf\)](http://www.clamav.net/doc/latest/clamdoc.pdf).

13.1 Installing ClamAV Basic

- 1 Click *Install* from under *Available Components*.
- 2 Click *Basic*, then click *Next*.
- 3 Review the setting. To make a change, click *Back*. To proceed with the installation, click *Next*.



- 4 The Basic ClamAV install is now complete. Click *Finish* to return to the available components page.

13.2 Installing ClamAV Advanced

- 1 Click *Install* from *Available Components*.
- 2 Click *Advanced*, then click *Next*.

3 Set your scanner options for archival file support.

- ♦ **Clam Archive Max Files to Scan:** Specify the maximum number of files to scan within an archive. A value of 0 disables this option.
- ♦ **Clam Archive Recursion:** Specify the Clam archive maximum compression ratio. Any file that has a compression ratio above this value is marked as a virus. A value of 0 disables this option.
- ♦ **Clam Archive Limit Memory Usage:** Select the check box to enable slower but more memory-efficient decompression algorithm. This only affects the bzip2 decompressor.
- ♦ **Clam Block Encrypted Archives:** Select the check box to mark encrypted archives as viruses.
- ♦ **Clam Archive Block Max:** Select the check box to mark archives as viruses when the archive max files, archive max file size, or archive max recursion limit is reached.

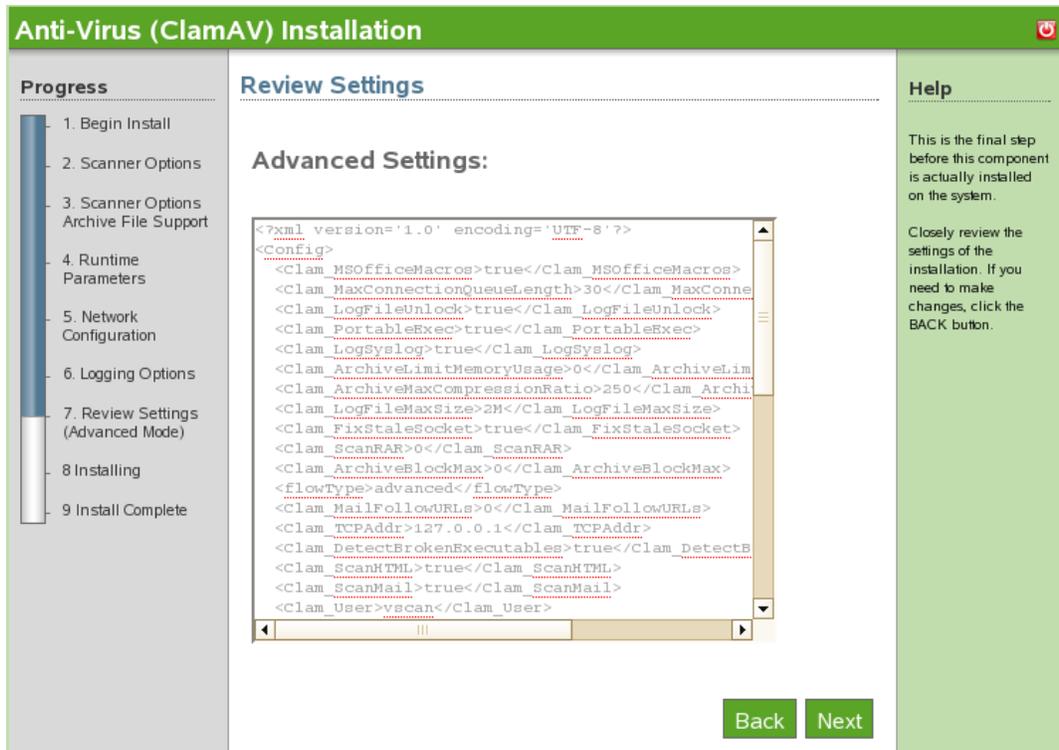
4 Select the security options most suitable for your business needs.

- ♦ **Portable Executable Support:** By default, AntiVirus uses the most common recommended options. This option disables recommended options and allows you to enable the selected ones below. The first option is PE. PE stands for Portable Executable, which is an executable file format used in all 32-bit versions of Windows operating systems. This option allows ClamAV to perform a deeper analysis of executable files and it is also required for decompression of popular executable packers such as Petite.
- ♦ **Detect Broken Executables:** Select the check box to allow detection of broken executables.
- ♦ **Microsoft Office Document Scanner:** Select the check box to enable scanning of Microsoft Office document macros.
- ♦ **Check Mail Scanner:** Select the check box to enable the internal e-mail scanner.
- ♦ **Clam Mail URL Scanner:** Select the check box to enable the downloading and scanning of e-mail that contains URLs.
- ♦ **Clam MS HTML Script Scanner:** Select the check box to enable HTML normalization and decryption of MS and Script Encoder code.

5 Select the appropriate runtime parameters.

- ♦ **Clam Stream Max Length:** Specify that the Clam Stream maximum length connection is closed when the data size limit is exceeded. The value should match your mail transport agent's (MTA) limit for a maximum attachment size.
- ♦ **Clam Max Connection Queue Length:** Specify the maximum length for the queue of pending connections.
- ♦ **Clam Max Threads:** Specify the maximum number of threads running at the same time.
- ♦ **Clam Data Read Timeout:** Specify the time in seconds to wait for data from a client socket before going to timeout.
- ♦ **Clam Idle Job Timeout:** Specify the time in seconds to wait for a new job before going into timeout.
- ♦ **Clam Max Directory Scan Recursion:** Specify the maximum depth to which directories are scanned.
- ♦ **Clam Self Check of Software:** Specify the time in seconds to perform internal sanity checks, such as database integrity and freshness.

- ♦ **Clam Follow Directory Symlinks:** Select the check box to enable following of directory symlinks.
 - ♦ **Clam Follow File Symlinks:** Select the check box to enable following of regular file symlinks.
 - ♦ **Clam Virus Event Command Execution:** Enable the execution of a command when a virus is found.
 - ♦ **Clam Run as User:** Run as a selected user (Clam must be started by `root`).
 - ♦ **Clam Allow Supplementary Groups:** Select the check box to allow the initialization of supplementary group access (Clam must be started by `root`).
 - ♦ **Clam Exit if Out of Memory Condition Exists:** Select the check box to enable stopping the daemon when libclamav reports an out-of-memory condition.
- 6** Select the appropriate network configuration.
- ♦ **Clam Path to Local Socket File:** Specify the path to a local socket file the daemon will listen on.
 - ♦ **Clam Fix Stale Socket:** Select the check box to enable the removal of a stale socket after an unclean shutdown.
 - ♦ **Clam TCP Port Number:** Specify the TCP port address.
 - ♦ **Clam IP Bind Address:** Specify the TCP address to bind to.
- 7** Select appropriate network configurations.
- ♦ **Clam Path to Local Socket File:** Specify the path to a local socket file the daemon will listen on.
 - ♦ **Clam TCP Port Number:** Select the check box to enable the removal of a stale socket after an unclean shutdown.
 - ♦ **Clam IP Bind Address:** Specify the TCP port address.
 - ♦ **Clam Fix Stale Socket:** Specify the TCP address to bind to.
- 8** Select the appropriate logging options.
- ♦ **Clam Log File Path:** Specify the full path of the log file. The log file must be writable for the user running the daemon.
 - ♦ **Clam Log File Maximum Size:** Specify the maximum size of a log file. A value of 0 disables the limit. You can use modifiers to specify log size in megabytes (M or m) or kilobytes (K or k). To specify the size in bytes, do not use modifiers.
 - ♦ **Clam Log Syslog Facility:** Specify the type of syslog message. Refer to `man syslog` for facility names.
 - ♦ **Clam Log File Unlock:** Select the check box to disable log file locking. By default, the log file is locked for writing to protect against running ClamAV multiple times. If you want to run another ClamAV, copy the configuration file, change the Log File variable, and run the daemon with the `-config-file` option.
 - ♦ **Clam Log Event Time:** Select the check box to enable an event's time to be logged.
 - ♦ **Clam Log Event Messaging to Syslog:** Select the check box to use the system logger. This can work together with LogFile.
 - ♦ **Clam Verbose Logging:** Select the check box to enable verbose logging.
- 9** Review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.



- 10 The ClamAV advanced install is now complete. Click *Finish* to return to the available components page.

13.3 Post-Installation

- ◆ [Section 13.3.1, “ClamAV Client Desktop Download,” on page 72](#)
- ◆ [Section 13.3.2, “ClamAV Signatures Desktop Download,” on page 73](#)
- ◆ [Section 13.3.3, “Scan Scheduling,” on page 73](#)
- ◆ [Section 13.3.4, “Helpful Links,” on page 73](#)

13.3.1 ClamAV Client Desktop Download

The ClamAV client is now available for installing to Windows client components from *Desktop Downloads*.

