Installation Guide

GroupWise 8

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Novell.

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About This Guide

This Novell *GroupWise 8 Installation Guide* helps you install a new GroupWise system or update an existing GroupWise 5.*x*/6.*x*/7 system. The guide is divided into the following sections:

For troubleshooting assistance, see:

- *GroupWise 8 Troubleshooting 1: Error Messages*
- *GroupWise 8 Troubleshooting 2: Solutions to Common Problems*
- *GroupWise 8 Troubleshooting 3: Message Flow and Directory Structure*
- Novell Support and Knowledgebase (http://www.novell.com/support)

  To search the GroupWise documentation from the Novell Support Web site, click *Advanced Search*, select *Documentation* in the *Search In* drop-down list, select *GroupWise* in the *Products* drop-down list, type the search string, then click *Search*.

- GroupWise Support Forums (http://forums.novell.com/forumdisplay.php?&f=356)

- GroupWise Support Community (http://www.novell.com/support/products/groupwise)
- GroupWise Cool Solutions (http://www.novell.com/coolsolutions/gwmag/index.html)

Audience

This guide is intended for network administrators who install and administer GroupWise.

Feedback

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

Additional Documentation

For additional GroupWise documentation, see the following guides at the Novell GroupWise 8 Documentation Web site (http://www.novell.com/documentation/gw8):

- *Administration Guide*
- *Multi-System Administration Guide*
- *Interoperability Guide*
- *Troubleshooting Guides*
- *GroupWise Client User Guides*
- *GroupWise Client Frequently Asked Questions (FAQ)*

GroupWise Product Overview

1 What Is GroupWise?

Novell GroupWise is an enterprise collaboration system that provides secure e-mail, calendaring, scheduling, and secure instant messaging. GroupWise also includes task management, contact management, document management, and other productivity tools. Companion products provide synchronization with mobile devices, teaming, and telephone and soft phone conferencing for complete enterprise connectivity and collaboration.

GroupWise can be used on your desktop on Windows, Macintosh, or Linux; in a Web browser anywhere you have an Internet connection; and on mobile devices. Your GroupWise system can be set up on NetWare, Linux, Windows, or any combination of these operating systems.

The following sections include more details about what GroupWise provides and what you need to do to set up GroupWise to best meet your needs.

- Section 1.1, "What GroupWise Provides," on page 13
- Section 1.2, "What You Need to Install," on page 15

1.1 What GroupWise Provides

GroupWise provides communication and collaboration services that are secure, highly available, and easily accessible:

- Section 1.1.1, "Essential Communication and Collaboration Services," on page 13
- Section 1.1.2, "Available Anytime," on page 14
- Section 1.1.3, "Accessible Anywhere," on page 14
- Section 1.1.4, "Always Secure," on page 15

1.1.1 Essential Communication and Collaboration Services

GroupWise provides a variety of tools to enable users to work together and work smarter.

- **Messaging:** Send and receive mail messages, phone messages, and reminder notes. A mail message is for general correspondence. A phone message is designed for those who take phone messages for others. A reminder note includes a start date and, when accepted by the recipient, is posted to the recipient's Calendar.
- **Scheduling:** Schedule both appointments and tasks. When you schedule an appointment, you can search other users' Calendars to find free times for the appointment. When you schedule a task, you can assign a priority and due date to the task. If the recipient accepts an appointment or task, it is automatically added to his or her Calendar.
- **Calendaring:** View and manage your appointments, tasks, and reminder notes in a Calendar view. You can create multiple calendars. You can also publish personal calendars and free/busy status so that non-GroupWise users can conveniently schedule meetings with you.

- **Task Management:** Accept or decline the tasks you are sent, and track accepted tasks through to completion. You can turn any message into a task. You can also organize, schedule, and monitor tasks in your Tasklist folder.
- **Contact Management:** Manage information for your contacts, groups, resources, and organizations, including being able to view, update, delete, and add information to the contacts in your address books and Contacts folders. In addition, you can view a history of messages sent to and received from individual contacts and compile notes on interactions with contacts.
- **Document Management:** Store documents in GroupWise libraries. In a library, documents are compressed to save disk space and encrypted to maintain security. With document management, you can check in, check out, share, and version documents.
- **Instant Messaging:** Using Novell Messenger, communicate in real time with other GroupWise users. Novell Messenger lets you know when other users are online, busy, or away from their desks. It also allows you to save conversations.
- **Teaming:** Using Novell Vibe, collaborate on a teaming Web site where personal, team, and global workspaces can include discussion folders, shared calendars, shared documents, blogs, wikis, surveys, and more. Powerful search capabilities make finding information quick and easy.
- **Conferencing:** Using Novell Conferencing, conduct telephone conferences with the convenience of communities, contacts, and buddies for conference calls; phone presence and participation indicators; meeting setup; instant chat; whiteboarding; desktop sharing; and more.

1.1.2 Available Anytime

GroupWise ensures that your essential communication tools are always available:

- **Caching:** The GroupWise Windows, Mac, and Linux clients include a Caching mode that allows you to cache GroupWise information to your local drive and continue to work even when you aren't logged into your network mailbox.
- **LDAP Pooling:** If you are using LDAP authentication for GroupWise mailbox authentication, LDAP pooling ensures that there is always an LDAP server through which authentication can be performed.
- **Clustering:** To ensure that GroupWise data is always available and GroupWise components are always running, you can install GroupWise in a cluster on NetWare, Linux, or Windows.

1.1.3 Accessible Anywhere

GroupWise lets you communicate and collaborate with other people by using the device that is most convenient:

- **Personal Computers:** To access your mailbox, you can run the GroupWise Windows client on any workstation that uses Windows XP or higher. On Macintosh workstations, you can run the GroupWise Mac client. On Linux workstations, you can run the GroupWise Linux client.
- **Web Browsers:** With GroupWise WebAccess installed, you can also access your mailbox through a Web browser, a cellular phone, or a PDA (personal digital assistant) such as Pocket PC. The GroupWise WebAccess client formats information to best accommodate the type of device on which it is being displayed.
- **Mobile Devices:** You can use Novell Data Synchronizer to synchronize personal information management (PIM) data such as e-mail, appointments, and contacts to synchronize between GroupWise and mobile devices.

  NOTE: The Data Synchronizer Mobility Pack replaces GroupWise Mobile Server in providing synchronization between GroupWise and mobile devices.

You can synchronize GroupWise with your BlackBerry device by using BlackBerry Enterprise Server for GroupWise.

◆ **Other E-Mail Clients:** GroupWise enables you to access your mailbox with any POP3, IMAP4, or SOAP e-mail client.

1.1.4 Always Secure

GroupWise provides extensive security measures to protect your information.

◆ **Encryption:** To protect your information as it is stored in the various GroupWise databases and moved across the network, GroupWise encrypts the information. Each piece of information is encrypted differently through the use of randomly-generated encryption keys.

◆ **Open Security Standards:** To further ensure that your information is secure while moving across your internal network or across the Internet, GroupWise supports open security standards such as Secure Sockets Layer (SSL), Secure Multipurpose Internet Mail Extension (S/MIME), Public Key Infrastructure (PKI), and Transport Layer Security (TLS).

◆ **Spam Protection:** To protect you from seeing unwanted messages, the GroupWise Windows client includes a Junk Mail Handling feature that lets you control unwanted Internet e-mail messages. In addition, you can configure the Internet Agent (the GroupWise component responsible for sending and receiving Internet e-mail messages) to reject messages from known open relay hosts and spam hosts. GroupWise also works with partner products that provide additional anti-spam solutions.

◆ **Virus Protection:** GroupWise works with partner products to provide solutions that detect and eliminate viruses.

For information about additional security solutions available for GroupWise through GroupWise partners, see the Novell Partner Product Guide (http://www.novell.com/partnerguide).

1.2 What You Need to Install

GroupWise includes multiple components that you need to install to realize the full benefits of GroupWise. However, some components might not be necessary, depending on your needs. The following table outlines the components, what they provide, and where to find instructions for installing them.

Table 1-1   *Components of Your GroupWise System*

Component	What it does	Go to
Administration, Agents, and Windows Client	Necessary for a basic GroupWise system. These components are required and must be installed before any other components.	Chapter 3, "Installing a Basic GroupWise System," on page 25
Internet Agent	Provides Internet e-mail communication, POP3/IMAP4/SOAP client access, and paging services.	Chapter 4, "Installing the GroupWise Internet Agent," on page 73
WebAccess	Provides access to mailboxes through a Web browser or mobile device.	Chapter 5, "Installing GroupWise WebAccess," on page 101

Component	What it does	Go to
Calendar Publishing Host	Provides public access to personal GroupWise calendars and free/busy availability to Internet users.	Chapter 6, "Installing the GroupWise Calendar Publishing Host," on page 135
Monitor	Provides administrative monitoring of the GroupWise agents.	Chapter 7, "Installing GroupWise Monitor," on page 159
Agents	Necessary for each new domain and post office that you create.	Chapter 8, "Installing GroupWise Agents," on page 181
GroupWise Clients (Windows, Mac, and Linux)	Can be rolled out to all GroupWise users on a convenient schedule.	Chapter 9, "Installing the GroupWise Clients," on page 229

In addition to the sections referenced in the above table, this *Installation Guide* includes the following supplemental sections:

- Chapter 10, "Installing Novell Messenger," on page 239
- Chapter 11, "Installing the Novell Data Synchronizer Mobility Pack," on page 241
- Chapter 12, "Installing Novell Vibe," on page 243
- Chapter 13, "Installing Novell Conferencing," on page 245

The information in these sections is provided as a reference for installing additional components after you've created your basic GroupWise system.

2 GroupWise System Requirements

You, as a GroupWise administrator, must ensure that your system meets GroupWise system requirements, so that your GroupWise system can be set up successfully. After your GroupWise system is set up, you must ensure that users' workstations meet GroupWise client requirements, so that users can run the GroupWise clients successfully.

2.1 GroupWise Administration Requirements

- ❏ x86-32 processor or x86-64

  On a 64-bit processor, GroupWise still runs as a 32-bit application.

- ❏ Any of the following server operating systems for the GroupWise agents (Post Office Agent, Message Transfer Agent, Internet Agent, WebAccess Agent, Monitor Agent):
  - ◆ Novell Open Enterprise Server (OES) 2 (NetWare or Linux version) or OES 11, plus the latest Support Pack
  - ◆ NetWare 6.5, plus the latest Support Pack

    NOTE: The Monitor Agent is not available for NetWare.

  - ◆ SUSE Linux Enterprise Server (SLES) 10 or SLES 11, plus the latest Support Pack

    The X Window System and Open Motif are required by the GUI GroupWise agent server consoles for the Post Office Agent, the Message Transfer Agent, and the Internet Agent. By default, the GroupWise agents run as daemons without user interfaces.

  - ◆ Windows Server 2003, Windows Server 2003 R2, Windows Server 2008, or Windows Server 2008 R2, plus the latest Service Pack

- ❏ Adequate server memory as required by the operating system
- ❏ eDirectory 8.7 or later, plus the latest Support Pack, with LDAP enabled
- ❏ ConsoleOne 1.3.6h or later, with the LDAP snap-in installed

  GroupWise 8 includes ConsoleOne 1.3.6h for Windows and for Linux on the *GroupWise 8* DVD or downloaded *GroupWise 8* software image.

  You can install the LDAP snap-in for Linux ConsoleOne along with ConsoleOne. You can download the LDAP snap-in for Windows ConsoleOne from the Novell Downloads site (http://download.novell.com/Download?buildid=FCT5LqrhcGI~).

  ConsoleOne requires Java Virtual Machine (JVM) 1.5.11 or later.

On Windows, ConsoleOne also requires the Novell Client. ConsoleOne 1.3.6h requires version 4.91 SP3 or later of the Novell Client. If necessary, you can download the latest Novell Client from the Novell Product Downloads site (http://download.novell.com).

On Linux, ConsoleOne also requires the X Window System, version X11R6 or later.

❑ Any of the following environments for running ConsoleOne and the GroupWise Installation program:

- Windows XP, Windows Vista, or Windows 7, plus the latest Service Pack, plus the Novell Client
- Windows Server 2003, Windows Server 2003 R2, Windows Server 2008, or Windows Server 2008 R2, plus the latest Service Pack, plus the Novell Client
- Novell Open Enterprise Server (OES) 2 (Linux version) or OES 11, plus the latest Support Pack
- SUSE Linux Enterprise Server (SLES) 10 or SLES 11, plus the latest Support Pack

The X Window System is required by the GUI GroupWise Installation program that steps you through the process of creating a new GroupWise system. A text-based Installation program is also available.

❑ Adequate server disk space:

- Software distribution directory: 500 MB for all GroupWise components in one language
- Domain directory: 100-200 MB for the domain database, plus 1 GB or more for message queues when links are down
- Post office directory: 5 MB per user (minimum); 100 MB or more per user (recommended); plus 100-300 MB for the post office database; plus 500 MB or more for message queues when links are down
- MTA/POA installation: approximately 25 MB (varies by platform)
- Internet Agent installation: approximately 37 MB (varies by platform)
- WebAccess installation: approximately 215 MB (111 MB shared with Monitor; varies by platform)
- Monitor installation: approximately 140 MB (111 MB shared with WebAccess; varies by platform)
- Calendar Publishing Host installation: approximately 7 MB, plus 50 KB per published calendar and 50 KB per user for free/busy searching

❑ Internet connectivity for the Internet Agent

- Internet domain name for your company
- Internet Service Provider (ISP) or in-house DNS address resolution

❑ Any of the following Web servers for WebAccess, Monitor, and the Calendar Publishing Host:

- NetWare 6.5: Apache 2.0 plus:
  - Tomcat 4.1 or later
  - JVM 1.4.2 or later
  - Jakarta Connector 1.2 or later
- OES 2 Linux / SLES 10: Apache 2.2 plus:
  - Tomcat 5.0 or later
  - JVM 1.4.2 or later
  - ModProxy Module

- OES 11 / SLES 11: Apache 2.2 plus:
  - Tomcat 6.0 or later
  - JVM 1.5 or later
  - ModProxy Module
- Windows Server 2003/2003 R2: Microsoft Internet Information Server (IIS) 6 or later plus:
  - Tomcat 5.5 or later
  - JVM 1.5 or later
  - Jakarta Connector 1.2 or later
- Windows Server 2008/2008 R2: Microsoft Internet Information Server (IIS) 7 or later plus:
  - Tomcat 5.5 or later
  - JVM 1.5 or later
  - Jakarta Connector 1.2 or later
- ❏ Any of the following Web browsers for the agent Web consoles:
  - Windows: Microsoft Internet Explorer 6.0 or later; Mozilla Firefox
  - Macintosh: The latest version of Safari for your version of Mac OS; Mozilla Firefox
  - Linux: Mozilla Firefox

2.2 GroupWise Client Requirements

2.2.1 Windows Client Requirements

- x86-32 processor or x86-64 processor

  On a 64-bit processor, GroupWise still runs as a 32-bit application.
- Any of the following desktop operating systems for the GroupWise Windows client:
  - Windows XP on a 300 MHz or higher workstation with at least 128 MB of RAM
  - Windows Vista on a 1 GHz or higher workstation with at least 1 GB of RAM
  - Windows 7 on a 1 GHz or higher workstation with at least 1 GB of RAM
- 200 MB of free disk space on each user's workstation to install the Windows client

2.2.2 Mac Client Requirements

The GroupWise Mac client is not included with GroupWise 8.0.3, but is available in earlier versions of GroupWise 8. The GroupWise 8.0.2 Mac client can continue to be used with a GroupWise system that has been updated to GroupWise 8.0.3 or to GroupWise 2012.

- x86-32 processor or x86-64 processor; PowerPC

  On a 64-bit processor, GroupWise still runs as a 32-bit application.

- Any of the following desktop operating systems:
  - Mac OS 10.6.8 and later (Snow Leopard), Mac OS 10.7 (Lion), Mac OS 10.8 (Mountain Lion) or later, for use with the GroupWise 8.0.2 HP3 or HP4 Mac client that is available on the Novell Downloads site (http://download.novell.com)

    or

    Mac OS 10.4 (Tiger), Mac OS 10.5 (Leopard), Mac OS 10.6.7 and earlier (Snow Leopard), for the GroupWise 8.0.2 HP2 Mac client that is available on the Novell Downloads site (http://download.novell.com)
  - Mac OS X for Intel
  - Mac OS X for PowerPC for the GroupWise 8.0.2 HP2 Mac client that is available on the Novell Downloads site (http://download.novell.com)

    The GroupWise 8.0.2 HP3 Mac client is not supported on Mac OS X for PowerPC.
- Apple Java Virtual Machine (JVM) 1.5 or later
- 75 MB of free disk space on each user's workstation to install the Mac client

2.2.3 Linux Client Requirements

The GroupWise Linux client is not included with GroupWise 8.0.3, but is available in earlier versions of GroupWise 8. The GroupWise 8.0.2 Linux client can continue to be used with a GroupWise system that has been updated to GroupWise 8.0.3 or to GroupWise 2012.

- x86-32 processor or x86-64 processor

  On a 64-bit processor, GroupWise still runs as a 32-bit application.
- SUSE Linux Enterprise Desktop (SLED) 10 or SLED 11, plus the latest Support Pack, plus the KDE desktop or the GNOME desktop
- 200 MB of free disk space on each user's workstation to install the Linux client

2.2.4 WebAccess Client Requirements

- Any of the following Web browsers:
  - Windows: Microsoft Internet Explorer 6.0 or later; Mozilla Firefox
  - Macintosh: The latest version of Safari for your version of Mac OS; Mozilla Firefox
  - Linux: Mozilla Firefox
- Any mobile device that supports Wireless Access Protocol (WAP) and has a microbrowser that supports Hypertext Markup Language (HTML) 4.0 or later, or Wireless Markup Language (WML) 1.1 or later

2.3 Supported Environments

2.3.1 IPV6 Support

The POA, the MTA, the Internet Agent, and the Monitor Agent support the IPV6 protocol when it is available on the server. If it is available, the agent detects it and supports IPV6 by default, along with IPV4. The WebAccess Agent and its accompanying Viewer Agent do not support IPV6.

As you configure your GroupWise system and specify the network address of an IPV6 server in ConsoleOne, you must specify its DNS hostname. *IP Address* fields in ConsoleOne do not accommodate IPV6 address format.

IPV6 support is available on Linux and Windows. IPV6 support is not currently available on NetWare.

2.3.2 Clustering Support

You can set up your GroupWise system in any of the following clustering environments, as described in the *GroupWise 8 Interoperability Guide*:

- "Novell Cluster Services on NetWare"
- "Novell Cluster Services on Linux"
- "Microsoft Clustering Services on Windows"

If you are using one of these clustering environments, follow the installation instructions in the *GroupWise 8 Interoperability Guide*, rather than the installation instructions in this guide.

2.3.3 Xen Virtualization Support

You can install components of your GroupWise system in virtual environments where a software program enables one physical server to function as if it were two or more physical servers. Xen virtualization technology in Novell Open Enterprise Server (Linux version) and SUSE Linux Enterprise Server is supported. For more information, see:

- Open Enterprise Server 2 Virtualization Documentation Web site (http://www.novell.com/documentation/oes2/virtualization.html#virtualization)
- SLES Virtualization Technology Documentation Web site (http://www.novell.com/documentation/vmserver).

Large post offices with busy POAs are not good candidates for virtualization. Specialized POAs, such as an indexing POA with no mailboxes and users, could be virtualized. Other GroupWise components such as the MTA, Internet Agent, and WebAccess Agent do well when virtualized.

2.3.4 VMware Support

GroupWise is supported on the following versions of VMware:

- VMware Server (formally GSX Server), an enterprise-class virtual infrastructure for x86-based servers
- VMware ESX Server, a data center-class virtual infrastructure for mission-critical environments

   For more information, see the VMware Web site (http://www.vmware.com).

2.3.5 Citrix Support

Any version of the GroupWise client runs successfully on any 32-bit version of Citrix terminal services.

The GroupWise agents run successfully on Citrix XenServer.

For more information, see the Citrix Web site (http://www.citrix.com).

2.3.6 Domain Services for Windows Support

Starting in GroupWise 8 SP1, GroupWise can be installed on the same server with Novell Domain Services for Windows (DSfW), and GroupWise objects can be created in a DSfW partition. DSfW uses ports 1389 and 1636 instead of the typical default ports of 389 and 636 for LDAP. The GroupWise 8 SP1 Installation program detects the presence of DSfW and automatically adjusts the LDAP port numbers that are used when installing the Internet Agent, WebAccess, and Monitor.

NOTE: Earlier versions of GroupWise cannot be installed on a DSfW server, nor can earlier versions of GroupWise eDirectory objects be created in a DSfW partition. However, GroupWise objects can still be created in an eDirectory tree that has a DSfW partition, as long as you do not try to create the GroupWise objects in the DSfW partition.

2.3.7 Linux File System Support

For best GroupWise performance on Linux, the `ext3` file system is recommended. If you are running OES Linux and need the feature-rich environment of the NSS file system, GroupWise is also supported there. The `reiser3` file system is also supported.

NOTE: If you choose to use the NSS file system, turn Salvage off for best performance. For more information, see the Novell Open Enterprise Server Documentation Web site (http://www.novell.com/documentation/oes2).

II Installation

For additional assistance in planning your GroupWise installation, see GroupWise Best Practices (http://wiki.novell.com/index.php/GroupWise) and GroupWise 8 Good and Bad Habits (http://wiki.novell.com/index.php/GroupWise_8_Good_and_Bad_Habits).

3 Installing a Basic GroupWise System

Every Novell GroupWise system, whether it services five users or 50,000 users, starts as a basic GroupWise system. The following sections present the background information and installation instructions you need to successfully implement your basic GroupWise system.

- Section 3.1, "Basic System Overview," on page 25
- Section 3.2, "Planning a Basic GroupWise System," on page 26
- Section 3.3, "Setting Up a Basic GroupWise System," on page 48
- Section 3.4, "What's Next," on page 67
- Section 3.5, "Basic GroupWise System Summary Sheet," on page 68

IMPORTANT: If you plan to install GroupWise in a clustered server environment, see the *GroupWise 8 Interoperability Guide* before starting to set up your GroupWise system.

3.1 Basic System Overview

A basic GroupWise system consists of a single domain (the primary domain) with one post office, a document library, and one or more users, as shown below.

Figure 3-1 *Basic GroupWise System*
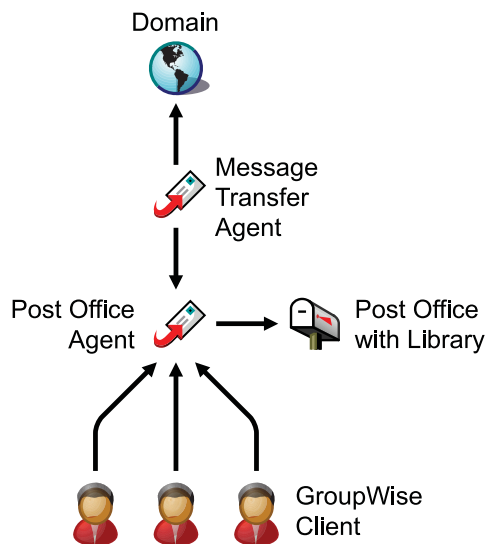
Each GroupWise user has a mailbox in the post office; users run the GroupWise client (Windows, Mac, Linux, or WebAccess) in order to access their mailboxes and to send and receive mail.

The GroupWise Post Office Agent (POA) responds to the GroupWise clients' requests for mailbox data and delivers messages between users' mailboxes in a post office. The GroupWise Message Transfer Agent (MTA) routes messages between post offices (if there is more than one post office in the domain) and between domains (if there is more than one domain in the system).

After you finish setting up your basic GroupWise system, you can review Section 3.4, "What's Next," on page 67 to learn how you can expand your GroupWise system.

3.2 Planning a Basic GroupWise System

The GroupWise Installation program helps you install the GroupWise software to the appropriate locations and helps you create and configure your basic GroupWise system (primary domain, post office, and agents).

If you are comfortable with your knowledge of GroupWise, you can skip this planning section and continue with Section 3.3, "Setting Up a Basic GroupWise System," on page 48. Otherwise, you should use the "Basic GroupWise System Summary Sheet" on page 68 to record your decisions about how to set up your basic GroupWise system. The topics in this section present the required information in a convenient planning sequence. The Installation Summary Sheet organizes the information in the order in which you need it during installation and setup.

- Section 3.2.1, "Determining Installation Locations," on page 26
- Section 3.2.2, "Planning Your Primary Domain," on page 30
- Section 3.2.3, "Planning Your Post Office," on page 36
- Section 3.2.4, "Planning Your GroupWise Agents," on page 39
- Section 3.2.5, "Sample GroupWise Configurations," on page 45

For additional assistance in planning your GroupWise installation, see GroupWise 8 Best Practices (http://wiki.novell.com/index.php/GroupWise) and GroupWise 8 Good and Bad Habits (http://wiki.novell.com/index.php/GroupWise_8_Good_and_Bad_Habits).

IMPORTANT: If you plan to install GroupWise in a clustered server environment, refer to the *GroupWise 8 Interoperability Guide* as you plan your GroupWise system.

3.2.1 Determining Installation Locations

The GroupWise Installation program prompts you for information about the Novell eDirectory tree where you plan to create GroupWise objects and the network server locations where you plan to create GroupWise directories and install software.

- "Novell eDirectory" on page 27
- "ConsoleOne" on page 27
- "GroupWise Software Distribution Directory" on page 28
- "Agent Platform" on page 30

Novell eDirectory

GroupWise is administered through eDirectory, the directory service provided by Novell. All components, such as domains, post offices, libraries, and agents, as well as all users' GroupWise accounts, are configured through objects in eDirectory. You need to make sure that you have eDirectory installed in your environment. eDirectory can be installed on NetWare, Linux, or Windows.

GroupWise 8 includes the *Novell eDirectory* CD or downloadable ISO image to assist those who do not already have eDirectory installed and want to install it on Linux or Windows. Follow the instructions in the *Novell eDirectory Installation Guide* (http://www.novell.com/documentation/edir88) to install eDirectory, along with its latest Support Pack, and ConsoleOne before proceeding to install your basic GroupWise system.

- ◆ "Accessing the eDirectory Tree" on page 27
- ◆ "Making Sure Users Exist in eDirectory" on page 27

Accessing the eDirectory Tree

In order to access the eDirectory tree, the GroupWise Installation program needs the IP address or DNS hostname of a server where a replica of the tree can be found. It also needs an eDirectory username with Admin-equivalent rights, the password for the username, and the eDirectory context where the User object can be found. Some parts of the installation process require LDAP authentication to eDirectory, so LDAP must be enabled on your eDirectory server.

The GroupWise Installation program must extend the schema of the eDirectory tree where you plan to create your GroupWise system. Because all objects for a single GroupWise domain must reside in the same eDirectory tree, installing a basic system (one domain) requires you to extend one tree only.

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *System Settings*, specify the IP address or DNS hostname of a server where a replica of the eDirectory tree resides. Also provide the authentication information so that the GroupWise Installation program can access the eDirectory tree and extend the schema.

Making Sure Users Exist in eDirectory

You must make sure all users who will use GroupWise exist in eDirectory. GroupWise accounts can only be assigned to eDirectory User objects and GroupWise External Entity objects.

NOTE: GroupWise external entities represent non-eDirectory users and are added to eDirectory for the sole purpose of assigning GroupWise accounts to these users. GroupWise external entities require GroupWise licenses but not eDirectory licenses. You can add GroupWise external entities only after you have installed GroupWise.

ConsoleOne

GroupWise administration is performed through ConsoleOne, using the version listed in Section 2.1, "GroupWise Administration Requirements," on page 17. When you install GroupWise, the GroupWise Administrator snap-ins are copied into an existing ConsoleOne installation. The GroupWise Administrator snap-ins extend the functionality of ConsoleOne to let you administer GroupWise. ConsoleOne considerations differ by platform:

NetWare and Windows:	For a GroupWise system on NetWare or Windows, you need to decide which ConsoleOne location you want to use to administer GroupWise. This can be a ConsoleOne location on a network server, or it can be on a local workstation. If you plan to use ConsoleOne on a local workstation, you need to perform the GroupWise installation from that workstation.
	For your convenience, ConsoleOne is included on the *GroupWise 8* DVD or downloaded *GroupWise 8* software image. The GroupWise Installation program lets you install ConsoleOne if necessary. You can also use the GroupWise Installation program at a later time to install ConsoleOne and the GroupWise Administrator snap-ins to additional locations.
	The default ConsoleOne installation directory is:
	drive:\Novell\ConsoleOne
	IMPORTANT: For a GroupWise system on NetWare, you cannot run ConsoleOne to administer GroupWise at the NetWare server console. The GroupWise Administrator snap-ins to ConsoleOne do not run in that environment.
Linux:	For a GroupWise system on Linux, ConsoleOne must already be installed before you set up your GroupWise system.
	For your convenience, ConsoleOne is included on the *GroupWise 8* DVD or downloaded *GroupWise 8* software image in the /linux/consoleone directory. To install ConsoleOne, copy the ConsoleOne .tar.gz file to a temporary location, extract the contents of the file, change to the Linux subdirectory, then run c1-install. At a later time, you can install ConsoleOne to additional Linux locations.
	The required ConsoleOne installation directory is:
	/usr/ConsoleOne

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *ConsoleOne Directory*, specify the path for the ConsoleOne location you want to use to administer GroupWise.

For more information about ConsoleOne, see "ConsoleOne Administration Tool" in "System" in the *GroupWise 8 Administration Guide*.

GroupWise Software Distribution Directory

During installation, you are prompted to create a GroupWise software distribution directory on a network server and then copy selected GroupWise software components to the directory.

You should consider the following when deciding where to create the software distribution directory:

- "User Access to the Directory" on page 28
- "Disk Space Required for the Software" on page 29
- "Default Software Distribution Directory Location" on page 29

User Access to the Directory

User access considerations depend on which GroupWise client users are running:

Windows Client:	Users can install the GroupWise Windows client through a TCP/IP or mapped connection to the software distribution directory. If you want users to install via a mapped connection, you should create the software distribution directory on a server where you can provide appropriate user access.
Mac/Linux Client:	Users can install the GroupWise Mac/Linux client from the *GroupWise 8* DVD, from the downloaded *GroupWise 8* software image, or from the software distribution directory, which requires user access to the file system where the software distribution directory is located.
WebAccess Client:	The GroupWise WebAccess client does not require that users install any GroupWise software on their workstations.

Disk Space Required for the Software

The disk space required for the directory depends on which software components you copy to the directory. The maximum disk space required to store all the GroupWise software components for one language is approximately 500 MB. For a breakdown by component, see Section 2.1, "GroupWise Administration Requirements," on page 17.

We recommend that you copy at least the GroupWise client files to the directory. This enables users to install the GroupWise client from the distribution directory. Otherwise, you need to mount the *GroupWise 8* DVD or downloaded *GroupWise 8* software image as a network volume or file system, or distribute the DVD to individual users, unless you use one of the software distribution methods described in "Distributing the GroupWise Client" in "Client" in the *GroupWise 8 Administration Guide*.

NOTE: On Linux, you should install the GroupWise Administration component to your software distribution directory. It includes the RPMs for GroupWise Check (GWCheck) and the GroupWise Database Copy utility (DBCopy). These RPMs are not installed by the GroupWise Installation program. For more information about these utilities, see "Standalone Database Maintenance Programs" in "Databases" in the *GroupWise 8 Administration Guide*.

Default Software Distribution Directory Location

The default location for the software distribution directory varies by platform:

NetWare:	*drive:*\grpwise\software
Linux:	/opt/novell/groupwise/software
Windows:	*drive:*\grpwise\software

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *Software Distribution Directory*, specify the path for the software distribution directory.

Under *Software Selection*, mark the software components that you want to copy there.

The GroupWise Installation program lets you create one software distribution directory. After you set up your basic GroupWise system, you can create additional software distribution directories if needed. For example, if not all users can access a single software distribution directory to run the GroupWise Windows client Setup program, you can create an additional software distribution

directory on a server they can access. For information about creating additional software distribution directories, see "Software Directory Management" in "System" in the *GroupWise 8 Administration Guide*.

Agent Platform

The Message Transfer Agent (MTA) and the Post Office Agent (POA) are available as NetWare NLM programs, Linux executables, and Windows executables.

In general, GroupWise is most efficient if you match the agent platform with the network operating system where the domain and post office are located. For example, if a domain and post office are located on a NetWare server, then you would install the NetWare agents for them. However, this is not required. For configuration examples, see Section 3.2.5, "Sample GroupWise Configurations," on page 45.

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *Agent Software Platform*, specify the type of agents (NetWare, Linux, or Windows) you want to use.

3.2.2 Planning Your Primary Domain

The primary domain functions as the main administration unit for the GroupWise system. Domains that you create after the first domain are secondary domains.

When you configure GroupWise information in eDirectory, it is also stored in the GroupWise domain database. From the domain database, the GroupWise agents distribute the information to each post office database. Users then get the information, such as user addresses, from the post office database. Domains can be located on NetWare, Linux, and Windows servers.

In a multiple-post-office system, the domain also organizes post offices into a logical grouping for addressing and routing purposes, and enables you to scale your GroupWise system to meet your current and future needs.

As you create your basic GroupWise system, the Installation program prompts you for information about the primary domain.

- "System and Domain Names" on page 30
- "Domain Directory" on page 31
- "Domain Context" on page 33
- "Domain Language" on page 35
- "Domain Time Zone" on page 36

System and Domain Names

Each domain requires a unique name. The name is used as the Domain object's name in eDirectory. It is also used for addressing and routing purposes within GroupWise, and can appear in the GroupWise Address Book. The domain name can reflect a location, company name or branch name,

or some other element that makes sense for your organization. For example, you might want the domain name to be the location (such as Provo) while the post office name is one of the company's departments (such as Research).

A domain name should consist of a single string. Use underscores (_) rather than spaces as separators between words to facilitate addressing across the Internet.

Do not use any of the characters listed below in system and domain names:

ASCII characters 0-31	Comma ,
Asterisk *	Double quote "
At sign @	Extended ASCII characters that are graphical or typographical symbols; accented characters in the extended range can be used
Braces { }	Parentheses ( )
Colon :	Period .

IMPORTANT: Name your domain carefully. After it is created, the name cannot be changed.

You must also provide a name for your GroupWise system. The system name is used when connecting to other GroupWise systems; for this reason, it must be different than any other GroupWise system with which you might want to connect. The system name can be your company name (for example, Novell), GroupWise, or anything else that fits the naming scheme you want to use. The system name is displayed only in ConsoleOne so any characters can be used. You cannot change the name after your system is created.

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *System Settings*, specify the name of the GroupWise system that you want to create in eDirectory.