- 1 Log in to the NOWS SBE console.
- 2 Click *Products and Services*.
- 3 Under *Select Component* panel, click *Anti-Virus (ClamAV)*.
- 4 Under *Desktop Downloads*, click *ClamAV Client Software*.
- 5 To save the install to your computer, click *Save to Disk*, then click *OK*.
- 6 After the download has completed, click the file ending in *clamAV.msi* on your desktop. The ClamAV Client Software component is now downloaded to your desktop.

13.3.2 ClamAV Signatures Desktop Download

ClamAV Signatures is available in Desktop Downloads. There is not a desktop download for the Linux client, because SLED includes ClamAV.

- 1 Log in to the NOWS SBE console.
- 2 Click *Products and Services*.
- 3 Under *Select Component*, click *Anti-Virus (ClamAV)*.
- 4 Under *Desktop Downloads*, click *Signatures*.
- 5 To save the install to your computer, click *Save to Disk*, then click *OK*.
- 6 After the download has completed, right-click the file ending in *clamav-signatures.zip* on your desktop, then click *Extract Here*. The ClamAV signature is now downloaded to your desktop and downloads new updates automatically.

13.3.3 Scan Scheduling

- 1 Log in to the NOWS SBE console.
- 2 Click *Products and Services*.
- 3 Under *Select Component*, click *Anti-Virus (ClamAV)*.
- 4 Under *Administrative Console*, click *Scan Scheduling*.
- 5 Select the days and time you want automatic virus scans to occur.
- 6 Click *Save Changes*.

13.3.4 Helpful Links

See also [scan scheduling information \(http://www.clamav.net/\)](http://www.clamav.net/).

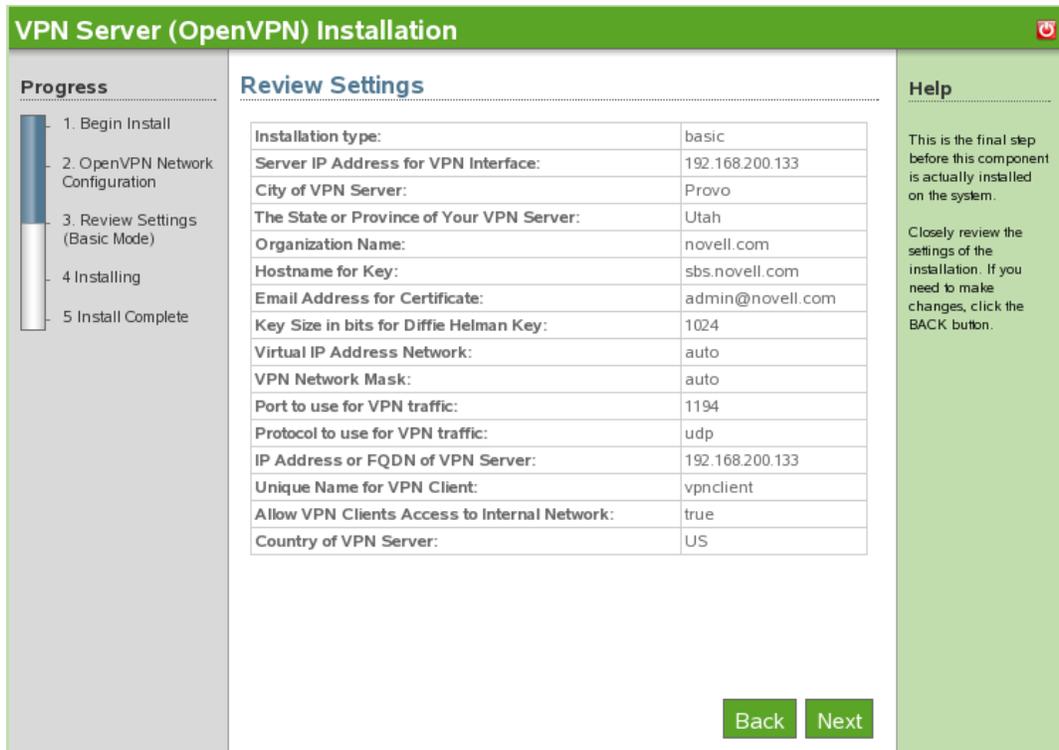
OpenVPN is a Virtual Private Network (VPN) package for creating point-to-point encrypted tunnels between host computers. A VPN allows users to authenticate and connect securely to the internal business network.

For additional information, see the [OpenVPN documentation site \(http://openvpn.net/howto.html\)](http://openvpn.net/howto.html).

- ♦ [Section 14.1, “Installing OpenVPN Basic,” on page 75](#)
- ♦ [Section 14.2, “Installing OpenVPN Advanced,” on page 76](#)
- ♦ [Section 14.3, “Post-Installation,” on page 77](#)
- ♦ [Section 14.4, “VPN Site-to-Site,” on page 80](#)

14.1 Installing OpenVPN Basic

- 1 Click *Install* on the OpenVPN row.
- 2 Click *Basic*, then click *Next*.
- 3 The following network specifications are automatically configured:
 - ♦ **Virtual IP Address Network:** Virtual IP network range (such as 192.168.1.0) to use for VPN network or automatic network detection.
 - ♦ **VPN Network Mask:** Network mask (such as 225.225.255.0) of the VPN network or auto for automatic detection.
 - ♦ **Allow VPN Clients Access to Internal Network:** Whether to allow VPN clients to route through the VPN server to the internal network.
- 4 Review the settings of the installation. To make a change, click *Back*. To proceed with the installation, click *Next*.

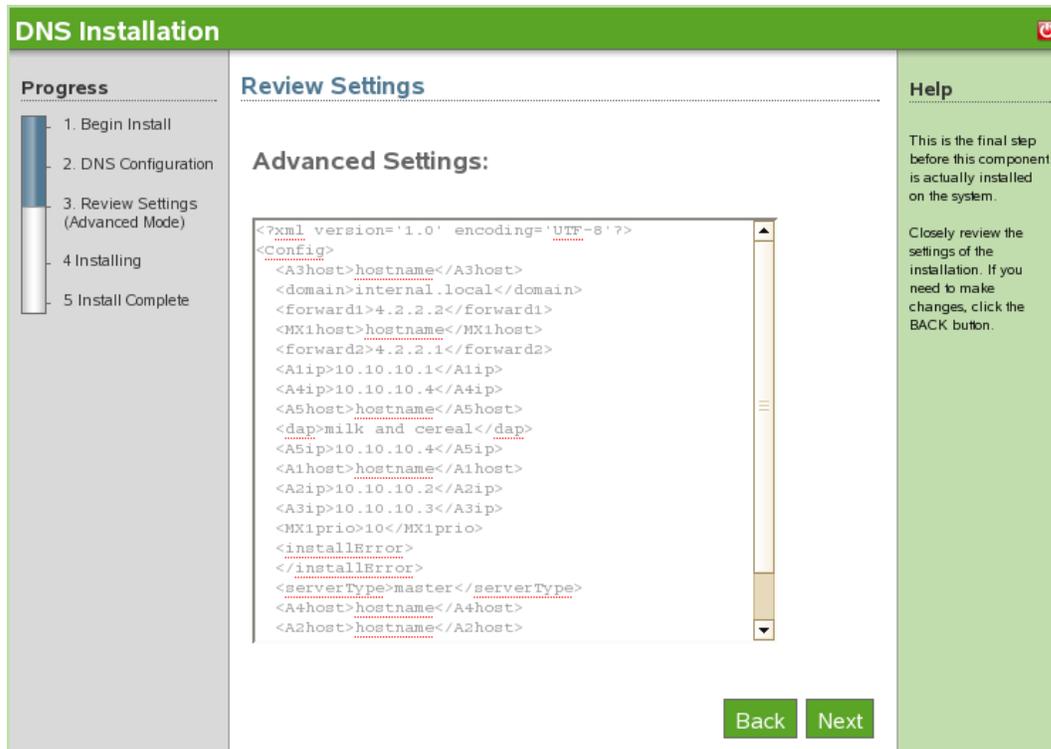


- 5 The OpenVPN installation is now complete. Click *Finish* to proceed to the available software page. OpenVPN is now listed on the installed software list.

14.2 Installing OpenVPN Advanced

- 1 Click *Install* on the OpenVPN row.
- 2 Click *Advanced*, then click *Next*.
- 3 Specify the OpenVPN advanced network configuration.
 - ♦ **Server IP Address for VPN Interface:** The IP address to be set to the assigned address of the interface that will be accepting VPN connections. If a system has multiple network interfaces, only one of them can be used for the VPN server.
 - ♦ **Virtual IP Address Network:** Virtual IP network range (such as 192.168.1.0) to use for VPN network or auto for automatic network detection
 - ♦ **VPN Network Mask:** Network mask (such as 255.255.255.0) of the VPN network or auto for automatic detection.
 - ♦ **Port to Use for VPN Traffic:** Port to use for VPN traffic. The default is 1194, but it can be anything above 1024 (1194 is highly recommended for best results).
 - ♦ **Protocol to Use for VPN Traffic:** The protocol to use for VPN traffic, either UDP or TCP (the default is UDP for better performance).
 - ♦ **IP Address or FQDN of VPN Server:** IP address or fully qualified domain name that VPN clients will connect to (such as vpn.mycompany.com or 207.191.20.141).
 - ♦ **Unique Name for VPN Client:** Name to use for the VPN client (no special characters).
 - ♦ **Allow VPN Clients Access to Internal Network:** Select this option to enable access.