Under *Primary Domain Settings*, specify the domain name.

Domain Directory

The domain requires a directory structure in which to store database files and temporary files that are created during message routing. As you choose a location for the domain directory, consider the following:

- "Security" on page 31
- "Server Platform and Version" on page 32
- "MTA Access" on page 32
- "Disk Space Requirements" on page 32
- "Directory Name" on page 32

Security

GroupWise users never need access to the domain directory, so you should create it in a location that you can easily secure.

Server Platform and Version

The domain directory can be located on any of the supported platforms listed in Section 2.1, "GroupWise Administration Requirements," on page 17.

MTA Access

The MTA requires direct access to the domain directory so that it can write to the domain database (`wpdomain.db`). Therefore, you might want to consider the server type (NetWare, Linux, or Windows) and location (local or remote) of the MTA before deciding on a domain directory. For information about the MTA, see Section 3.2.4, "Planning Your GroupWise Agents," on page 39. For examples of possible domain directory locations and MTA configurations, see "Sample GroupWise Configurations" on page 45.

IMPORTANT: On Linux, the MTA must be installed on the same server where its directory structure is located. A file system mount between Linux servers does not provide the necessary file locking mechanisms for the GroupWise Linux MTA to write to the domain database on a remote Linux server.

Disk Space Requirements

The domain directory requires a minimum of 100-200 MB of disk space for the domain database. In addition, you should plan for an additional 1 GB or more of free disk space for the temporary storage of messages when links are down.

Directory Name

You should specify an empty directory for the domain. If you want, the directory can reflect the domain name you chose. Use the following platform-specific conventions:

NetWare: Use a maximum of 8 characters

Linux: Use only lowercase characters

Windows: No limitations.

Choose the name and path carefully. After the directory is created, it is difficult to rename. If the directory you specify does not exist, it is created during installation.

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *Primary Domain Settings*, specify the full path for the domain directory.

Domain Context

You can create the Domain object in any Organization or Organizational Unit container in any context in your eDirectory tree. The only requirement is that it be in the same tree as the other objects associated with the domain (Post Office object, User objects, and so forth).

The following sections provide examples of where you might place your Domain object. Because it is helpful to discuss the Domain object's context in relationship to the Post Office object's context, the examples also include context information for the Post Office object.

Objects in the Same Container as Users' Organizational Units

In the following example, the Domain object (Provo) and Post Office object (Research) reside in the same container (Provo) as the organizational units (Accounting, Manufacturing, R&D, and Sales) that contain the users. This allows you to associate the domain with a single organization and associate one post office with all users within the organization.

Figure 3-2 *eDirectory Tree with the GroupWise Objects and Users' Organizational Units in the Same Organization Container*
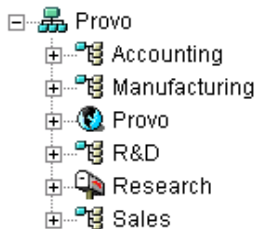
Objects Mirror eDirectory Organization

The following example is similar to the previous example, except that a separate post office is created for each organizational unit that contains users. The Domain object (Provo) resides in the organization (Provo) and the Post Office objects reside in the same organizational units (Accounting, Manufacturing, R&D, and Sales) as the users.

Figure 3-3 *eDirectory Tree with the GroupWise Objects Mirroring the eDirectory Structure*
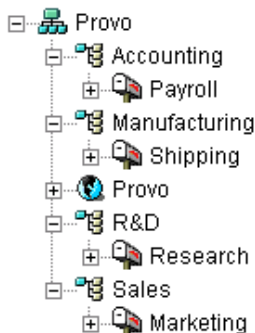
As in the previous example, this organizational structure allows you to quickly associate users with their post offices. In addition, if you have thousands of users split between the different organizational units, this method allows you to create multiple post offices with a smaller number of users on each post office.

Objects Mirror Network Server Organization

Because the domain and post office have directory structures on network servers, you could also choose to place the Domain and Post Office objects in the same context as the servers where the directories will reside, as shown in the following example.

Figure 3-4   *eDirectory Tree with the GroupWise Objects Located in the Same Containers as the Network Servers Where Their Directories Reside*
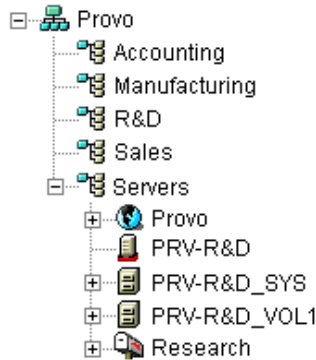
Objects in a Dedicated Container

If, rather than mirroring your eDirectory or server organization, you prefer to keep all your GroupWise objects together, you could create a container, such as GroupWise, and place all GroupWise objects in that container, as shown below.

Figure 3-5   *eDirectory Tree with the GroupWise Objects in a Dedicated Organizational Unit Container*
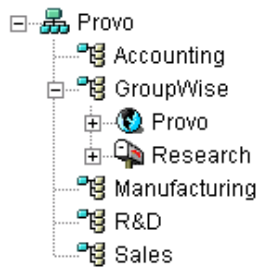
Administratively, this type of organizational structure makes it easier to restrict a GroupWise administrator's object and property rights to GroupWise objects only.

For information about GroupWise administrator rights, see "GroupWise Administrator Rights" in "Security Administration" in the *GroupWise 8 Administration Guide*.

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *Primary Domain Settings*, specify the context where you want to create the Domain object.

IMPORTANT: If the context does not already exist in your eDirectory tree, create the context now.

The GroupWise View in ConsoleOne

ConsoleOne includes a GroupWise View, displayed under the GroupWise System container.

The GroupWise View filters out all non-GroupWise objects and shows how GroupWise objects relate to each other. For example, in the left pane, notice the Post Office object (Development) is subordinate to the Domain object (Provo1). You can select an object in the left pane and display its associated objects (User, Resource, and so forth) in the right pane.

Figure 3-6   *GroupWise View in ConsoleOne*
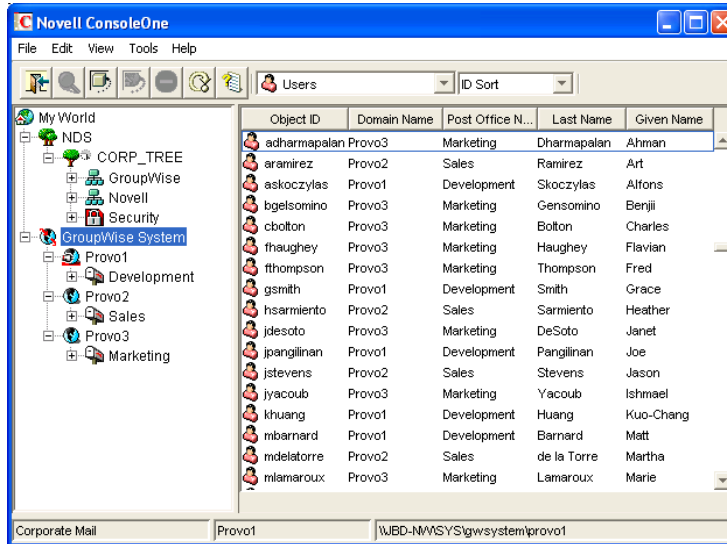
The GroupWise View is particularly useful if your GroupWise objects are placed in different contexts in the eDirectory tree. Rather than searching for GroupWise objects throughout the tree, you can administer the objects from the GroupWise View.

Some GroupWise administrative functions can only be done in the GroupWise View. This includes such tasks as defining users from other GroupWise systems so that they appear in your system's GroupWise Address Book.

For more information about the GroupWise View, see "GroupWise View" in "System" in the *GroupWise 8 Administration Guide*.

Domain Language

The domain language determines the sort order for items in the GroupWise Address Book.

NOTE: The list of languages displayed in ConsoleOne includes more languages than GroupWise supports. See "GroupWise Languages" on page 42 for a list of valid domain languages.

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *Primary Domain Settings*, specify the language for the domain. The domain language becomes the default language for the domain's post offices.

For more information, see "Multilingual GroupWise Systems" in "System" in the *GroupWise 8 Administration Guide*.

Domain Time Zone

When a message is sent from a user in one time zone to a user in another time zone, GroupWise adjusts the message's time so that it is correct for the recipient's time zone. For example, if a user in New York (GMT -05:00, Eastern Time) schedules a user in Los Angeles (GMT -08:00, Pacific Time) for a conference call at 4:00 p.m. Eastern Time, the appointment is scheduled in the Los Angeles user's calendar at 1:00 p.m. Pacific Time.

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *Primary Domain Settings*, specify the time zone for the domain. The domain time zone becomes the default time zone for the domain's post offices.

3.2.3 Planning Your Post Office

The post office contains users' mailboxes. Like a domain, a post office requires a name, has a directory structure and an eDirectory object, and can be configured to support different languages and time zones. Post offices can be located on NetWare, Linux, and Windows servers.

The following sections prepare you to supply the GroupWise Installation program with the required information.

- "Post Office Name" on page 36
- "Post Office Directory" on page 37
- "Post Office Context" on page 38
- "Post Office Language" on page 38
- "Post Office Time Zone" on page 39

Post Office Name

The post office, like the domain, requires a unique name. The name is used as the Post Office object's name in eDirectory. It is also used for addressing and routing purposes within GroupWise, and can appear in the GroupWise Address Book. The post office name can reflect any element that makes sense for your organization. For example, you might want the domain name to be the location (such as Provo) while the post office name is one of the company's departments (such as Research).

Post office names must be a single string. Use underscores (_) rather than spaces as separators between words to facilitate addressing across the Internet. The same characters that are invalid in domain names are also invalid in post office names (see "System and Domain Names" on page 30).

IMPORTANT: Name your post office carefully. After it is created, the name cannot be changed.

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *Post Office Settings*, specify the name you've selected.

Post Office Directory

The post office requires a directory structure in which to store database files and temporary files that are created during message routing and delivery. As you choose a location for the post office directory, consider the following:

Security

The GroupWise Windows and Mac/Linux clients access the post office through a client/server (TCP/IP) connection to the Post Office Agent (POA). The WebAccess client uses an HTTP connection. Therefore, GroupWise users never need access to the post office directory, so you should create the directory in a location that you can easily secure.

Server Platform and Version

The post office directory can be located on any of the supported platforms listed in Section 2.1, "GroupWise Administration Requirements," on page 17.

POA Access

The POA requires direct access to the post office directory so that it can write to the post office database (`wphost.db`). Therefore, you might want to consider the server type (NetWare, Linux, or Windows) and location (local or remote) of the POA before deciding on a post office directory. For information about the POA, see Section 3.2.4, "Planning Your GroupWise Agents," on page 39. For examples of possible post office directory locations and POA configurations, see Section 3.2.5, "Sample GroupWise Configurations," on page 45.

IMPORTANT: On Linux, the POA must be installed on the same server where its directory structure is located. A file system mount between Linux servers does not provide the necessary file locking mechanisms for the GroupWise Linux POA to write to the post office database on a remote Linux server.

Disk Space Requirements

The post office directory holds users' messages and attachments, so you should plan a minimum of 5 MB per user. 100 MB or more per user is recommended. Although actual messages are relatively small, message attachments (documents, spreadsheets, images, and so forth) can greatly increase the amount of disk space used.

Using ConsoleOne, you can restrict the amount of disk space users are allowed for their mailboxes. When you know the number of users and the amount of disk space allocated to each user, you can more accurately determine the amount of disk space required for the post office.

You can reduce the amount of disk space required for the post office by forcing users to run the GroupWise Windows and Mac/Linux clients in Caching mode rather than Online mode. In Online mode, messages are stored only in the post office. In Caching mode, messages are also stored on users' local drives, so you can reduce the size of users' Online mailboxes independent of what users want to store in personal locations.

In addition to user messages and attachments, the post office directory also contains a document library. If you want to use GroupWise document management, you should take into account the disk space you want to provide for storing documents.

Plan for 100-300 MB for the post office database, which holds the GroupWise Address Book and updates to it for download by Remote client users. Also plan 500 MB or more for the temporary storage of messages when links are down.

Directory Names

You should specify an empty directory for the post office. If you want, the directory can reflect the post office name you chose. Use the following platform-specific conventions:

NetWare: Use a maximum of 8 characters

Linux: Use only lowercase characters

Windows: No limitations.

Choose the name and path carefully. After the directory is created, it is difficult to rename. If the directory you specify does not exist, it is created during installation.

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *Post Office Settings*, specify the full path for the post office directory.

Post Office Context

Like the Domain object, you can create the Post Office object in any Organization or Organizational Unit container in any context in your eDirectory tree. The only requirement is that it be in the same tree as the Domain object and other objects associated with the domain (User objects and so on). For configuration examples, see .

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *Post Office Settings*, specify the context where you want to create the Post Office object.

IMPORTANT: If the context does not already exist in your eDirectory tree, create the context now.

Post Office Language

The post office language determines the sort order for items in the GroupWise Address Book.

NOTE: The list of languages displayed in ConsoleOne includes more languages than GroupWise supports. See for a list of valid post office languages.

The post office assumes the same language as its domain unless you specify otherwise. For example, if you set the domain and post office language to English, the GroupWise Address Book items are sorted according to English sort order rules. This is true even if some users in the post office are running non-English GroupWise clients such as German or Japanese. Their client interface and Help files are in German or Japanese, but the sort order in the GroupWise Address Book is according to English standards. Time, date, and number formats for the non-English clients default to the workstation language.

For more information, see "Multilingual GroupWise Systems" in "System" in the *GroupWise 8 Administration Guide*.

Post Office Time Zone

When a message is sent from a user in one time zone to a user in another time zone, GroupWise adjusts the message's time so that it is correct for the recipient's time zone. For example, if a user in New York (GMT -05:00, Eastern Time) schedules a user in Los Angeles (GMT -08:00, Pacific Time) for a conference call at 4:00 p.m. Eastern Time, the appointment is scheduled in the Los Angeles user's calendar at 1:00 p.m. Pacific Time.

The post office assumes the same time zone as its domain unless you specify otherwise.

3.2.4 Planning Your GroupWise Agents

The Message Transfer Agent (MTA) and Post Office Agent (POA) route messages through the GroupWise system. The MTA handles all message traffic between the domain and post office, while the POA handles all message traffic within the post office. The GroupWise agents can run on NetWare, Linux, and Windows servers.

- **Message Transfer Agent:** GroupWise requires one MTA per domain, which means that you need to install and run one MTA for your basic GroupWise system.

  In addition to routing user messages between post offices and between domains, the MTA routes administration messages from the domain to the post office. For example, when a user is given a GroupWise account in eDirectory, the user is added to the GroupWise domain database. At the same time, the MTA routes an administration message from the domain to the post office so that the POA can add the user to the post office database. After the user is added to the post office database, the post office's users can see the newly added user's information in the GroupWise Address Book

- **Post Office Agent:** GroupWise requires one POA per post office, which means that you need to install and run one POA for your basic GroupWise system.

  The POA routes messages within the post office, updates the post office database when it receives administration messages from the MTA, and performs other maintenance tasks in the post office.

The following sections prepare you to supply the information required when installing the MTA and POA:

- "Agent Location" on page 40
- "POA Configuration" on page 41
- "MTA Link to the Post Office" on page 41
- "Agent Web Consoles" on page 42

- ["GroupWise Languages" on page 42](#)
- ["NetWare Installation Options: Automatic Startup and Protected Mode" on page 43](#)
- ["Linux Installation Option: Automatic Startup" on page 43](#)
- ["Windows Installation Options: SNMP Traps and Service vs. Application" on page 44](#)

Agent Location

The MTA requires direct access to the domain directory so that it can write to the domain database. The POA requires direct access to the post office directory so that it can write to the post office database.

In general, we recommend that you install an agent on the same server as its directory. For example, you would install the MTA on the same server as the domain directory and the POA on the same server as the post office directory. This ensures that the agent always has access to its directory.

Figure 3-7   *Direct Access between Agents and Directories*
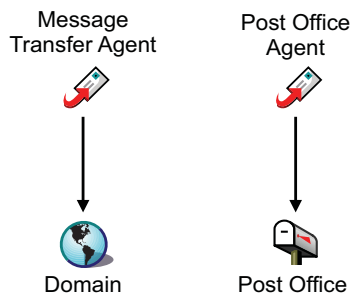
However, if necessary, you can install the agent on a different server from its directory if you are using NetWare or Windows. This requires the agent to have a direct link (mapped drive or UNC path) to its directory on the remote server in order to function. The following diagram illustrates the direct links:

Figure 3-8   *MTA with UNC Path or Mapped Drive to Domain and Post Office Directories; POA with UNC Path or Mapped Drive to the Post Office Directory*
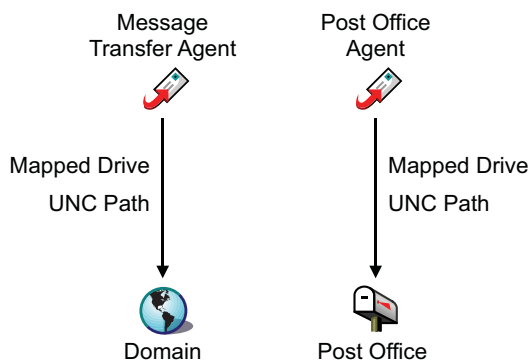
IMPORTANT: On Linux, file system mounts between Linux servers do not provide the necessary file locking mechanisms for the GroupWise Linux agents to access their databases on remote Linux servers.

For the purpose of simplifying the setup of your basic GroupWise system, you are required to install both the MTA and the POA to the same server. If, at a later time, you decide that you want to run one of the agents on a different server, see Chapter 8, "Installing GroupWise Agents," on page 181.

Consider these platform-specific guidelines:

NetWare: When installing the NetWare agents, we recommend you use the `sys:\system` directory on the NetWare server. This simplifies the use of startup files and ensures that the agent NLM programs are in the server's search path. If you use a different directory, you must add that directory to the server's search path.

Linux: The Linux agents are automatically installed to `/opt/novell/groupwise/agents`. On Linux, do not move the agent software to a different location.

Windows: The default installation directory is `c:\Program Files\Novell\GroupWise Server\Agents`. However, you can install the agents to any directory you want.

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *Installation* for your software platform, specify the installation path for the agents.

POA Configuration

In order to configure the POA, you need to know the IP address or DNS hostname of the server where you plan to install the POA. The POA uses its client/server port to communicate with GroupWise clients; the default client/server port is 1677. The POA uses its message transfer port to communicate with the MTA; the default message transfer port is 7101. Use these default port numbers unless they are already in use by another program on the server where you plan to install the POA.

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *POA Network Address*, specify the IP address or DNS hostname of the POA's server, along with the required port numbers.

For a complete list of default port numbers used by the GroupWise agents, refer to "GroupWise Port Numbers" in the *GroupWise 8 Administration Guide*.

MTA Link to the Post Office

To route user and administration messages to the post office, the MTA requires a TCP/IP connection with the post office's POA. The MTA uses its message transfer port to communicate with the POA; the default message transfer port is 7100. Use this default port number unless it is already in use by another program on the server where you plan to install the MTA.

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *MTA Network Address*, specify the IP address or DNS hostname of the MTA's server, along with the required port number.

For a complete list of default port numbers used by the GroupWise agents, refer to "GroupWise Port Numbers" in the *GroupWise 8 Administration Guide*.

Agent Web Consoles

The MTA and POA provide agent server consoles to let you monitor and configure the agents while at the agent servers. The availability of agent server consoles varies by platform.

NetWare: The MTA and POA consoles are always displayed.

Linux: The MTA and POA consoles are displayed only if you start the agents with the --show startup switch on the command line or if you use the `show = yes` option in the GroupWise High Availability service configuration file (`gwha.conf`).

Windows: The MTA and POA consoles are displayed if you run the agents as applications but are not displayed if you run the agents as services.

When the MTA and POA server consoles are not available, you can monitor and configure the agents through a Web browser. This feature, referred to as the agent Web console, lets you access the agents' statistics and diagnostic information from any location where you are connected to the Internet and have access to a Web browser.

By default, the MTA Web console is enabled on port 7180 and the POA Web console is enabled on port 7181. Use these default port numbers unless they are already in use by another program on the server where you plan to install the agents.

In your browser, you access the agent Web consoles using the following URLs:

```
http://mta_network_address:port
http://poa_network_address:port
```

where *mta_network_address* and *poa_network_address* are the agents' IP addresses or DNS hostnames and *port* is the agent's HTTP port number.

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *POA Network Address*, specify the POA's HTTP port.

Under *MTA Network Address*, specify the MTA's HTTP port.

For a complete list of default port numbers used by the GroupWise agents, refer to "GroupWise Port Numbers" in the *GroupWise 8 Administration Guide*.

GroupWise Languages

GroupWise 8 is available in multiple languages. Available languages are listed on the "Basic GroupWise System Summary Sheet" on page 68. GroupWise Administrator snap-ins for ConsoleOne and the GroupWise agents are available in five languages. However, the GroupWise agents can send administrative messages such as undeliverable notifications to the GroupWise clients in the full range of GroupWise client languages.

By default, the agents start in the language selected for the domain. If that language has not been installed, the agents start in the language used by the operating system. If that language has not been installed, the agents start in English.

NOTE: For NetWare and Windows, the downloadable *GroupWise 8* software image is available in multilanguage and English-only versions. For Linux, all available languages are included in the same RPM, so all languages are always installed.

NetWare and Windows:	Decide which languages you want to install.
Linux:	All languages are always automatically installed. You can run any GroupWise program in any available language at any time.

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *Agent Language Selection*, mark the languages you want to install for the ConsoleOne snap-ins and the GroupWise agents. The GroupWise Administrator languages are copied to the ConsoleOne location. The GroupWise agent languages are copied to the software distribution directory.

Under *Client Language Selection*, select the languages that you plan to install the GroupWise clients in. This enables the agents to send administrative messages to the clients in each user's client language. The GroupWise client language files are copied to the software distribution directory.

For more information, see "Multilingual GroupWise Systems" in "System" in the *GroupWise 8 Administration Guide*.

NetWare Installation Options: Automatic Startup and Protected Mode

You can have the Installation program add a reference to the `grpwise.ncf` file in the NetWare server's `autoexec.ncf` file so that the GroupWise agents are automatically loaded whenever the server is started.

You can also have the Installation program configure the NetWare agents to run in Protected Mode, which starts them in their own protected address space on the NetWare server.

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *NetWare Installation Options*, mark whether or not you want to configure the NetWare server to start the GroupWise agents automatically or in a protected address space.

Linux Installation Option: Automatic Startup

The Linux GroupWise agents are Run Control compliant. You can have the Installation program create symbolic links to the `grpwise` script in the `rc3.d` and `rc5.d` directories so that the agents load on restart into run level 3 or 5, depending on the configuration of your Linux system.

If you want to configure the agents for high availability, as described in "Enabling the Groupwise High Availability Service for the Linux GroupWise Agents" on page 209, they must be configured to start automatically on system startup.

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *Linux Installation Option*, mark whether or not you want to configure the Linux server to start the GroupWise agents automatically.

Windows Installation Options: SNMP Traps and Service vs. Application

If you are installing the GroupWise agents on Windows, you have the following additional installation options:

- "SNMP Services" on page 44
- "Application vs. Service" on page 44

SNMP Services

If you want the GroupWise agents to be able to communicate with SNMP management and monitoring programs, you must configure them for this functionality during installation. The Windows SNMP service must already be enabled on the Windows server in order to configure this functionality for the GroupWise agents.

BASIC GROUPWISE SYSTEM SUMMARY SHEET

Under *Windows Installation Options*, mark whether you want to configure the GroupWise agents to communicate with SNMP management and monitoring programs. If you do, ensure that the Windows SNMP service is enabled on the GroupWise agent server.

For more information about SNMP, see the following sections in the *GroupWise 8 Administration Guide*:

- "Setting Up SNMP Services for the POA" in "Post Office Agent"
- "Setting Up SNMP Services for the MTA" in "Message Transfer Agent"

Application vs. Service

You can run the Windows MTA and POA as normal applications or as services. When you run the agents as Windows services, they must run under a specific user account. The user account you use depends on where the domain and post office directories are located:

- When the domain and post office directories are located on the same server where you are installing the agents, the agents can run under the local system account.
- When the domain and post office directories are located on a remote server, you must specify a user with rights to access the domain and post office directories.

Windows	If the Windows agents need to log in to another Windows server, provide a Windows username and password.
NetWare:	If the Windows agents need to log in to a NetWare server, provide an existing eDirectory username and password, or create a new account for the agents, as described in "Creating a NetWare Account for Agent Access (Optional)" on page 193.
Linux:	Configuring the Windows agents to log in to a Linux server is not recommended.

As with all Windows services, you can start the agents manually or have them start automatically each time the Windows server restarts.

Under *Windows: Installation Options*, mark whether you want to run the GroupWise agents as Windows services.

If you want to run the agents as Windows services, under *Windows: Service Information*, record the account the agents will run under, and if necessary, the password for the account. Also select whether you want the service to start automatically or manually.

NOTE: On Windows Server 2008, the Windows agents running as services cannot interact with the desktop. They must run as background processes.

3.2.5   Sample GroupWise Configurations

Many different configurations are possible for your GroupWise system. The following diagrams illustrate some of the ways a basic GroupWise system (primary domain and one post office) can be set up.

- "NetWare 6.5 Server" on page 45
- "Linux Server" on page 45
- "Windows Server 2003" on page 46
- "Open Enterprise Server and Windows Server 2003" on page 46

NetWare 6.5 Server

The following diagram shows a basic GroupWise system set up on a single NetWare 6.5 server.

Figure 3-9   GroupWise System Installed on a Single NetWare 6.5 Server
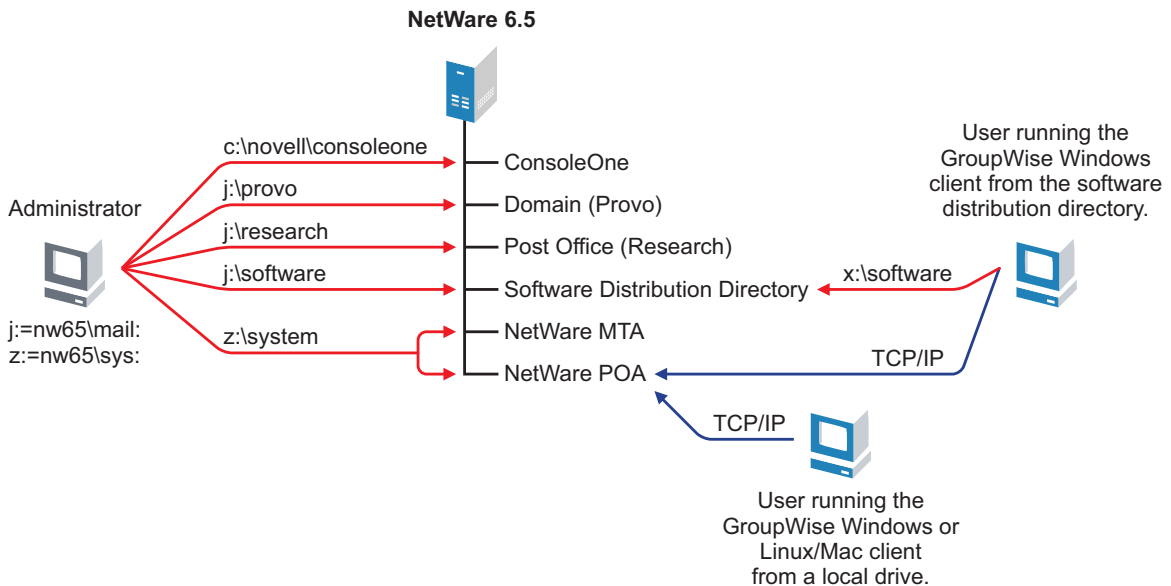
Linux Server

The following diagram shows all GroupWise components on a Linux server.

Figure 3-10 *GroupWise System Installed on a Single Linux Server*

Figure 3-10 *GroupWise System Installed on a Single Linux Server*
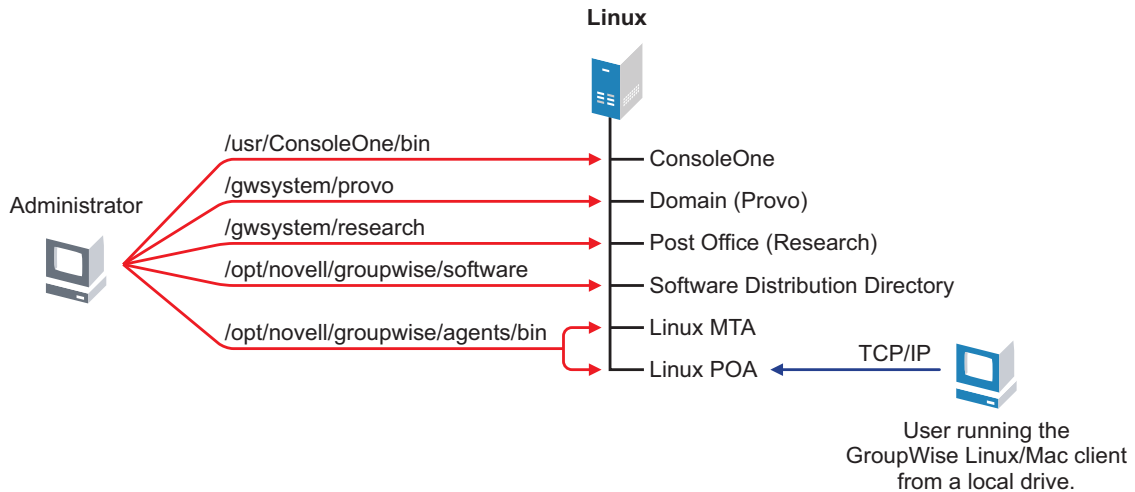
Windows Server 2003

The following diagram shows all GroupWise components on Windows Server 2003.

Figure 3-11 *GroupWise System Installed on a Single Windows Server 2003 Machine*
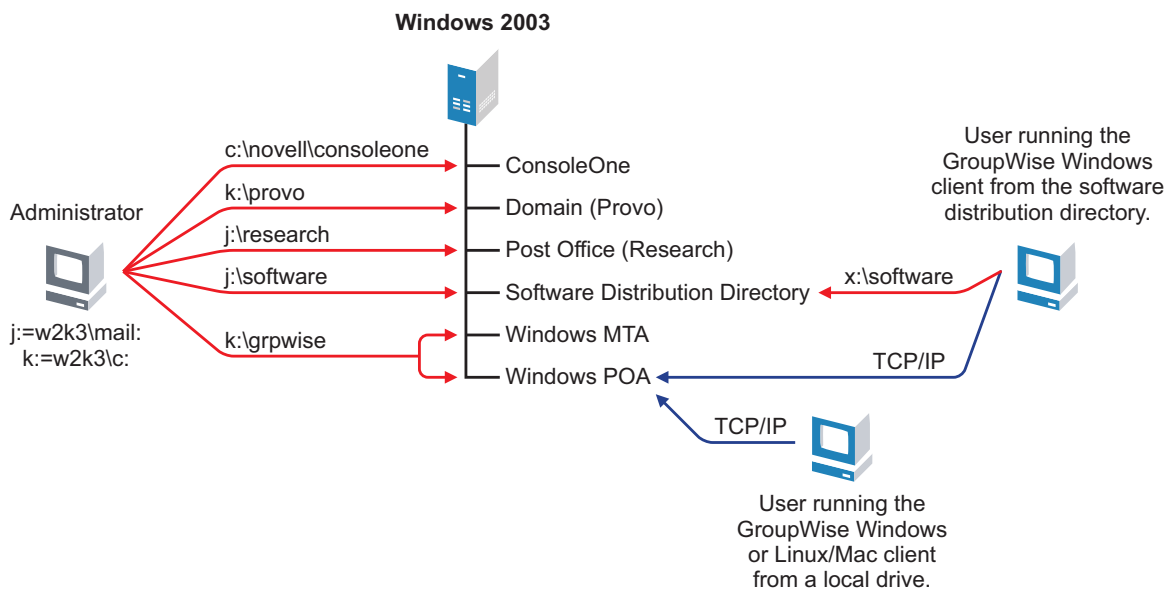
Open Enterprise Server and Windows Server 2003

The following diagram shows the domain, post office, and software distribution directory on a server running the NetWare version of Novell Open Enterprise Server (OES). The MTA and POA, located on a Windows Server 2003 machine, use a UNC path to access the domain directory and post office directory on the OES NetWare server.

Figure 3-12   *GroupWise System Installed on an OES NetWare Server and Windows Server 2003 Machine*
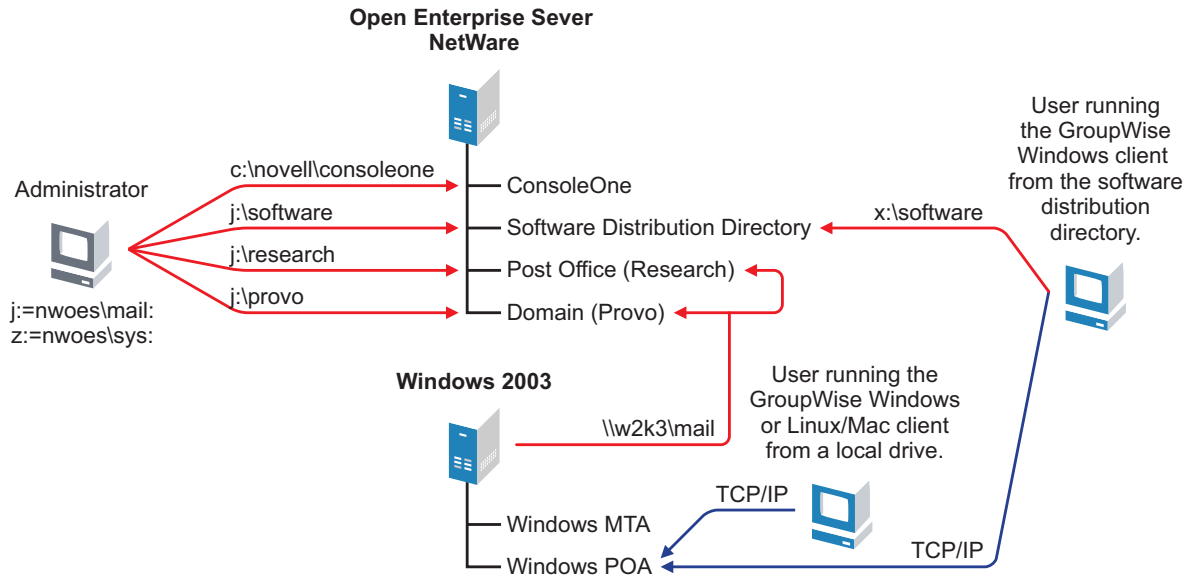
The following diagram shows the domain and MTA on a NetWare 6.5 server. The post office, software distribution directory, and POA are on a Windows Server 2003 machine. The MTA communicates with the POA through TCP/IP.