- 4 Specify your OpenVPN certificate configuration.
 - ♦ **Country of VPN Server:** Your country.
 - ♦ **City of VPN Server:** The city of your VPN server.
 - ♦ **The State or Province of Your VPN Server:** The state of your VPN server.
 - ♦ **Organization Name:** The name of your organization.
 - ♦ **Hostname for Key:** Unique hostname for this server, which will be embedded in the key.
 - ♦ **E-mail Address for Certificate:** An e-mail address to be displayed with the certificate.
 - ♦ **Key Size in bits for Diffie Helman Key:** The Diffie Helman Key Size determines the size of the key used for the initial handshake between the VPN client and server. The larger the key, the more secure it is, but it also takes much longer to generate during install and takes slightly more time for each VPN client to connect. 2048 provides the best balance between security and speed. 1024 is less secure but faster.
- 5 Review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.



- 6 The OpenVPN advanced installation is now complete. Click *Finish* to proceed to the available software page. OpenVPN is now listed on the installed software list and can be launched from the OpenVPN administration page.

14.3 Post-Installation

- ♦ Section 14.3.1, “Monitoring Clients Connected to OpenVPN,” on page 78
- ♦ Section 14.3.2, “Creating the OpenVPN Certificates for Clients in the Key Management Interface,” on page 78
- ♦ Section 14.3.3, “Installing the Windows OpenVPN,” on page 79

14.3.1 Monitoring Clients Connected to OpenVPN

The Connection Status Windows shows what clients are connected and their addresses.

- 1 Log in to the NOWS SBE console.
- 2 Under *Select Component*, click *VPN Server (OpenVPN)*.
- 3 Under *Administrative Console*, click *OpenVPN Connection Status*.

The screenshot shows a web interface titled "OpenVPN Status Report". It includes a breadcrumb trail: "My View - Mantis" > "Autoinstallation". Below the title, it says "Last updated: Tue Jul 10 23:26:38 2007".

CLIENT LIST

Common Name	Real Address	Bytes Received	Bytes Sent	Connected Since
admin	192.168.65.129:3153	5284	5586	Tue Jul 10 23:26:21 2007

ROUTING TABLE

Virtual Address	Common Name	Real Address	Last Ref
172.16.150.6	admin	192.168.65.129:3153	Tue Jul 10 23:26:21 2007

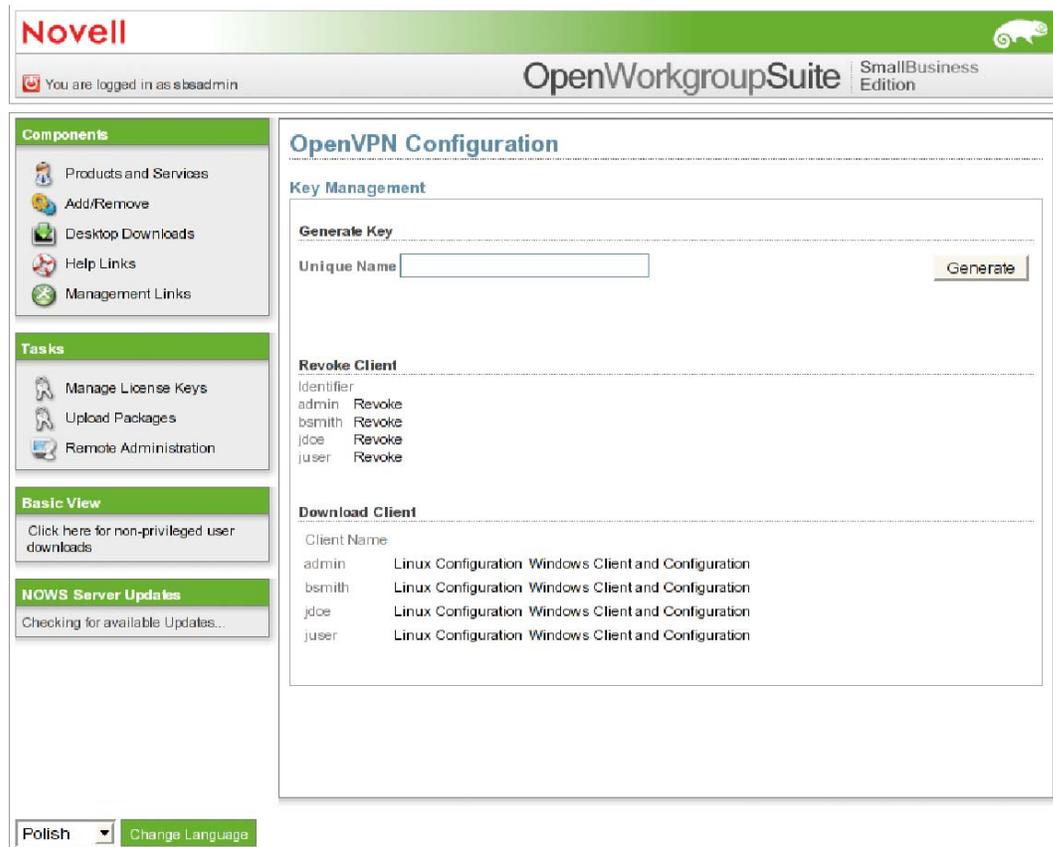
GLOBAL STATISTICS

Max bcst/mcast queue length	0
-----------------------------	---

14.3.2 Creating the OpenVPN Certificates for Clients in the Key Management Interface

Key Management allows you to create a new key/certificate pair, revoke an existing key/certificate pair, and download client configurations for Windows and Linux clients.

- 1 Log in to the NOWS SBE console.
- 2 Click *Products and Services*.
- 3 Under *Select Component*, click *VPN Server (OpenVPN)*.
- 4 Under *Administrative Console*, click *OpenVPN Key Management*.



5 To revoke a client certificate, click *Revoke* on the client's certificate.

14.3.3 Installing the Windows OpenVPN

- 1 Log in to the Nows SBE console.
- 2 Click *Products and Services*.
- 3 Under *Select Component*, click *OpenVPN Services (OpenVPN)*.
- 4 Click *Key Management*.
- 5 Click *Windows Client and Configuration*.
- 6 Specify the username in *Unique Name* field, then click *Generate*. This downloads a .zip file to your desktop.
- 7 Open the .zip file and extract the contents to a folder on your system.
- 8 To install the OpenVPN client and set up the client configuration, double-click the `install.bat` file. This loads the OpenVPN GUI Client Installation.



`install.bat`

- 9 Accept the default values or specify new values. Under some versions of Windows, a warning prompts the user to allow installation of a non-secure driver. Click *Continue*.

- 10 After the installation completes, a new program is visible in the taskbar. Click the new icon to launch OpenVPN with the new configuration, and a status window displays, showing the connection progress:



When the connection is fully established, the status window disappears and the taskbar briefly shows the new VPN address. At this point, the VPN tunnel has been established and OpenVPN has been successfully downloaded.

The VPN tunnel can be broken by right-clicking in the taskbar icon and selecting *disconnect*.

14.4 VPN Site-to-Site

- ◆ [Section 14.4.1, “Installing Two NICs,” on page 80](#)
- ◆ [Section 14.4.2, “VPN Site-to-Site Setup,” on page 81](#)
- ◆ [Section 14.4.3, “Troubleshooting Tips,” on page 82](#)

14.4.1 Installing Two NICs

It is best to complete the installation and configuration of the first network interface card (NIC) through the Web configuration tool before configuring a second NIC. After the initial Web configuration is complete, you can then use YaST to configure the second NIC.

NOTE: Because traffic is routed through the server, be sure to enable *IP Forwarding* when configuring the second NIC.

14.4.2 VPN Site-to-Site Setup

The process of setting up a site-to-site VPN between two NOWS SBE servers is to create two client-to-server VPNs between the servers in opposite directions.

- 1 Synchronize the time between the two servers by using *ntpdate*.
- 2 In the NOWS SBE Web administration tool, install Firewall (IPTables) and VPN Server (OpenVPN) on both Server A and Server B.
 - 2a For Server A, replace `auto` in the *Virtual IP Address Network* field with a distinct segment address, such as `172.16.150.0`.
 - 2b For Server B, replace `auto` in the *Virtual IP Address Network* field with a distinct segment address, such as `172.16.151.0`.
 - 2c Replace `auto` in the *VPN Network Mask* field with the appropriate mask, such as `255.255.255.0`.
 - 2d Verify that *Allow VPN Clients Access to Internal Network* is selected.
- 3 From Server A's Web administration tool, create a client key for Server B to use.
 - 3a Go to *Products and Service > VPN Server (OpenVPN) > Administrative Console > Open VPN Key Management*.
 - 3b Specify a unique name and select *Generate*.
Using the name of Server B helps maintain organization.
 - 3c Select *Windows Client and Configuration* to download and save the Windows client `.zip` file. The filename is based on the unique name selected.
- 4 Copy the client `.zip` file to `/etc/openvpn` on Server B.
- 5 Extract the client `.zip` file into the `/etc/openvpn` folder using the command `unzip unique_name_client.zip`. If desired, delete the Windows install files.
- 6 Rename (`mv`) or copy (`cp`) the `unique_name.ovpn` file to `client.conf`.
- 7 Using a text editor, such as `vi`, open the `server.conf` file and comment out the second to the last line with a `#` symbol. This prevents the VPN from pushing the public route to the other server and allows each server to access the public network directly.
- 8 Create a client key for Server A to use by repeating **Step 3** from Server B's Web administration tool.
- 9 Finalize Server A's configuration by repeating **Step 4** through **Step 7** on Server A. When complete, each server should have a `server.conf` and a `client.conf` file in the `/etc/openvpn/` directory.
- 10 Restart OpenVPN on each server by using `/etc/init.d/openvpn restart`.
You should now have a functioning two-way VPN tunnel. Each server should push its private routes to the other.
- 11 Test the connection by pinging a host on Network A from Server B, and a host on Network B from Server A.

For most networks with more than a single subnet, or where Server A and Server B are not the default gateway for clients on their networks, you also need to set up routing on internal switches and routers so that clients on Network A know to point to Server A as the next hop to Network B. This also needs to be done so that clients on Network B know to point to Server B as the next hop to Network A.

WARNING: This involves modifying systems beyond the NOWS SBE servers and can break the network if performed incorrectly. You are on your own at this point.

14.4.3 Troubleshooting Tips

- ◆ To verify the validity of the certificates on the VPN, issue the following command:
`openssl verify-<keyname>ca.crt-purpose sslclient <keyname>.crt`
- ◆ [Step 7 on page 81](#) suggests commenting out the public push statements for the VPN. If this is not done and the VPN servers are on the same network segment, the servers will hang. Pushing the public route can also cause trouble communicating over the VPN tunnel.
- ◆ Uninstalling the Firewall (IPTables) component does not undo any firewall configuration changes that have been made. Changes to the firewall configuration can cause the Site-to-Site VPN to stop functioning, so make firewall changes with care.
- ◆ To verify the firewall configuration, follow these directions:
 1. In a text editor, open `/etc/sysconfig/SuSEfirewall12`
 2. Find the line beginning with `FW_DEV_INT`
 3. Verify that it looks like this:
`FW_DEV_INT="eth1 tun0 tun1 tun2 tun3 tun4 tun5 tun6 tun7 tun8 tun9"`

A firewall is a hardware or software device that is configured to permit, deny, or proxy data through a computer network that has different levels of trust.

- ♦ [Section 15.1, “Installing IPTables Basic,” on page 83](#)
- ♦ [Section 15.2, “Installing IPTables Advanced,” on page 83](#)
- ♦ [Section 15.3, “Post-Installation,” on page 84](#)

15.1 Installing IPTables Basic

- 1 Click *Install* under *Available Components*.
- 2 Click *Basic*, then click *Next*.
- 3 Specify your IPTable configurations.
 - ♦ **External Interface:** The network interface connected to the Internet.
 - ♦ **Internal Interface:** The internal network interface. If you are using NAT, it routes from the external interface to the internal interface.
 - ♦ **NAT:** Network Address Translation shares the firewalled Internet connection with the network on the internal network interface. This is a must if you are using this server as your network firewall.
- 4 Closely review the settings. If you need to make a change, click *Back*. To proceed with the installation, click *Next*.
- 5 The firewall install is complete. Click *Finish* to proceed to the available software page. IPTables is now listed on the installed software list.

15.2 Installing IPTables Advanced

- 1 Click *Install* under *Available Components*.
- 2 Click *Advanced*, then click *Next*.
- 3 Specify your firewall configurations.
 - ♦ **External Interface:** The network interface connected to the Internet.
 - ♦ **Internal Interface:** The internal network interface. If you are using NAT, it will route from the external interface to the internal interface.
 - ♦ **NAT:** Network Address Translation shares the firewalled internet connection with the network on the internal network interface. This is a must if you are using this server as your network firewall.
- 4 Specify your firewall port setup. See [Section 1.4, “Planning for the NOWS SBE Install,” on page 14](#) for typical ports that should be open for TCP and UDP.
 - ♦ **Additional Ports (TCP):** Specify a comma-separated list of additional TCP ports to open on the firewall. Port ranges can be specified with a hyphen.
 - ♦ **Additional Ports (UDP):** Specify a comma-separated list of additional UDP ports to open on the firewall. Port ranges can be specified with a hyphen.

- 5 Review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.
- 6 The firewall install is complete. Click *Finish* to proceed to the available software page. Firewall is now listed on the installed software list.

15.3 Post-Installation

Further firewall configuration is necessary to secure your system. The administration interface is currently exposed to all interfaces.

15.3.1 Firewall Configuration

- 1 Log in to the Nows SBE console.
- 2 Click *Products and Services*.
- 3 Under *Product Components*, click *Firewall (IPTables)*.
- 4 Under *Administrator Console*, click *Firewall Administration*.
- 5 Specify the port configuration, then click *Save Changes*.

It is recommended that you disable access to this administration interface. For additional recommendations for setting firewall rules, see the [Firewall Documentation Web sit \(http://www.fwbuilder.org/pages/cd/contrdoc3.html\)](http://www.fwbuilder.org/pages/cd/contrdoc3.html).

Dynamic Local User enables you to authenticate to Windows by using your Novell® eDirectory™ User ID through LDAP, which gives you a single place to manage and synchronize user IDs and passwords.

- ♦ [Section 16.1, “Installing DLU Basic,” on page 85](#)
- ♦ [Section 16.2, “Installing DLU Advanced,” on page 85](#)
- ♦ [Section 16.3, “Post-Installation,” on page 86](#)

16.1 Installing DLU Basic

1 Click *Install* under *Available Components*.

2 Configure your DLU LDAP settings.

LDAP User Container: Specify the LDAP user container. For example, if your user context is `cn=jdoe, ou=users, o=mycompany`, then your LDAP user container is `ou=users,o=mycompany`.

16.2 Installing DLU Advanced

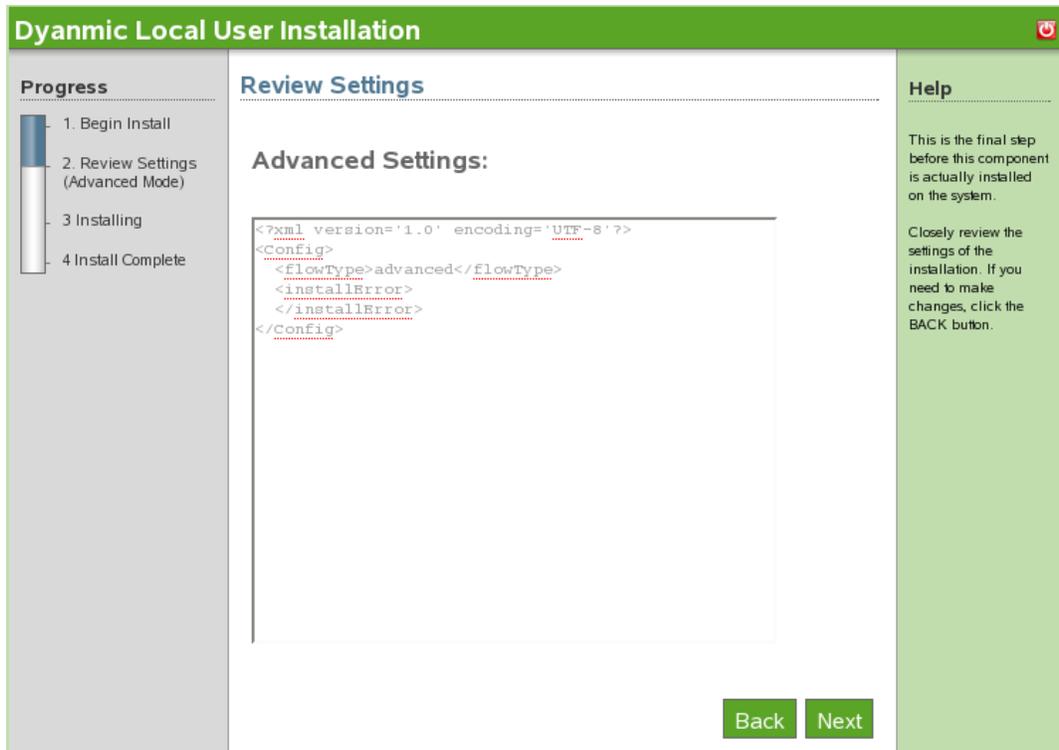
1 Click *Install* under *Available Components*.