Figure 3-13   *GroupWise System Installed on a NetWare 6.5 Server and Windows Server 2003 Machine*
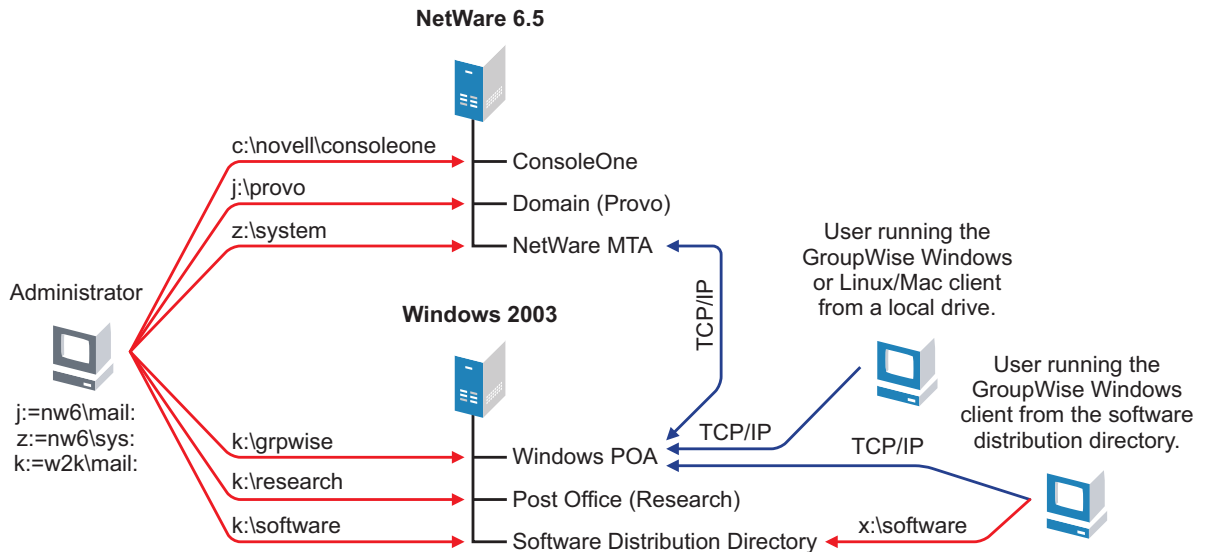
NOTE: The above configuration has the MTA on one server and the POA on another. Because the basic GroupWise system setup requires you to install the MTA and POA on the same server, you would need to do additional setup to create a similar configuration.

3.3   Setting Up a Basic GroupWise System

Follow the setup instructions for the platform where you are creating your basic GroupWise system:

- Section 3.3.1, "NetWare and Windows: Setting Up a Basic GroupWise System," on page 48
- Section 3.3.2, "Linux: Setting Up a Basic GroupWise System," on page 57

3.3.1   NetWare and Windows: Setting Up a Basic GroupWise System

You should have already reviewed Section 3.2, "Planning a Basic GroupWise System," on page 26 and filled out the summary sheet. The following sections step you through the GroupWise Installation program for creating a new GroupWise system.

- "Starting the Windows GroupWise Installation Program" on page 48
- "Installing Your Basic GroupWise System" on page 50
- "Starting the GroupWise Agents" on page 52
- "Setting Up and Running the GroupWise Windows Client on Your Local Machine" on page 53
- "Installing the GroupWise Administrator Snap-Ins to Additional Windows Machines" on page 53
- "Setting Up Predefined Installations" on page 55

IMPORTANT: If you plan to install GroupWise in a clustered server environment, see the *GroupWise 8 Interoperability Guide* before starting to set up your GroupWise system.

Starting the Windows GroupWise Installation Program

1 Select an appropriate location to run the GroupWise Installation program.

NetWare:	If you are setting up your basic GroupWise system on NetWare, you can run the Installation program from any Windows machine that meets the administrator machine requirements listed in Section 2.1, "GroupWise Administration Requirements," on page 17.
Windows:	If you are setting up your basic GroupWise system on Windows, you must run the Installation program from the Windows server where you want to create your initial domain and post office and install the Windows agents. The server must meet the administrator machine requirements as well as the server operating system requirements listed in Section 2.1, "GroupWise Administration Requirements," on page 17.

2 Configure the Windows machine to ensure GroupWise database integrity across the network:

   2a At the selected Windows machine, right-click the Novell Client icon (the Red N) on the toolbar at the bottom of your screen, then click *Novell Client Properties*.

   2b Click *Advanced Settings*.

   2c Set *File Caching* to *Off*.

   2d Set *File Commit* to *On*.

   2e Click *OK* to save the new Novell Client settings.

   2f Reboot the Windows machine to put the new settings into effect.

3 If you are setting up your basic GroupWise system on NetWare, map a drive to the NetWare server where you want to create your initial domain and post office and install the GroupWise agents.

4 Log in as an Admin equivalent to the eDirectory tree in which you are creating your GroupWise system.

5 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program.

or

Run `setup.exe` at the root of the downloaded *GroupWise 8* software image.

6 Select the language in which you want to run the GroupWise Installation program, then click *OK*.

NOTE: All available languages are included on the *GroupWise 8* DVD and the multilanguage version of the downloaded *GroupWise 8* software image, but you can select which languages you want to install.

The main GroupWise System Installation page appears.
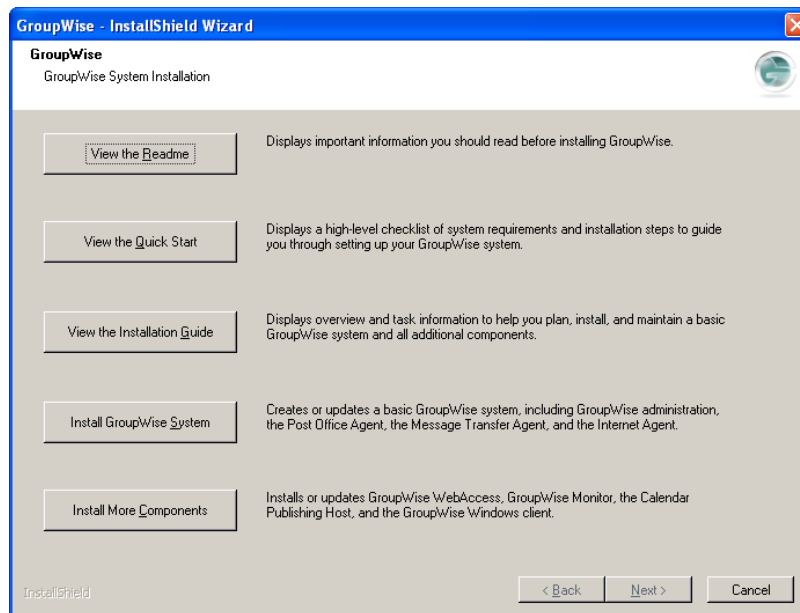
7 Click *Install GroupWise System*, then click *Yes* to accept the License Agreement and display the Installation Type page.
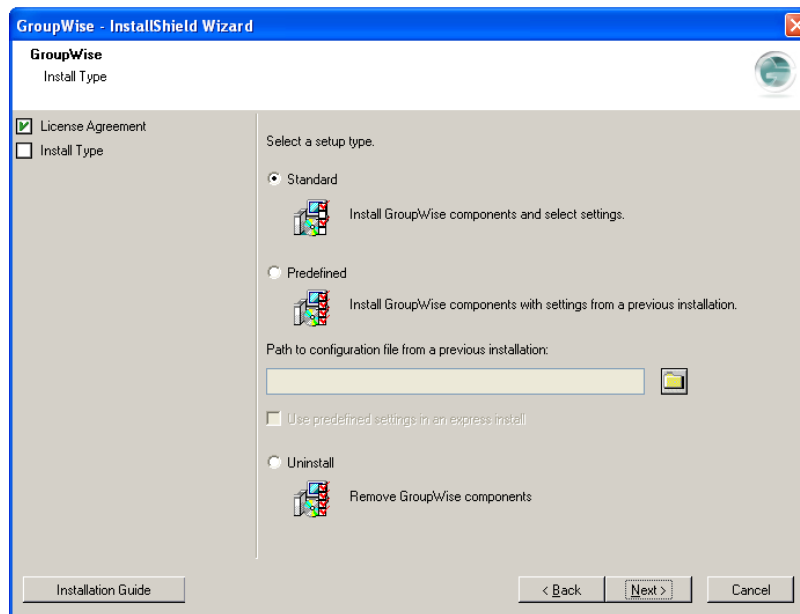
When you create a new GroupWise system, you are performing a Standard installation. Other installation options on this page are described in "Setting Up Predefined Installations" on page 55.

8 Click *Next* to accept the default of *Standard*.
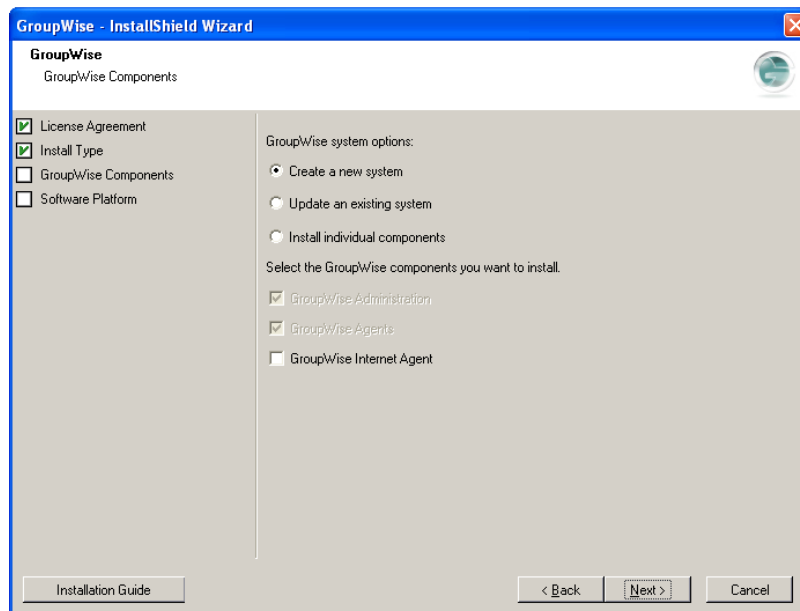
9 Make sure that *Create a New System* is selected, then click *Next*.

10 Continue with Installing Your Basic GroupWise System.

Installing Your Basic GroupWise System

1 Follow the prompts to provide the following information from your Basic GroupWise System Summary Sheet.
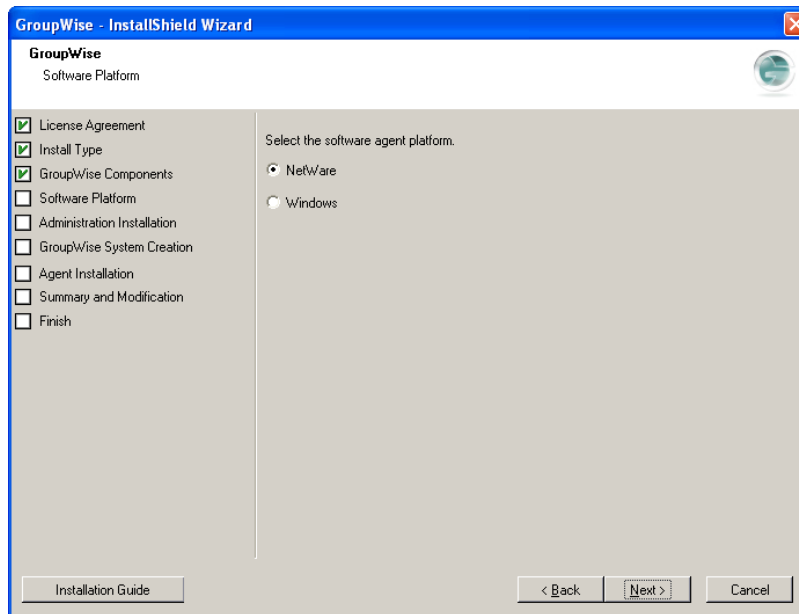
Software Platform
ConsoleOne Path
Software Distribution Directory
Software Selection

After the GroupWise Installation program has gathered this administrative information, it is ready to gather information about the eDirectory tree and the GroupWise objects to create.

2 Follow the prompts to provide the following information from your Basic GroupWise System Summary Sheet.
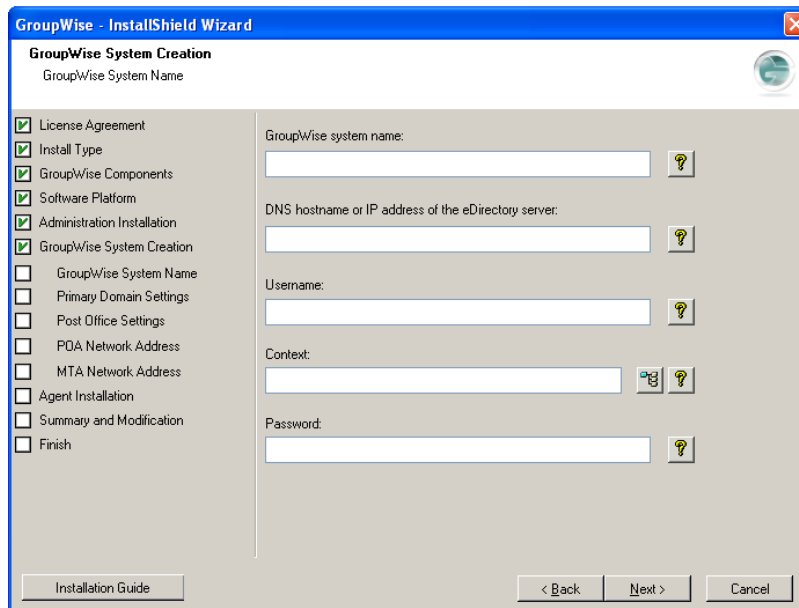
GroupWise System Name and System Settings
Primary Domain Settings
Post Office Settings

After the GroupWise Installation program has gathered eDirectory information, it is ready to gather GroupWise agent information.

3 Follow the prompts to provide the following information from your Basic GroupWise System Summary Sheet.
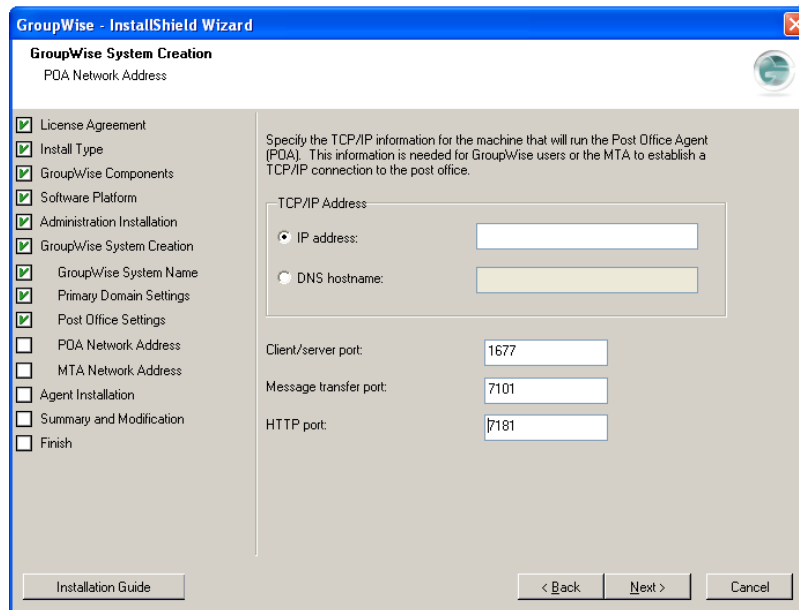
POA Network Address
MTA Network Address
Installation Path
NetWare Installation Options or Windows Installation Option
Agent Language Selection
Client Language Selection

4 If you are installing to a Windows server, provide the following information from your Basic GroupWise System Summary Sheet.

Windows Service Information

5 On the Summary and Modification page:

   5a Review the installation information you have provided.

   5b If you need to change information, select the information to change, then click *Edit Setting*.

   5c Specify the desired information, then click *OK*.

6 Click *Install* to start the installation.

Status messages keep you informed about the installation and system creation progress.

7 Click *Finish* when the installation and system creation is completed.

Starting the GroupWise Agents

The GroupWise Installation program does not start the agent for you. For instructions, see the instructions for your agent platform:

- "Starting the NetWare GroupWise Agents" on page 197
- "Starting the Windows GroupWise Agents" on page 222

IMPORTANT: The GroupWise agents must be running in order to access your GroupWise mailbox to send and receive messages.

Setting Up and Running the GroupWise Windows Client on Your Local Machine

To test your new GroupWise system, you can install and run the GroupWise Windows client on your local machine. To accomplish this test quickly, follow the instructions in the specific sections of Chapter 9, "Installing the GroupWise Clients," on page 229 that are listed below, in order to create test GroupWise user accounts and mailboxes.

- "Assigning GroupWise Accounts to eDirectory Users" on page 230
- "Installing and Starting the GroupWise Windows Client" on page 231

As an easy test, create the test GroupWise account for your own eDirectory user. You can delete it after the test if you want your permanent mailbox elsewhere in the GroupWise system. Make sure that you can log in to the test GroupWise account. As a further test, create a second test account, install the client on a second machine, and exchange messages between the two users. Then skip to Section 4.5, "What's Next," on page 96. Or you can install the GroupWise Administrator snap-ins to additional locations, as described in Installing the GroupWise Administrator Snap-Ins to Additional Windows Machines.