2 Select *Advanced*, then click *Next*.

3 Configure your DLU LDAP settings.

- ♦ **LDAP Naming Attribute:** Specify the LDAP Naming Attribute. For example, if your user context is `cn=jdoe, ou=users, o=mycompany`, then your LDAP Naming Attribute is `cn`.
- ♦ **LDAP User Container:** Specify the LDAP User Container. For example, if your user context is `cn=jdoe, ou=users, o=mycompany`, then your LDAP User Container is `ou=users,o=mycompany`.
- ♦ **LDAP Server IP:** Specify the IP address of your LDAP server.
- ♦ **Secure Connection:** Specify port 636 to ensure that the authentication method is secure LDAP.

4 Review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.



5 The DLU install is now complete. Click *Finish* to return to the available software page.

16.3 Post-Installation

After the installation, complete the following for DLU desktop downloads.

- 1 Log in to the NOWS SBE console.
- 2 Click *Desktop Downloads*.
- 3 Under the *Choose Component* drop-down menu, select *Dynamic Local User*, then click *Search*.
- 4 Under *Search Results*, click *dlu- Dynamic Local User Client* and *dlu- pGina LDAP Registry* files.
- 5 For both downloads, click *Save File*.
- 6 Install *dlu-Dynamic Local User Client* from Windows workstation.
- 7 Click the *pGina LDAP Plugin* icon.
- 8 Specify pGina user information, then click *Next* to proceed with installation.
- 9 Follow the screen prompts to define your computer's architecture type.
 - ♦ Enter 1 for x86 architecture type.
 - ♦ Enter 2 for x86-64 architecture type.
 - ♦ Enter 0 to abort install.
- 10 Continue as directed by screen prompts.
- 11 Verify that the plug-in path in the `pgina-ldap-regedit.reg` file is correct. It should point to `ldapath_plus.dll`.

- 12** Import the `pgina-ldap-regedit.reg` registry file by using the Windows Registry Editor.
 - 12a** From your Windows workstation, click *Start > Run*.
 - 12b** Type `regedit`, then click *OK*.
 - 12c** Next, click *File > Import* and browse for `pgina-ldap-regedit`.
- 13** After installation is complete, test your pGina installation. To test the plug-in from your Windows workstation, click *Start > All Programs > pGina > Plugin Tester*.
- 14** Specify your directory administrator username and password, then click *Login*.
- 15** After the LDAP plug-in is successfully configured, restart your Windows workstation for changes to take effect.

After the reboot, the login window is DLU instead of the standard Windows login screen. DLU is automatically configured by the `pgina-ldap-regit.reg` file that has been copied to each Windows workstation's registry settings.

Helpdesk provides an online resource for administrators to monitor issues, check status incident tickets, allocate work, and personalize settings to best fit their company's needs. This allows users the reassurance that their incidents have been received by support teams.

- ♦ [Section 17.1, "Installing Helpdesk Basic," on page 89](#)
- ♦ [Section 17.2, "Installing Helpdesk Advanced," on page 90](#)
- ♦ [Section 17.3, "Post-Installation," on page 94](#)

17.1 Installing Helpdesk Basic

- 1 Click *Install* on the *Helpdesk* row.
- 2 Click *Basic*, then click *Next*.
- 3 Specify settings for your LDAP services. LDAP is used for user authentication and authorization.
 - ♦ **Helpdesk Administrator User Name:** The login ID for the default administrator of your Helpdesk application.
 - ♦ **Password for Helpdesk Admin:** The password to which the default administrator login is linked.
 - ♦ **Admin FDN:** The fully distinguished name of the eDirectory™ tree's admin user, such as cn= admin, o= tree.
 - ♦ **Admin User Password:** The password you use for your eDirectory tree's admin user.
 - ♦ **Helpdesk Proxy Username:** For security purposes, a separate proxy user is created for the back-end helpdesk.
 - ♦ **Helpdesk Proxy User Password:** The password to use for the Helpdesk proxy user.
 - ♦ **MySQL User Password:** The password to use for the Helpdesk proxy username. For security purposes, the root password in MySQL* is also set to this.
 - ♦ **Helpdesk Mail User Name:** The login name of the Helpdesk support e-mail account.
 - ♦ **Helpdesk Mail Password:** The password used to log in to the Helpdesk support e-mail account.
- 4 Click *Next* to continue.
- 5 Review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.

Helpdesk Installation

Progress

1. Begin Install
2. LDAP Configuration
3. MySQL Information
4. Help Desk Environment
5. Review Settings (Basic Mode)
6. Installing
7. Install Complete

Review Settings

Installation type:	basic
Password for Help Desk Admin:	*****
Help Desk Administrator User Name:	HelpdeskAdmin
LDAP Host:	192.168.200.133
LDAP SSL:	0
LDAP Port:	389
LDAP Bind DN:	cn=sbsadmin,o=novell
LDAP Base Organization:	o=novell
Help Desk Object:	cn=HelpDeskConfig,o=novell
LDAP Password:	*****
Admin User Password:	*****
Admin FDN:	cn=sbsadmin,o=novell
Help Desk Tree:	novelltree
Help Desk Upload Path:	uploads
Help Desk Download Path:	uploads
Help Desk Title:	novell Help Desk
Help Desk Send Notifications:	1
Help Desk Technician Change E-mail:	support@novell.com
Help Desk Database Host:	192.168.200.133
MySQL user:	root
E-mail address for machine changes:	support@novell.com

Help

This is the final step before this component is actually installed on the system.

Closely review the settings of the installation. If you need to make changes, click the BACK button.

Back Next

- 6 The Helpdesk Basic installation is now complete. Click *Finish* to proceed to the available software page. Helpdesk is now listed on the installed software list and can be launched from the Helpdesk administration link.

17.2 Installing Helpdesk Advanced

- 1 Click *Install* on the *Helpdesk* row.
- 2 Click *Advanced*, then click *Next*.
- 3 Specify the settings for your LDAP services. LDAP is used for user authentication and authorization.
 - ♦ **LDAP Host:** Specify the IP address for your eDirectory server. In most cases this is the same as the server on which you are installing Helpdesk
 - ♦ **LDAP Port:** The default port for LDAP services is 389. However, this is a non-secure port and all authentication should use a secure connection. Change this to port 636, which is for LDAP over SSL.
 - ♦ **LDAP Base Organization:** The base context your Helpdesk application will look to authenticate users. Typically it is the o of the eDirectory tree.
 - ♦ **Helpdesk Object:** The eDirectory Helpdesk object's fully distinguished name, such as cn=__, ou=__.
 - ♦ **Admin FDN:** The fully distinguished name of the eDirectory tree's admin user, such as cn= admin, o= tree.
 - ♦ **Admin User Password:** The password you use for your eDirectory tree's admin user.
- 4 Click *Next* to continue.

5 Specify the settings for your Helpdesk environment.

- ♦ **Helpdesk Administrator User Name:** The login ID for the default administrator of your Helpdesk application.
- ♦ **Password for Helpdesk Admin:** The password to which the default administrator login is linked.
- ♦ **Helpdesk Tree:** The name of your eDirectory tree.
- ♦ **Helpdesk Upload Path:** The path from which all Helpdesk uploads occur. Use the default to ensure that you receive updates from Novell®.
- ♦ **Helpdesk Download Path:** The path from which all Helpdesk downloads occur. Use the default to ensure that you receive updates from Novell.
- ♦ **Helpdesk Title:** The name you want employees to see when they log in to the Helpdesk application.
- ♦ **Helpdesk Proxy Username:** For security purposes, a separate proxy user is created for the back-end helpdesk.
- ♦ **Helpdesk Proxy User Password:** The password to use for the helpdesk proxy user.
- ♦ **Helpdesk Admin E-Mail:** The e-mail address to be used when users submit tickets, such as support@yourdomainname.com
- ♦ **Helpdesk Database User Name:** The name of the user on your database server that will have full access to this database instance.

6 Click *Next* to continue.

7 Specify the settings for MySQL, then click *Next*.

- ♦ **MySQL User:** The user that will manage the database.
- ♦ **MySQL User Password:** The password used by your eDirectory tree's administrator.

8 Click *Next* to continue.

9 Specify the Advanced Helpdesk configurations.

Configuration Option	Value
Help Desk Send User Queue Change:	0
Help Desk Send User Priority Change:	0
Help Desk Send User Tech Change:	1
Help Desk Send User Status Change:	1
Help Desk Send User Close:	1
Help Desk Web Help Desk Page:	http://192.168.200.133/he
E-mail address of queue changes:	support@novell.com
E-mail address for machine changes:	support@novell.com
Help Desk Technician Change E-mail:	support@novell.com
Help Desk Solution Change E-mail:	support@novell.com
Help Desk Status Change E-mail:	support@novell.com
Help Desk Priority Change E-mail:	support@novell.com
Help Desk Default Technician:	Helpdesk Support
Help Desk Auto Assign:	0
Help Desk Allow Technician Assign:	0
Help Desk Check Sleep Time:	30
Help Desk Ticket Sleep Time:	60

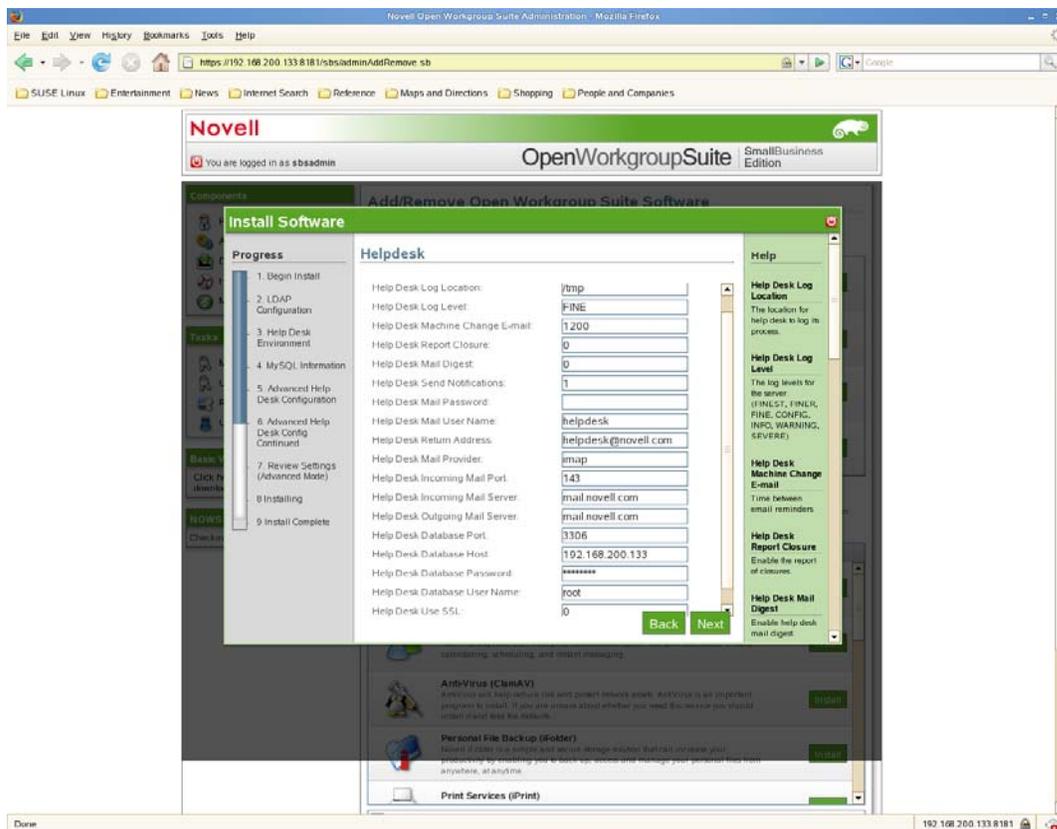
Buttons: Back, Next

- ◆ **Helpdesk Send User Queue Change:** Keep 0 to not notify users of a change in their queue association. Change to 1 to turn on notification.
- ◆ **Helpdesk Send User Priority Change:** Keep 0 to not notify users of a change in the priority of their incident. Change to 1 to turn on notification.
- ◆ **Helpdesk Send User Tech Change:** Keep 1 to activate notification. Change to 0 to not notify users of a change to the technician assigned to their incident.
- ◆ **Helpdesk Send User Status Change:** Keep 1 to activate notification. Change to 0 to not notify users of a change in their incident's status.
- ◆ **Helpdesk Send User Close:** Keep 1 to activate notification. Change to 0 to not notify users of a change in their incident's status to Close.
- ◆ **Helpdesk Web Helpdesk Page:** The address for your Helpdesk services.
- ◆ **E-mail Address of Queue Changes:** Specify the e-mail address to be used to send notifications of reassignments of queues.
- ◆ **Helpdesk Technician Change E-Mail:** Specify the e-mail address to be used to send notifications of reassignments of technicians.
- ◆ **Helpdesk Solution Change E-Mail:** Specify the e-mail address to be used to send notifications of incident solutions.
- ◆ **Helpdesk Status Change E-Mail:** Specify the e-mail address to be used to send notifications of a change to incident status.
- ◆ **Helpdesk Priority Change E-Mail:** Specify the e-mail address to be used to send notifications of a change to incident priority.
- ◆ **Helpdesk Default Technician:** Specify the default technician name for unassigned Helpdesk incidents.

- ♦ **Helpdesk Technician Change E-Mail:** Specify the e-mail address to be used to send notifications of reassignments of technicians.
- ♦ **Helpdesk Auto Assign:** Keep 0 to not automatically assign incidents. Change to 1 to enable this feature.
- ♦ **Helpdesk Allow Technician Assign:** Keep 0 to not allow technicians to assign incidents. Change to 1 to enable this feature.
- ♦ **Helpdesk Check Sleep Time:** The interval in seconds that the system polls for incidents submitted by e-mail.
- ♦ **Helpdesk Ticket Sleep Time:** The interval in seconds that the system polls for new incidents submitted through the Helpdesk interface.

10 Click *Next* to continue.

11 Specify any additional Advanced Helpdesk configurations.

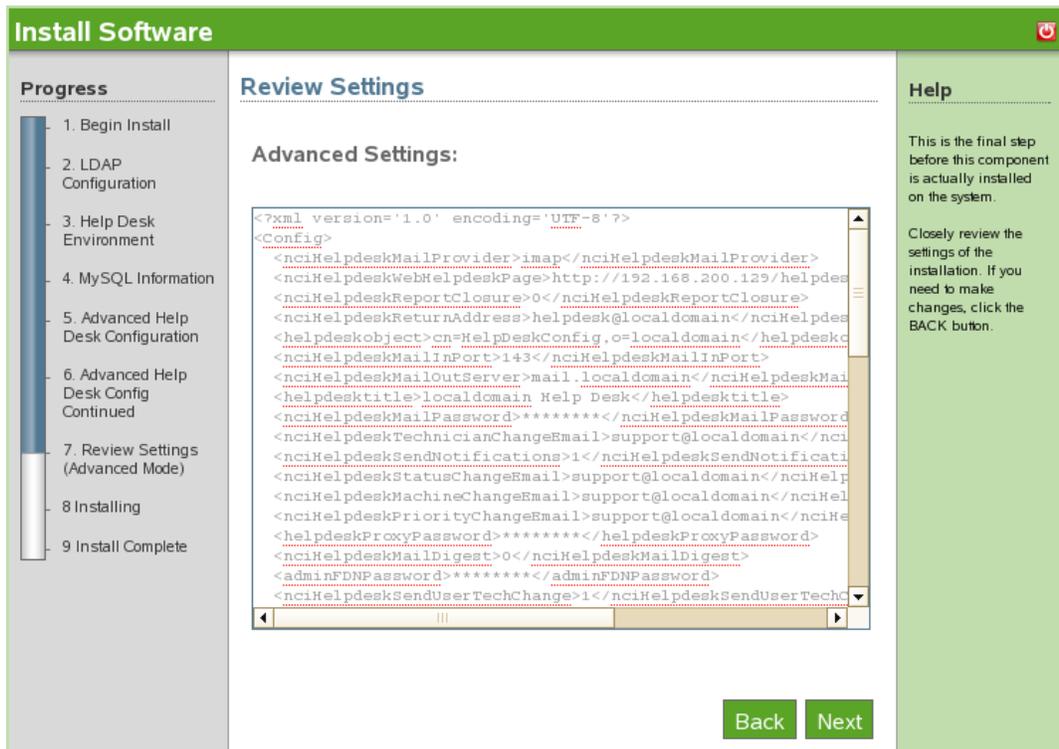


- ♦ **Helpdesk Log Location:** The directory location on the server for log files.
- ♦ **Helpdesk Log Level:** FINE, NORMAL, VERBOSE. *FINE* is the default.
- ♦ **Helpdesk Report Closure:** Keep at 0 to not report on closed reports. Change to 1 to activate notification.
- ♦ **Helpdesk Mail Digest:** Keep at 0 to not send out a report of all incidents daily. Change to 1 to activate this notification.
- ♦ **Helpdesk Send Notifications:** Keep 1 to send out notifications. Change to 0 to deactivate this notification.

- ♦ **Helpdesk Mail Password:** The password used to log in to the designated Helpdesk mail account.
- ♦ **Helpdesk Mail User Name:** The user name of the designated Helpdesk mail account.
- ♦ **Helpdesk Return Address:** The e-mail address used by the Helpdesk for responding to user inquiries.
- ♦ **Helpdesk Mail Provider:** The mail service used by your company.
- ♦ **Helpdesk Incoming Mail Port:** The port on which the server is listening for incoming mail.
- ♦ **Helpdesk Outgoing Mail Server:** The address of your mail server.
- ♦ **Helpdesk Database Port:** The port that the database uses.
- ♦ **Helpdesk Database Host:** The host that is running the MySQL server.

12 Click *Next* to continue.

13 Review your settings. To make a change, click *Back*. To proceed with the installation, click *Next*.



14 The Helpdesk Advanced installation is now complete. Click *Finish* to proceed to the available software page. Helpdesk is now listed on the installed software list and can be launched from the Helpdesk administration link.