Installing the GroupWise Administrator Snap-Ins to Additional Windows Machines

As part of creating your basic GroupWise system, the GroupWise Administrator snap-ins to ConsoleOne were installed in one location. If ConsoleOne is installed in multiple locations and if you want to be able to administer GroupWise from those locations, you need to install the GroupWise snap-ins to each ConsoleOne installation.

1 Go to the Windows machine where you want to install the GroupWise snap-ins to ConsoleOne.

2 Configure the Windows machine, as described in Step 2 in "Starting the Windows GroupWise Installation Program" on page 48.

3 Make sure you are logged in as an Admin equivalent and have network access to a software distribution directory (or the *GroupWise 8* DVD or downloaded software image) and the domain directory.

4 Start the GroupWise Installation program (`setup.exe`).

5 Click *Install GroupWise System*, click *Yes* to accept the License Agreement, then click *Next* to display the GroupWise Components page.
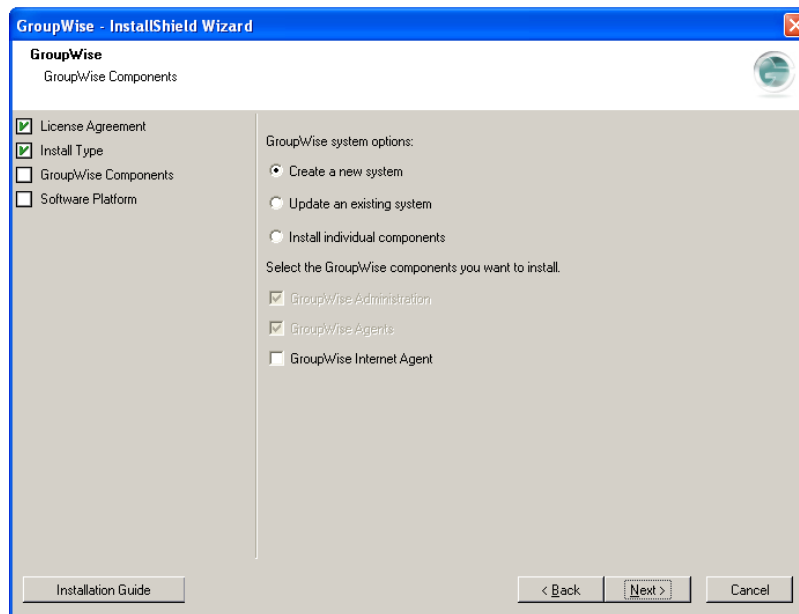
6 Select *Install Individual Components*.

7 Deselect *GroupWise Agents*, then click *Next*.
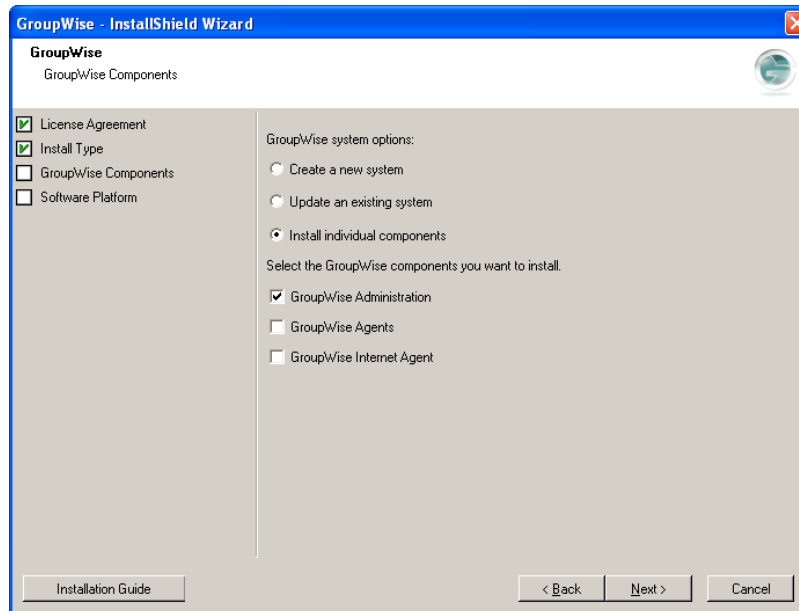
8 Deselect *Copy Files to a Software Distribution Directory*, then click *Next*.

9 Follow the prompts to install the GroupWise Administrator snap-ins to ConsoleOne on your current Windows machine.

10 Repeat Step 1 through Step 9 for each location where you want to install the GroupWise snap-ins.

11 Skip to Section 3.4, "What's Next," on page 67.

Setting Up Predefined Installations

Whenever you run any installation using the Windows GroupWise Installation program, from a full system creation to installation of a single GroupWise component, you can save all the information you provide during the installation into a configuration file. You then have the option of performing that installation again and again using the previous installation information as defaults for the next installation, or performing an express installation with no intervention on your part.

You can create installation configuration files to create a new GroupWise system, update an existing GroupWise system, and install GroupWise administration, agents (POA and MTA), and the Internet Agent.

NOTE: You cannot currently create installation configuration files to install GroupWise WebAccess, GroupWise Monitor, the GroupWise Calendar Publishing Host, or the GroupWise Windows client. Predefined installations are not available when you run the Linux Installation program. Additional predefined installations will be available in a future GroupWise release.

Deciding Where to Store Installation Configuration Files

You can store installation configuration files in any convenient location, taking into account the following:

- If you run the GroupWise Installation program only from your own workstation, you can store the configuration files locally. However, if you want them to be available from multiple locations or to multiple users, you should store them on the network.

- For the least amount of interaction during predefined installations, you can create the configuration files with passwords stored in them. Passwords are stored in clear text. Therefore, if you store the configuration files with passwords, you should store them in a secure location.

Creating an Installation Configuration File

1 Create a directory where you want to store installation configuration files.

2 Run an installation that you want to repeat.

The final Installation program page allows you to create the configuration file.
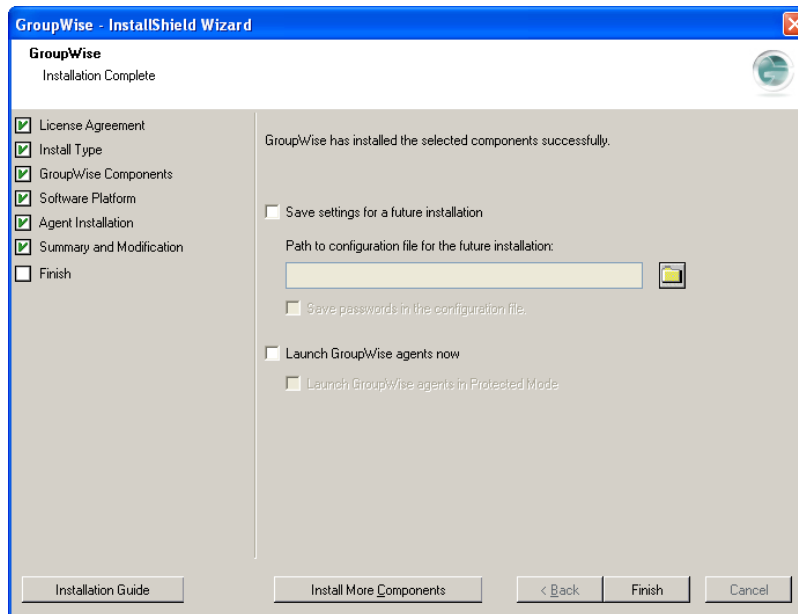
3 Select *Save Settings for a Future Installation*.

4 Specify the full path and filename for the installation configuration file.

The configuration filename automatically receives a `.cfg` extension

5 Select *Save Passwords in the Configuration File* if you store your configuration files in a secure location and you do not want to be prompted for passwords during an express installation.

6 Click *Finish* to complete the current installation.

Running a Predefined Installation

1 Start the GroupWise Installation program, click *Install GroupWise System*, then click *Yes* to accept the License Agreement.
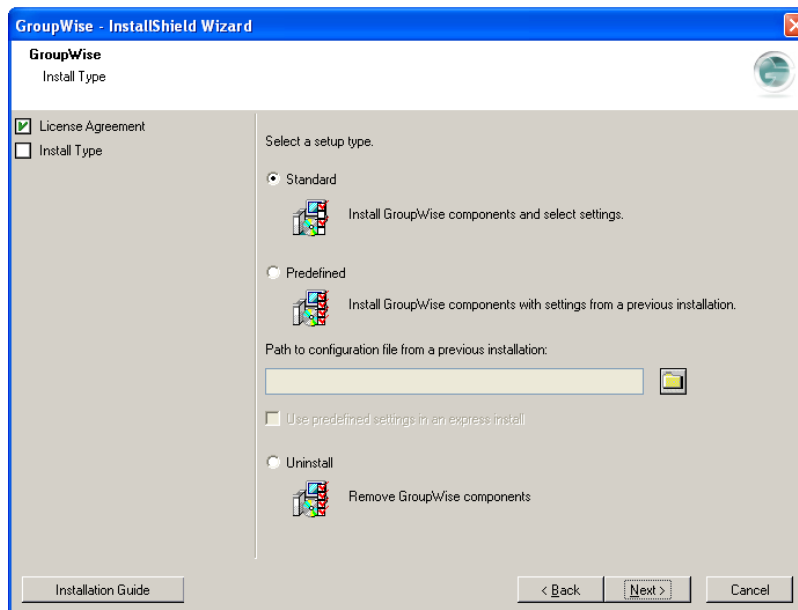
2 Select *Predefined*.

3 Browse to and select the installation configuration file from a previous installation that you want to repeat.

4 If you want to run the predefined installation without intervention or if you want to stop only for providing passwords, select *Use Predefined Settings in an Express Install*.

or

If you want to use the settings in the installation configuration file as default as you run the Installation program yourself, do not select *Use Predefined Settings in an Express Install*.

This option allows you to quickly click through the Installation program pages, while adjusting only a few settings for the current installation.

5 Click *Next* to start the predefined installation.

3.3.2 Linux: Setting Up a Basic GroupWise System

You should have already reviewed Section 3.2, "Planning a Basic GroupWise System," on page 26 and filled out the summary sheet. The following sections step you through the GroupWise Installation program.

- "Starting the Linux GroupWise Installation Program" on page 57
- "Installing the GroupWise Software" on page 58
- "Selecting a Linux Mount Directory" on page 59
- "Using ConsoleOne to Create Your Basic GroupWise System" on page 60
- "Installing and Starting the Linux GroupWise Agents" on page 63
- "Setting Up and Running the GroupWise Linux Client on Your Local Machine" on page 66
- "Installing the GroupWise Administrator Snap-Ins to Additional Linux Machines" on page 67

IMPORTANT: If you plan to install GroupWise in a clustered server environment, see the *GroupWise 8 Interoperability Guide* before starting to set up your GroupWise system.

If you are new to Linux, you might want to review Appendix A: Useful Linux Commands for Administering a GroupWise System in the *GroupWise 8 Administration Guide* before beginning to set up your GroupWise system on Linux.

Starting the Linux GroupWise Installation Program

1 Make sure that ConsoleOne is installed on your Linux server.

ConsoleOne is installed in /usr/ConsoleOne. If ConsoleOne and eDirectory have not yet been installed on your system, see "Novell eDirectory" on page 27.

**2** At a Linux server that meets the administrator machine requirements listed in Section 2.1, "GroupWise Administration Requirements," on page 17, insert the *GroupWise 8* DVD.

or

Run ./install at the root of the downloaded *GroupWise 8* software image.

3 Specify the root password, then click *OK*.

The X Window System is required for running the GUI GroupWise Installation program. If you are not using the X Window System, you can install GroupWise components individually, as described in "Installing the GroupWise Agents Using the Text-Based Installation Program" on page 201. However, you must use the GUI GroupWise Installation program to create your basic GroupWise system.

4 Select the language in which you want to run the GroupWise Installation program, then click *OK*.

NOTE: On Linux, all available languages are included in the GroupWise RPMs, so all languages are always installed.

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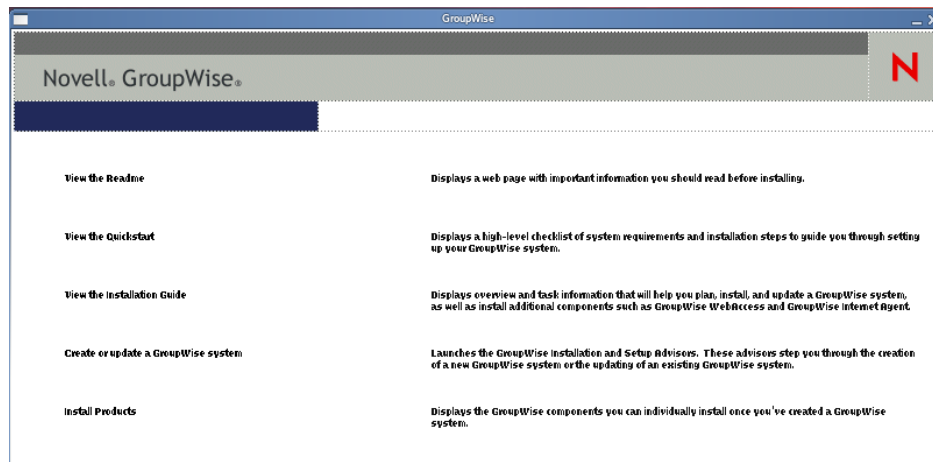
5 Continue with Installing the GroupWise Software.

Installing the GroupWise Software

1 Click *Create or Update a GroupWise System*.
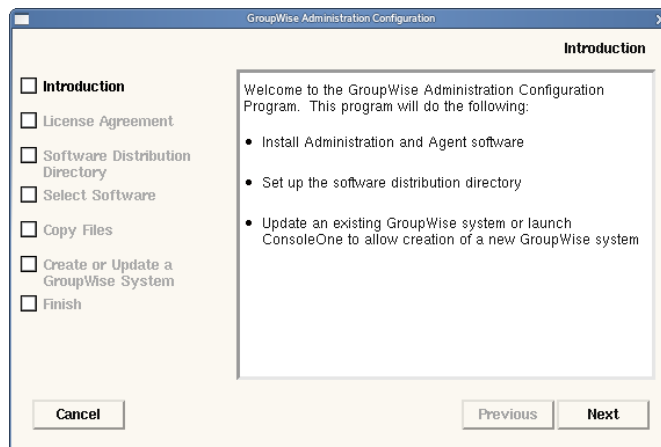
The list on the left details the steps the Installation program performs for you.

2 Click *Next*, accept the License Agreement, then click *Next*.

3 Follow the prompts to provide the following information from your Basic GroupWise System Summary Sheet.

Software Distribution Directory
Software Selection

The Installation program automatically installs the GroupWise Administrator snap-ins to ConsoleOne under /usr/ConsoleOne. Then, the Installation program copies the selected software components into your software distribution directory.

4 When the copying is complete, click *Next*.
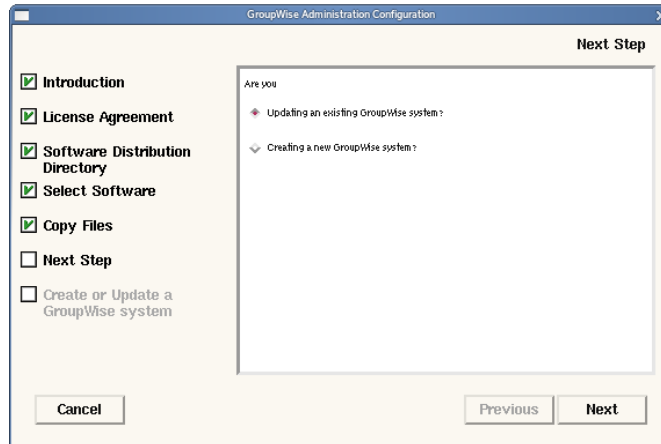
5 Select *Creating a New GroupWise System*, then click *Next*.

You use the New System utility in ConsoleOne to create your basic GroupWise system.

6 Click *Run* to start ConsoleOne.

7 Continue with .

Selecting a Linux Mount Directory

The first time you start ConsoleOne with the GroupWise Administrator snap-ins installed, you are prompted to specify a Linux mount directory under which you create mount points. Typically, Linux servers and workstations use `/mnt` for this purpose. In the future as your system grows, this information helps ConsoleOne resolve the UNC paths of GroupWise database locations into Linux paths. Although the mount directory information is not used when you are creating your basic GroupWise system, it is gathered at this time for later reference.

GroupWise databases can be located on Linux servers, NetWare servers, or Windows servers. In the Linux mount directory, you will eventually create mount points that have the same names as the servers that are mounted to those mount points. You will need to do this for each server where a domain or post office is located that you want to access from ConsoleOne on Linux. The following table illustrates the correspondence between UNC paths and mount points for GroupWise database locations on Linux, NetWare, and Windows, assuming the typical mount directory of `/mnt`:

Table 3-1 *Correspondence between UNC Paths and Mount Points*

Platform	GroupWise Domain UNC Path	Corresponding Linux Mount Point
Linux	`\\`*`linux_server`*`\`*`gw_partition`*`\`*`domain_directory`*	`/mnt/`*`linux_server`*`/`*`gw_partition`*
NetWare	`\\`*`netware_server`*`\`*`gw_volume`*`\`*`domain_directory`*	`/mnt/`*`netware_server`*`/`*`gw_volume`*
Windows	`\\`*`windows_server`*`\`*`gw_share`*`\`*`domain_directory`*	`/mnt/`*`windows_server`*`/`*`gw_share`*

IMPORTANT: Although NetWare and Windows are not case-sensitive operating systems, the case of characters in pathnames becomes significant when the directory structure is mounted to a Linux machine.