17.3 Post-Installation

Additional information on administering Helpdesk can be found in the [Helpdesk online documentation \(http://www.novell.com/documentation/nows/\)](http://www.novell.com/documentation/nows/).

The Dynamic Host Configuration Protocol (DHCP) enables your server to provide IP addresses as clients need them instead of manually assigning addresses to client computers.

For additional information, see the [Novell® DHCP online documentation \(http://www.novell.com/documentation/oes/networking-protocols.html#dhcp\)](http://www.novell.com/documentation/oes/networking-protocols.html#dhcp).

- ◆ [Section 18.1, “Installing DHCP Basic,” on page 95](#)
- ◆ [Section 18.2, “Installing DHCP Advanced,” on page 96](#)
- ◆ [Section 18.3, “Post-Installation,” on page 97](#)

18.1 Installing DHCP Basic

To start DHCP component install, click on *Install* under *Available Components*. Next decide if you would like the Basic or Advanced installation. The Basic installation installs a DHCP server with default parameters for your network. Installation instructions will start with Basic, followed by Advanced.

- 1 Click *Install* under *Available Components*.
- 2 Click *Basic*, then click *Next*.
- 3 Confirm that the default settings for DHCP configuration are appropriate, then click *Next*.

Field	Value
Subnet:	192.168.200.0
Netmask:	255.255.255.0
IP Range Start:	192.168.200.100
IP Range End:	192.168.200.254
Network Interface:	eth0
DNS 1:	192.168.200.133
DNS 2:	192.168.200.2
Default Route:	192.168.200.133
Domain:	novell.com

- 4 Review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.
- 5 The DHCP basic installation is now complete. Click *Finish* to return to the available software page.

Review Settings	
Installation type:	basic
Subnet:	192.168.200.0
Netmask:	255.255.255.0
IP Range Start:	192.168.200.100
IP Range End:	192.168.200.254
Network Interface:	eth0
DNS 1:	192.168.200.133
DNS 2:	192.168.200.2
Default Route:	192.168.200.133
Domain:	novell.com

Help

This is the final step before this component is actually installed on the system.

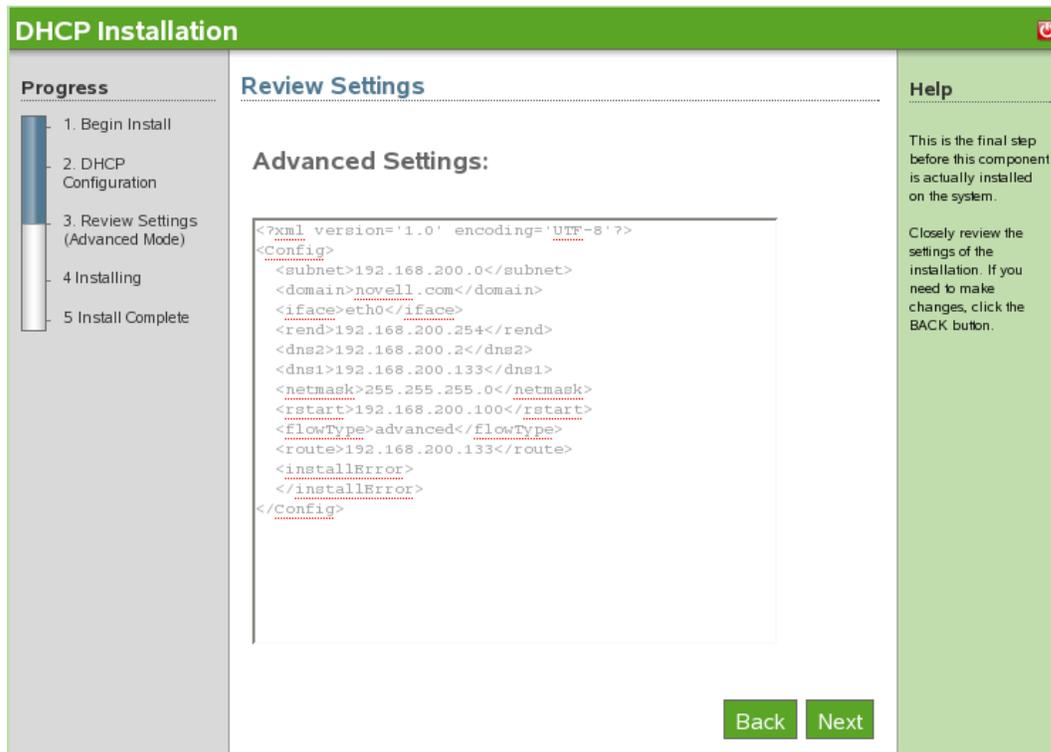
Closely review the settings of the installation. If you need to make changes, click the BACK button.

Back Next

18.2 Installing DHCP Advanced

- 1 Click *Install* under *Available Components*.
- 2 Click *Advanced*, then click *Next*.
- 3 Specify your DHCP configuration.
 - ♦ **DHCP Settings:** Verify that the DHCP settings are correct for your network.
 - ♦ **Subnet:** Specify the network's subnet IP address.
 - ♦ **Netmask:** Specify the network's subnet mask.
 - ♦ **IP Range Start:** Specify beginning number of the range of your network's IP addresses (0 is usually the network address).
 - ♦ **IP Range End:** Specify the ending number of the range of your network's IP addresses (255 is usually the broadcast address).
 - ♦ **DNS 1:** Specify the IP addresses of your DNS server.
 - ♦ **DNS 2:** Specify the IP address of an alternative DNS server.
 - ♦ **Default Route:** Specify the default route for DHCP clients. This is the IP address of the next hop router that the clients would go for any traffic off their network. If your server is the NAT/internal gateway, use the server's internal IP address for this setting.
 - ♦ **Domain:** This is your company's domain name.

4 Review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.



5 The DHCP advanced installation is now complete. Click *Finish* to return to the available software page. DHCP is now listed on the installed software page.

18.3 Post-Installation

After installation, the DHCP server is up and running on your network. There are no modifications or maintenance that need to be done. Custom tasks can be done from the command line by logging in to the server through SSH.

DNS, or Domain Name System, is an Internet service that translates domain names into IP addresses. Because domain names are alphabetic, they're easier to remember. However, the Internet however, is really based on IP addresses. Every time you use a domain name, a DNS service must translate that name into the corresponding IP address. For example, the domain name `www.example.com` might translate to `198.105.232.4`.

For additional information, see the Novell® DNS online documentation (<http://www.novell.com/documentation/oes/networking-protocols.html#dhcp>).

- ♦ [Section 19.1, “Installing Basic DNS,” on page 99](#)
- ♦ [Section 19.2, “Post-Installation,” on page 100](#)

19.1 Installing Basic DNS

- 1 Click *Install* on the DNS row.
- 2 Select *Basic*, then click *Next*.
- 3 Specify your DNS configurations.
 - ♦ **DNS Domain Name:** Specify your DNS domain name.
 - ♦ **DNS Forwarder 1:** Specify your DNS forwarder. This should be obtained from your ISP.
 - ♦ **DNS Forwarder 2:** Specify another DNS forwarder.
 - ♦ **Internal A Record x Hostname:** Add the hostname of the servers you want your DNS server to be able to resolve for your network.
 - ♦ **Internal A Record x IP:** Add the IP address of the servers specified for your network.
- 4 Review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.

DNS Installation

Progress

1. Begin Install
2. DNS Configuration
3. Review Settings (Basic Mode)
4. Installing
5. Install Complete

Review Settings

Installation type:	basic
DNS Domain Name:	internal.local
dap dap dap :	milk and cereal
Internal A Record 2 IP:	10.10.10.2
Internal A Record 3 hostname:	hostname
Internal A Record 3 IP:	10.10.10.3
Internal A Record 4 hostname:	hostname
Internal A Record 4 IP:	10.10.10.4
Internal A Record 5 hostname:	hostname
Internal A Record 5 IP:	10.10.10.4
DNS Forwarder 1:	4.2.2.2
DNS Forwarder 2:	4.2.2.1
DNS Server Type:	master
Internal MX Record Hostname:	hostname
Internal MX Record Priority:	10
Internal A Record 1 hostname:	hostname
Internal A Record 1 IP:	10.10.10.1
Internal A Record 2 hostname:	hostname

Help

This is the final step before this component is actually installed on the system.

Closely review the settings of the installation. If you need to make changes, click the BACK button.

Back Next

- 5 The DNS Basic installation is now complete. Click *Finish* to proceed to the Add/Remove Software page. DNS is now listed on the installed software list.

19.2 Post-Installation

After installation, DNS is up and running on your network. There are no modifications or maintenance that need to be done.

For help setting server parameters in DNS or starting and stopping DNS, see the [Novell® DNS online documentation \(http://www.novell.com/documentation/oes/networking-protocols.html#dhcp\)](http://www.novell.com/documentation/oes/networking-protocols.html#dhcp).

Remote Desktop (TightVNC)

20

TightVNC, or Virtual Network Computing, is a graphical desktop sharing software that allows a user to remotely control another computer. It transmits local keyboard and mouse events and movements to the remote host, thus allowing the user to control a remote computer from a local one.

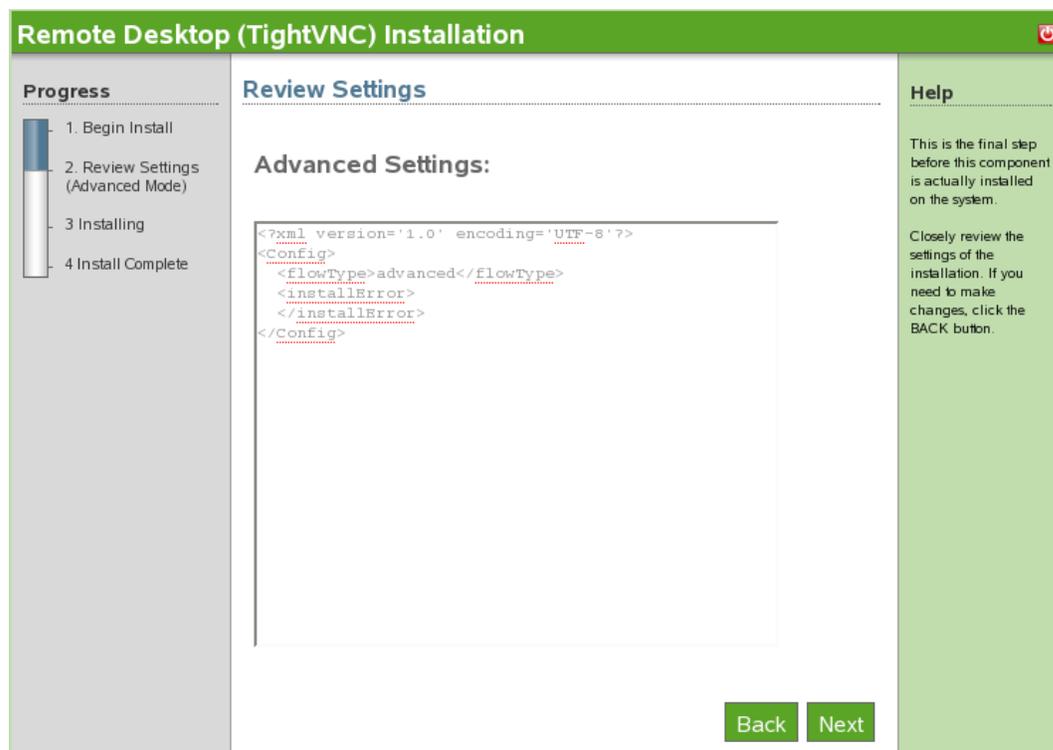
For more information, see the [TightVNC online documentation \(http://www.tightvnc.com/docs.html\)](http://www.tightvnc.com/docs.html).

- ♦ [Section 20.1, “Installing TightVNC Basic,” on page 101](#)
- ♦ [Section 20.2, “Post-Installation,” on page 102](#)

20.1 Installing TightVNC Basic

To start the component download section, click *Install* on the TightVNC row. The installation process for TightVNC only requires a basic installation. There are not any advanced features to configure.

- 1 Click *Install* on the TightVNC row.
- 2 Select *Basic*, then click *Next*.
- 3 Review the settings. To make a change, click *Back*. To proceed with the installation, click *Next*.



- 4 The TightVNC installation is now complete. Click *Finish* to proceed to the Add/Remove Software page. TightVNC is now listed on the installed software list.

20.2 Post-Installation

- ◆ Section 20.2.1, “TightVNC Desktop Download for Linux,” on page 102
- ◆ Section 20.2.2, “TightVNC Desktop Download for Windows,” on page 102
- ◆ Section 20.2.3, “TightVNC Desktop Download for the Windows Terminal Services Client for Linux,” on page 102
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20.2.1 TightVNC Desktop Download for Linux

- 1 Log in to the NOWS SBE console.
- 2 Click *Products and Services*.
- 3 Under *Select Components*, click *Remote Desktop (TightVNC)*.
- 4 Under *Desktop Downloads*, select *TightVNC for Linux*.
- 5 Click *Save to Disk*, then click *OK*.
- 6 On your desktop, right-click the `tightvnc-server-1.2.9-1.i386.rpm` file, then click *Extract Here*.
- 7 To complete the download, click the `etc` and `usr` folders on your desktop.

20.2.2 TightVNC Desktop Download for Windows

- 1 Log in to the NOWS SBE console.
- 2 Click *Products and Services*.
- 3 Under *Select Components*, click *Remote Desktop (TightVNC)*.
- 4 Under *Desktop Downloads*, select *TightVNC for Windows*.
- 5 Click *Save to Disk*, then click *OK*.
- 6 On your desktop, right-click the `tightvnc-1.2.9-setup.exe` file, then click *Extract Here*.
- 7 To complete the download, click the `tightvnc-1.2.9-setup.exe` file on your desktop.

20.2.3 TightVNC Desktop Download for the Windows Terminal Services Client for Linux

- 1 Log in to the NOWS SBE console.
- 2 Click *Products and Services*.
- 3 Under *Select Components*, click *Remote Desktop (TightVNC)*.
- 4 Under *Desktop Downloads*, select *Windows Terminal Services*.
- 5 Click *Save to Disk*, then click *OK*.
- 6 On your desktop, right-click the `rdesktop-1.5.0.tar.gz` file, then click *Extract Here*.

7 To complete the download, click the `rdesktop-1.5.0.tar.gz` folder on your desktop.

20.2.4 TightVNC Desktop Download for MAC OS X

- 1 Log in to the NOWS SBE console.
- 2 Click *Products and Services*.
- 3 Under *Select Components*, click *Remote Desktop (TightVNC)*.
- 4 Under *Desktop Downloads*, select *VNC for MAC OS X*.
- 5 Click *Save File*.
- 6 To complete the download, click the `OSXvnc1.71.dmd` file on your desktop.

20.2.5 TightVNC Desktop Download for the Putty SSH Client for Windows

- 1 Log in to the NOWS SBE console.
- 2 Click *Products and Services*.
- 3 Under *Select Components*, click *Remote Desktop (TightVNC)*.
- 4 Under *Desktop Downloads*, select *Putty SSH Client for Windows*.
- 5 Click *Save File*.
- 6 To complete the download, click the `putty.exe` file on your desktop.

20.2.6 Helpful Links

For additional information see the [Putty online documentation](http://www.chiark.greenend.org.uk/~sgtatham/putty/docs.html) (<http://www.chiark.greenend.org.uk/~sgtatham/putty/docs.html>).

Uninstalling Components

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The uninstall tool allows you to perform a complete component uninstall.

NOTE: To uninstall eDirectory™, you must first uninstall iManager.

- 1 To uninstall a component, click the *Add/Remove* menu panel tab. The removal of a component is the same whether it was a Basic or Advanced install.
- 2 Click *Uninstall* on the row of the component you want to remove.

The screenshot displays the Novell OpenWorkgroupSuite Small Business Edition interface. The main content area is titled "Add/Remove Open Workgroup Suite Software" and shows a list of installed software components. Each component has an "Uninstall" button. The components listed are:

- Dynamic Local User**: Automatically creates a user account on a Windows workstation when a user is created in eDirectory.
- Directory Services (eDirectory)**: With a directory service, you have a systematic way to unify identities, resources, and devices with policies, applications, files, people, peripheral devices, and other network components.
- Management Tools (iManager)**: Novell iManager is a Web based administration console that provides customized access to network administration utilities and content from virtually any location in the world.
- Anti-Virus (ClamAV)**: AntiVirus will help reduce risk and protect network assets. AntiVirus is an important program to install. If you are unsure about whether you need this service you should install it and take the defaults.
- Windows File and Print Sharing (Samba)**: Samba is an Open Source/Free Software suite that provides seamless file and print services to SMB/CIFS clients.
- VPN Server (OpenVPN)**: A full featured SSL VPN solution which can accommodate a wide range of

Below the installed software, there is a section for "Available Software" with expandable categories:

- All
- Backup Restore and Recovery
- Business Applications
- Collaboration Groupware and Messaging
- File Print and Fax
- Security Management
- Systems Management

The left sidebar contains navigation options:

- Components**: Products and Services, Add/Remove, Desktop Downloads, Help Links, Management Links
- Tasks**: Manage License Keys, Upload Packages, Remote Administration, Users and Groups, Set Language
- Basic View**: Click here for non-privileged user downloads
- NOWS Server Updates**: No new updates available. Checked: Never. Check now
- Component Updates**: Novell, Third-Party. Update

- 3 Click *Uninstall* to proceed with the uninstall. Click *Cancel* to stop the uninstall.



- 4 The component uninstall is now complete. Click *Finish* to proceed to the Add/Remove Software page. The component is now removed from the installed software list.



NOTE: Uninstall does not always completely remove a package.