1 In the Linux Mount Directory dialog box, browse to and select the Linux mount directory, then click *OK*.
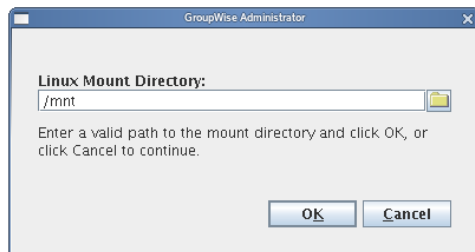
The typical Linux mount directory is /mnt.

In the future, you and other GroupWise administrators might have different mount points depending on the workstation or server where ConsoleOne runs. To change the mount directory later in ConsoleOne, click *Tools > GroupWise System Operations > System Preferences > Linux Settings*. The mount directory information is stored in a user-specific preferences file (.consoleone/SnapinPrefs.ser) in each GroupWise administrator's home directory.

2 Continue with Using ConsoleOne to Create Your Basic GroupWise System.

Using ConsoleOne to Create Your Basic GroupWise System

ConsoleOne automatically attempts to authenticate to an eDirectory tree when it starts.

1 Fill in the following fields, then click *Login* to start ConsoleOne:
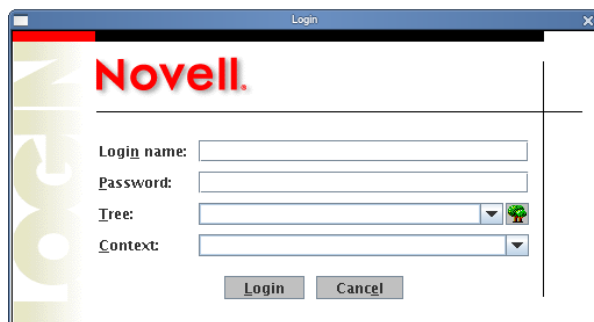
If the Login dialog box does not appear automatically, select the NDS object, then click *File > Authenticate*.

Login Name: Provide a Novell eDirectory username that has rights to create eDirectory objects.

Password: Provide the password for the username.

Tree: Type or select the eDirectory tree where you want to create GroupWise objects.

If the eDirectory tree is located on a Windows server, you might need to specify the IP address of the server instead of the tree name.

Context: Provide the full context of the User object associated with the username you provided.

2 Under the NDS object, select the tree where you want to create the GroupWise system, then click *Tools > GroupWise Utilities > New System*.
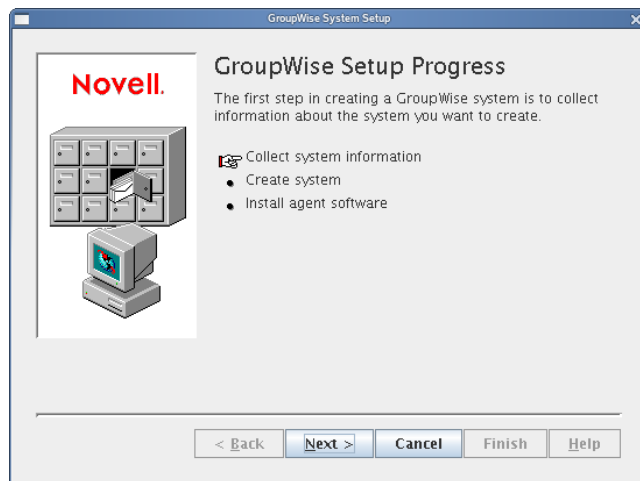
3 Follow the prompts to provide the GroupWise system and domain information from your Basic GroupWise System Summary Sheet.

Software Distribution Directory
Software Selection
eDirectory Tree
eDirectory Schema Extension
System Name
Primary Domain
Domain Directory
Domain Context
Domain Language
Domain Time Zone

4 Follow the prompts to provide the GroupWise post office information from your Basic GroupWise System Summary Sheet.

Post Office Name
Post Office Directory
Post Office Context
Post Office Language
Post Office Time Zone

5 Follow the prompts to provide information about how to link the domain and the post office from your Basic GroupWise System Summary Sheet.

Post Office Link
POA Network Address
MTA Network Address

When you have provided the system, domain, post office, and agent information for your GroupWise system, you are ready to create users. However, adding users at this point is optional. After the Installation program has finished, you can add users to the post office at any time by using ConsoleOne. We recommend that you just add two test users at this time.
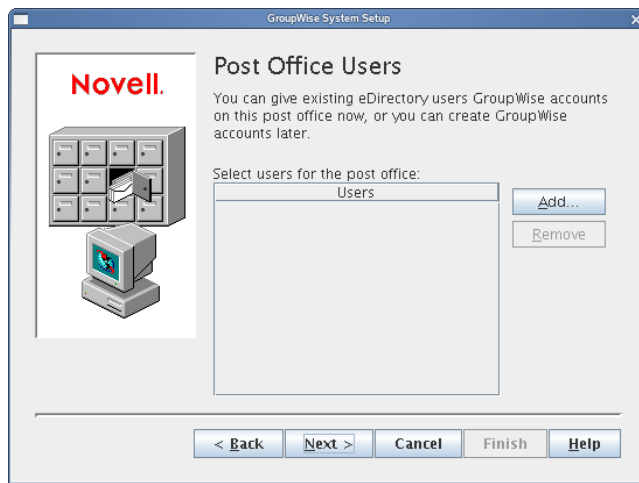
6 Add users as needed, then click *Next*.

The Installation program summarizes your overall progress.
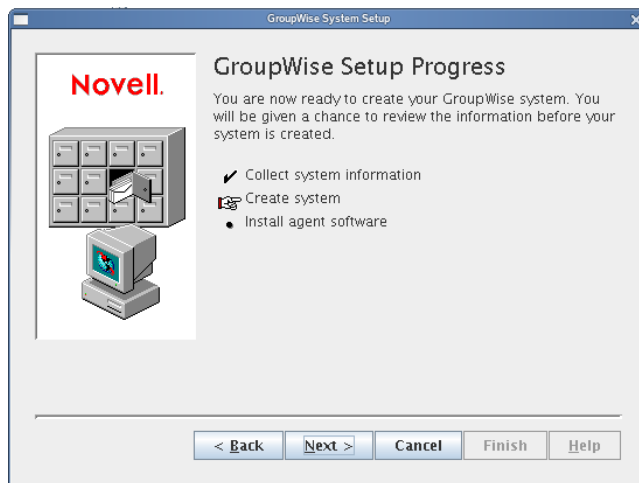
7 Click *Next* to display a summary of the system, domain, post office, and agent information you entered.
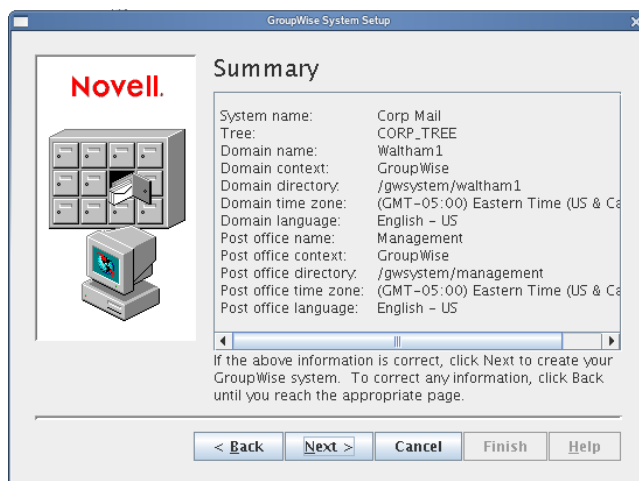
After you have verified that the information you entered is correct, you are ready to create your GroupWise system.

8 Click *Next* to create your GroupWise system.

The Installation program summarizes your overall progress.
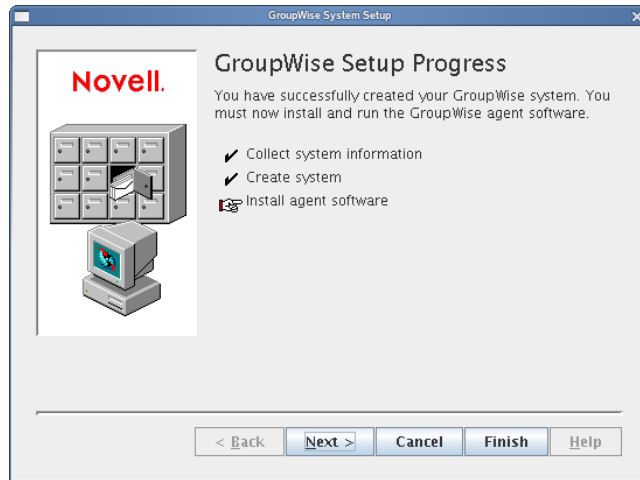
9 Click *Next* to install the MTA and POA software.

10 Continue with Installing and Starting the Linux GroupWise Agents.

Installing and Starting the Linux GroupWise Agents

At this point, the Installation program has created eDirectory objects and network server directories associated with your GroupWise system. You now need to install and start the MTA and POA on your Linux server.

- ◆ "Installing the Linux Agents" on page 63
- ◆ "Starting the Linux Agents with a User Interface" on page 64

Installing the Linux Agents

The GroupWise Installation program starts the Agent Configuration program for you.

Figure 3-14 *Introduction Page*
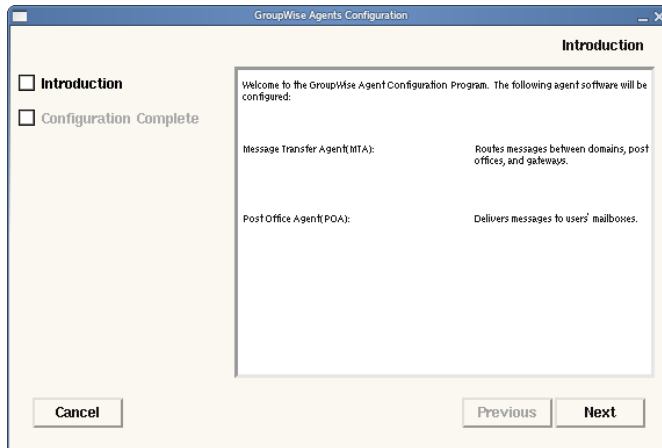
1 Review the Introduction, then click *Next*.

On the Configuration Complete page, *Launch GroupWise Agents on System Startup* is selected by default.

IMPORTANT: If you want to configure the agents for high availability, as described in "Enabling the Groupwise High Availability Service for the Linux GroupWise Agents" on page 209, they must be configured to start automatically on system startup.

2 If you do not want the agents to start automatically when the server restarts, deselect *Launch GroupWise Agents on System Startup*.

3 Click *Exit* to complete the agent configuration.

4 Continue with Starting the Linux Agents with a User Interface.

Starting the Linux Agents with a User Interface

1 In a terminal window, become root by entering su - and the root password.

2 Change to the GroupWise agent bin directory.

```
cd /opt/novell/groupwise/agents/bin
```

3 Use one of the following commands to start the MTA:

Syntax:

```
./gwmta --show --home domain_directory &
./gwmta --show @domain_name.mta &
```

Example:

```
./gwmta --show --home /gwsystem/domlnx &
./gwmta --show @provo.mta &
```

The --show startup switch starts the MTA with a server console interface similar to that provided for the NetWare and Windows MTAs. This user interface requires that the X Window System and Open Motif be running on the Linux server.

The --home startup switch specifies the domain directory and is required to start the MTA.

The *@domain*.mta startup switch specifies the MTA startup files, which contains the --home startup switch.

To remind yourself of these commands when you are at your Linux server, view the gwmta man page.

The ampersand (&) causes the MTA to run in the background, so that the terminal window you started it in is again available for use.
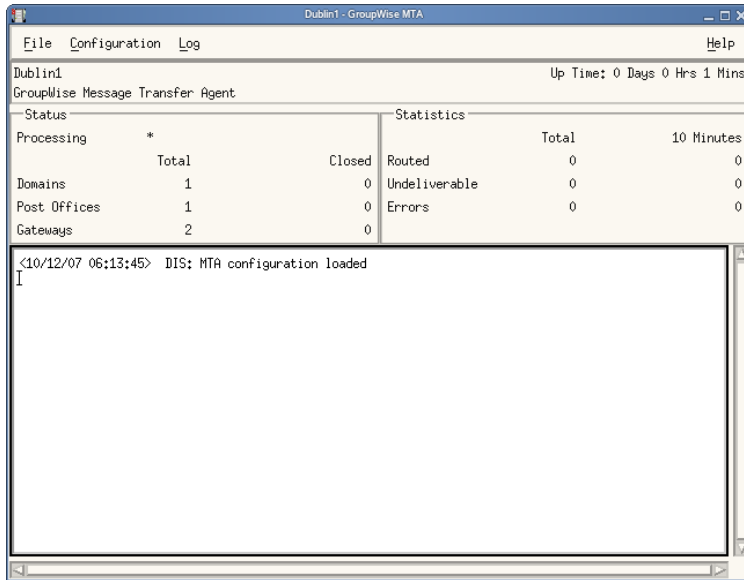
The status messages displayed on the MTA server console are also written to the MTA log file (*mmdd*mta.*nnn*) in the `/var/log/novell/groupwise/`*domain*`.mta` directory. The log file name includes the month and day when it was created, along with an incrementing extension to accommodate multiple log files on the same day.

In ConsoleOne, you can see that the domain database has been updated by the MTA because the Version field on the Identification page of the Domain object shows 8 when the database update is complete.

4 Wait until the domain has been updated before you start the POA.

5 Use one of the following commands to start the POA:

Syntax:

```
./gwpoa --show --home post_office_directory &
./gwpoa --show @post_office_name.poa &
```

Example:

```
./gwpoa --show --home /gwsystem/polnx &
./gwpoa --show @polnx.poa &
```

To remind yourself of these commands when you are at your Linux server, view the gwpoa man page.

The status messages displayed on the POA server console are also written to the POA log file (*mmdd*poa.*nnn*) in the `/var/log/novell/groupwise/`*post_office*`.poa` directory. The log file name includes the month and day when it was created, along with an incrementing extension to accommodate multiple log files on the same day.

In ConsoleOne, you can see that the post office database has been updated by the POA because the *Version* field on the Identification page of the Post Office object shows 8 when the database update is complete.

After the post office database has been updated, you can install the GroupWise Linux client and connect to the post office.

6 If you want to finish setting up your basic GroupWise system, continue with Setting Up and Running the GroupWise Linux Client on Your Local Machine.

or

If you want to learn more about managing the GroupWise agents on Linux, skip to the following sections in Chapter 8, "Installing GroupWise Agents," on page 181:

- ◆ "Starting the Linux GroupWise Agents as Daemons" on page 204
- ◆ "Monitoring the Linux GroupWise Agents from Your Web Browser" on page 205
- ◆ "Starting the Linux GroupWise Agents on System Startup" on page 206
- ◆ "Running the Linux GroupWise Agents As a Non-root User" on page 207
- ◆ "Enabling the Groupwise High Availability Service for the Linux GroupWise Agents" on page 209
- ◆ "Stopping the Linux GroupWise Agents" on page 215

Setting Up and Running the GroupWise Linux Client on Your Local Machine

To test your new GroupWise system, you can install and run the GroupWise Linux client on your local machine. To accomplish this test quickly, follow the instructions in the specific sections of Chapter 9, "Installing the GroupWise Clients," on page 229 that are listed below, in order to create test GroupWise user accounts and mailboxes.

- ◆ "Assigning GroupWise Accounts to eDirectory Users" on page 230
- ◆ "Installing and Starting the GroupWise Linux Client" on page 235

As an easy test, create the test GroupWise account for your own eDirectory user. You can delete it after the test if you want your permanent mailbox elsewhere in the GroupWise system. Make sure that you can log in to the test GroupWise account. As a further test, create a second test account, install the client software on a second machine, and exchange messages between the two users. Then skip to Section 4.5, "What's Next," on page 96. Or you can install the GroupWise Administrator snap-ins to additional locations, as described in Installing the GroupWise Administrator Snap-Ins to Additional Linux Machines.

Installing the GroupWise Administrator Snap-Ins to Additional Linux Machines

As part of creating your basic GroupWise system, the GroupWise Administrator snap-ins to ConsoleOne were installed under /usr/ConsoleOne of the server where you ran the GroupWise Installation program. If ConsoleOne is installed in multiple locations and if you want to be able to administer GroupWise from those locations, you need to install the GroupWise snap-ins to each ConsoleOne installation.

1 Go to the Linux machine where you want to install the GroupWise snap-ins to ConsoleOne.

2 Make sure you are logged in as root and have network access to the software distribution directory (or *GroupWise 8* DVD or downloaded software image) and the domain directory.

3 Start the GroupWise Installation program (install), then click *Install Products > GroupWise Administration > Install Administration*.

4 When the installation is complete, click *OK*, then click *Configure GroupWise Administration*.

5 Accept the License Agreement, then follow the prompts to provide the necessary information.

6 Repeat Step 1 through Step 5 for each location where you want to install the GroupWise snap-ins.

7 Skip to What's Next.

3.4   What's Next

After you have set up your basic GroupWise system, you can expand the system by:

- Setting up access to the Internet through the GroupWise Internet Agent. See Chapter 4, "Installing the GroupWise Internet Agent," on page 73.

- Setting up GroupWise WebAccess so that users can access their mailboxes through a Web browser on a computer or mobile device such as a cell phone. See Chapter 5, "Installing GroupWise WebAccess," on page 101.

- Setting up a GroupWise Calendar Publishing Host so that GroupWise users can share their personal calendars and free/busy information with Internet users. See Chapter 6, "Installing the GroupWise Calendar Publishing Host," on page 135.

- Setting up GroupWise Monitor to monitor your GroupWise agents. See Chapter 7, "Installing GroupWise Monitor," on page 159.

- Installing the MTA or POA on a different server than the one you installed to during the basic system setup. See Chapter 8, "Installing GroupWise Agents," on page 181.

- Setting up users to run the GroupWise client on their workstations. See Chapter 9, "Installing the GroupWise Clients," on page 229.

- Setting up instant messaging capabilities for users. See Chapter 10, "Installing Novell Messenger," on page 239.

- Setting up synchronization between users' GroupWise mailboxes and their mobile devices. See Chapter 11, "Installing the Novell Data Synchronizer Mobility Pack," on page 241.

- Setting up team collaboration capabilities. See Chapter 12, "Installing Novell Vibe," on page 243.
- Setting up phone conferencing capabilities. See Chapter 13, "Installing Novell Conferencing," on page 245.

After your GroupWise system is fully installed, you can refer to sections of the *GroupWise 8 Administration Guide* as you maintain your GroupWise system by:

- Adding more users to the post office. See "Users".
- Defining resources that users can schedule. See "Resources".
- Defining groups of users that GroupWise users can select when addressing messages. See "Distribution Lists, Groups, and Organizational Roles".
- Changing the GroupWise client from Online mode to Caching mode so that users' messages are stored on a local drive as well as in the post office. See "Client".
- Setting up GroupWise Remote so that Windows client users can access their mailboxes from a computer that is not directly connected to your network. See "Client".
- Controlling the functionality of users' GroupWise client software. See "Client".
- Configuring your current post office's library or setting up additional libraries. See "Libraries and Documents".
- Adding additional post offices to the domain. See "Post Offices".
- Adding additional domains to the system. See "Domains".
- Configuring the Post Office Agent (POA) and Message Transfer Agent (MTA) to support secure connections (SSL). See "Post Office Agent" and "Message Transfer Agent".
- Connecting to other GroupWise 5.*x*, 6.*x*, 7., or 8 systems. See the *GroupWise 8 Multi-System Administration Guide*.

3.5 Basic GroupWise System Summary Sheet

Installation Program Field	Value for Your GroupWise System	Explanation
Agent Software Platform:		Section 3.2.1, "Determining Installation Locations," on page 26
• NetWare		
• Windows		
• Linux		
ConsoleOne Directory:		Section 3.2.1, "Determining Installation Locations," on page 26
Software Distribution Directory:		Section 3.2.1, "Determining Installation Locations," on page 26

Installation Program Field	Value for Your GroupWise System	Explanation
Software Selection: ◆ ConsoleOne Snapins ◆ GroupWise Monitor ◆ NetWare Agents ◆ Windows Agents ◆ GroupWise WebAccess ◆ GroupWise Calendar Publishing Host ◆ GroupWise Internet Agent ◆ GroupWise Client for Windows		Section 3.2.1, "Determining Installation Locations," on page 26
System Settings: ◆ DNS hostname or IP address of tree ◆ Username ◆ Context ◆ Password ◆ GroupWise system name		Section 3.2.1, "Determining Installation Locations," on page 26 "System and Domain Names" on page 30
Primary Domain Settings: ◆ Domain name ◆ Path to domain database ◆ Domain object context ◆ Domain language ◆ Domain time zone:		Section 3.2.2, "Planning Your Primary Domain," on page 30
Post Office Settings: ◆ Post office name ◆ Path to post office database ◆ Post office object context ◆ Post office language ◆ Post office time zone:		Section 3.2.3, "Planning Your Post Office," on page 36

Installation Program Field	Value for Your GroupWise System	Explanation

POA Network Address:
 	
◆ IP address
◆ DNS hostname
◆ Client/server port
  (default 1677)
◆ Message transfer port
  (default 7101)
◆ HTTP port
  (default 7181)
		Section 3.2.4, "Planning Your GroupWise Agents," on page 39

MTA Network Address:
 	
◆ IP address
◆ DNS hostname
◆ Message transfer port
  (default 7100)
◆ HTTP port
  (default 7180)
		Section 3.2.4, "Planning Your GroupWise Agents," on page 39

Installation Path:		"Agent Location" on page 40
NetWare Installation Options: ◆ Launch the GroupWise agents on system startup ◆ Launch GroupWise agents in Protected Mode		"NetWare Installation Options: Automatic Startup and Protected Mode" on page 43
Linux Installation Option: ◆ Launch the GroupWise agents on system startup		"Linux Installation Option: Automatic Startup" on page 43
Windows Installation Options: ◆ Install and configure SNMP for GroupWise agents ◆ Install as Windows services		"Windows Installation Options: SNMP Traps and Service vs. Application" on page 44
Agent Languages to Install: ◆ English ◆ French ◆ German ◆ Brazilian Portuguese ◆ Spanish		Section 3.2.4, "Planning Your GroupWise Agents," on page 39

Installation Program Field	Value for Your GroupWise System	Explanation
Client Language to Support:		Section 3.2.4, "Planning Your GroupWise Agents," on page 39
◆ English		
◆ French		
◆ German		
◆ Brazilian Portuguese		
◆ Spanish		
◆ Arabic		
◆ Chinese Traditional		
◆ Chinese Simplified		
◆ Czech		
◆ Danish		
◆ Dutch		
◆ Finnish		
◆ Hebrew		
◆ Hungarian		
◆ Italian		
◆ Japanese		
◆ Korean		
◆ Norwegian		
◆ Polish		
◆ Russian		
◆ Swedish		
Windows Service Information:		"Application vs. Service" on page 44
◆ Use local system account		
◆ Allow service to interact with desktop		
◆ Use this Windows user account		
◆ Name of Windows user account		
◆ Password		
◆ Startup type		
◆ Automatic		
◆ Manual		
◆ Disabled		

4 **Installing the GroupWise Internet Agent**

The Novell GroupWise Internet Agent enables you to send and receive messages over the Internet. The following sections provide information to help you successfully install the Internet Agent in your existing GroupWise system.

- Section 4.1, "GroupWise Internet Agent Overview," on page 73
- Section 4.2, "Internet Agent System Requirements," on page 77
- Section 4.3, "Planning the GroupWise Internet Agent," on page 78
- Section 4.4, "Setting Up the Internet Agent," on page 86
- Section 4.5, "What's Next," on page 96
- Section 4.6, "GroupWise Internet Agent Installation Summary Sheet," on page 96

IMPORTANT: If you plan to install the Internet Agent in a clustered server environment, see the *GroupWise 8 Interoperability Guide* before you install the Internet Agent.

4.1 GroupWise Internet Agent Overview

The Internet Agent allows communication between GroupWise users and users of other messaging systems who send e-mail across the Internet. The Internet Agent picks up inbound e-mail messages from the Internet, converts them from RFC-822 or MIME format to the GroupWise message format, and then passes the converted messages to the GroupWise Message Transfer Agent (MTA).

For outgoing messages to the Internet, the GroupWise MTA passes the messages to the Internet Agent, which then converts the messages to Internet messaging format, and then sends them to the designated Internet addresses.

Figure 4-1   *GroupWise Internet Agent Connecting a GroupWise System to the Internet*
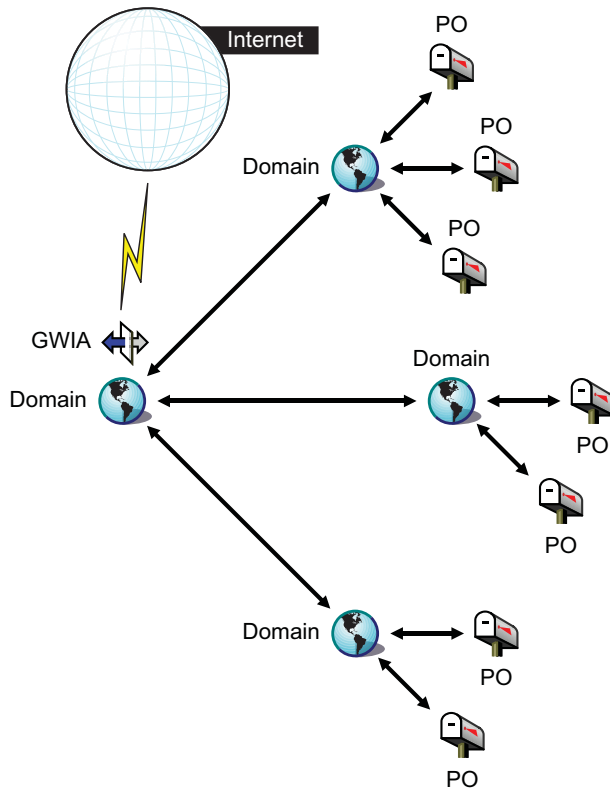
Choose from the following list of topics to learn more about the capabilities of the GroupWise Internet Agent.

- "SMTP/MIME Service" on page 75
- "POP3 Service" on page 75
- "IMAP4 Service" on page 76
- "LDAP Services" on page 76
- "iCal and iMip Services" on page 76
- "Secure Connections via SSL" on page 76
- "Access Control" on page 76
- "Multiple Threading" on page 76
- "SNMP-Compliant" on page 76
- "SMP Support (NetWare Only)" on page 77

SMTP/MIME Service

The SMTP/MIME service in the Internet Agent allows you to send and receive e-mail with standard encoding on attachments, international character sets, and multipart messages. Multimedia e-mail with images, sound, and video can also be exchanged. The service also includes these additional features:

 ◆ **SMTP Dial-Up Service:** The Internet Agent includes SMTP dial-up functionality. This can be useful when your system does not meet the requirements of a dedicated Internet connection, or when you prefer not to have a permanent Internet connection. With the SMTP dial-up feature, you can establish a schedule to periodically check the message store without maintaining a permanent link.

 ◆ **Flexible Addressing:** The Internet Agent offers full GroupWise addressing support, including system groups, nicknames, and individual users.

   The Internet Agent also takes advantage of GroupWise Internet addressing, which allows inbound messages addressed in a variety of formats to be delivered to GW users. These formats include:

   ```
   UserID@Internet_domain_name
   UserID.PostOffice@Internet_domain_name
   Last_Name.First_Name@Internet_domain_name
   First_Name.Last_Name@Internet_domain_name
   First_Initial_Last_Name@Internet_domain_name
   ```

 ◆ **Internet Users in the Address Book:** Internet users can be added to the GroupWise Address Book so users won't have to remember long Internet addresses.

 ◆ **Real-Time Blacklists:** Organizations such as SpamCop provide lists of IP addresses that are known to be open relay hosts or spam hosts. You can use the real-time blacklists provided by such sites to protect your users from offensive spam.

 ◆ **Spam Protection:** Anti-spam services use different indicators to mark potential spam. One might use a string of asterisks; the more asterisks, the greater the likelihood that the message is spam. Another might use a numerical value; the higher the number, the greater the likelihood that the message is spam. You can configure the Internet Agent to recognize as spam whatever indicators your anti-spam service uses and flag such messages for processing by the client Junk Mail Handling feature.

 ◆ **Accounting:** The accounting feature provides inbound and outbound tracking of messages passing through Internet Agent. This lets administrators track how the Internet Agent is being used. GroupWise Monitor includes a Gateway Accounting report that organizes information gathered in Internet Agent accounting files into a format that is visually easy to read.

 ◆ **DNS Name Resolution:** The Internet Agent can access a DNS server directly to resolve host names to IP addresses, or it can rely on a relay host to perform the name resolution.

 ◆ **Connect to Other GroupWise Systems Through the Internet:** With passthrough addressing, you can connect to other GroupWise systems anywhere on the Internet and have access to all of the GroupWise features. The Internet simply becomes a mail transport medium for GroupWise.

POP3 Service

The Post Office Protocol 3 (POP3) service in the Internet Agent allows you to download messages from your GroupWise post office to a POP3 client application such as a Web browser's e-mail program or a Telnet application. The Internet Agent acts as the POP3 server, providing a TCP connection between the user's GroupWise post office and a POP3 client. Accessing the GroupWise post office via the Internet Agent's POP3 server capability, users can retrieve their e-mail messages and manage them through user ID login options.

IMAP4 Service

The GroupWise Internet Agent supports the Internet Messaging Access Protocol 4 (IMAP4). As an IMAP4 server, the Internet Agent allows IMAP4-compliant e-mail clients to read and manipulate GroupWise messages.

LDAP Services

The Internet Agent supports the Lightweight Directory Access Protocol (LDAP) directory standard with LDAP server capability that allows access for directory searches of GroupWise post offices. Using LDAP Public Access, Internet mail clients can do lookups on GroupWise users and address information.

iCal and iMip Services

The Internet Agent supports iCalendar (iCal), the Internet Calendaring and Scheduling core object specification (RFC 2445), and iMIP, the iCalendar Message-based Interoperability Protocol (RFC 2447). When a GroupWise user sends an appointment to an external Internet user, the Internet agent converts the appointment into an iMIP message that can be read and accepted, declined, or canceled in compatible e-mail systems such as Microsoft Exchange and Lotus Notes. GroupWise users can also receive and accept, decline, or cancel appointments from users of these e-mail systems. Accept/decline notifications are also exchanged between systems. In addition, tasks to an from users in other e-mail systems can be marked Completed.

Secure Connections via SSL

The Internet Agent supports the use of SSL for its connections to SMTP hosts, POP3 clients, IMAP4 clients, and Internet Agent Web console.

Access Control

The Internet Agent program includes security capabilities called Access Control that allow administrators to control user access to all services (SMTP/MIME, LDAP, POP3, and IMAP4). Access Control can help you reduce costs and provide added security.

With the SMTP/MIME service, Access Control can be used to block messages being sent to or received from specific host or IP addresses.

Multiple Threading

Multiple threading allows more than one send or receive process to be running concurrently. You can configure the number of threads to enhance the speed and performance of the Internet Agent. The number of threads are set separately for the SMTP/MIME service, POP3 service, IMAP4 service, and LDAP service.

SNMP-Compliant

The Internet Agent can be managed by any SNMP-compliant network manager, such as the alarm management features of Novell ZENworks Server Management.

SMP Support (NetWare Only)

The NetWare Internet Agent supports Symmetric Multi-Processing (SMP), letting it take advantage of a server with multiple processors.

4.2 Internet Agent System Requirements

The following sections define the Internet Agent's requirements:

4.2.1 Network Server Requirements

The network server where you install the Internet Agent must meet the following requirements:

❑ x86-32 processor or x86-64 processor

On a 64-bit processor, GroupWise still runs as a 32-bit application.

❑ Any of the following server operating systems for the GroupWise Internet Agent:
- Novell Open Enterprise Server (OES) 2 (NetWare or Linux version) or OES 11, plus the latest Support Pack
- NetWare 6.5, plus the latest Support Pack
- SUSE Linux Enterprise Server (SLES) 10 or SLES 11, plus the latest Support Pack

  The X Window System and Open Motif are required by the GUI Internet Agent server console. By default, the Internet Agent runs as a daemon without a user interface.
- Windows Server 2003, Windows Server 2003 R2, Windows Server 2008, or Windows Server 2008 R2, plus the latest Service Pack

❑ Adequate server memory as required by the operating system

❑ Any of the following environments for running the GroupWise Installation program:
- Windows XP, Windows Vista, or Windows 7, plus the latest Service Pack, plus the Novell Client
- Windows Server 2003, Windows Server 2003 R2, Windows Server 2008, or Windows Server 2008 R2, plus the latest Service Pack, plus the Novell Client
- Novell Open Enterprise Server (OES) 2 (Linux version) or OES 11, plus the latest Support Pack
- SUSE Linux Enterprise Server (SLES) 10 or SLES 11, plus the latest Support Pack

  The X Window System is required by the GUI GroupWise Installation program that steps you through the process of creating a new GroupWise system. A text-based Installation program is also available.

❑ Adequate server disk space:
- 17 MB for the Internet Agent program files.
- 200 MB minimum for message file processing. The actual amount is determined by the number and size of message files being processed at one time by the Internet Agent.

4.2.2 GroupWise System Requirements

The GroupWise system in which you install the Internet Agent must meet the following requirements:

❐ The domain's version must be equal to or later than the Internet Agent's version. The domain's version is determined by the Message Transfer Agent (MTA) version running for it.

❐ The versions of any post offices that the Internet Agent accesses on behalf of POP3 or IMAP4 clients must be equal to or later than the Internet Agent's version. A post office's version is determined by the Post Office Agent (POA) version running for it.

4.2.3 Internet Connectivity Requirements

Before you install the Internet Agent, you need to ensure that your network is configured for Internet connectivity.

❐ **Internet Connection:** You can connect to the Internet by using a direct connection over a leased line or a standard switched telephone line.

❐ **Internet Domain Name:** You must have an Internet domain name. The domain name must be defined by an MX RR (mail exchanger resource record) in DNS.

❐ **DNS Server Access or Relay Host Access:** If you want the Internet Agent to send messages directly to other SMTP hosts, it requires access to a DNS server for address resolution. Otherwise, it requires access to a relay host that can perform the address resolution and message routing. Make sure the server where you plan to install the Internet Agent is configured to access a DNS server or can access your relay host. For specific details, refer to your server documentation.

❐ **IP Address:** The Internet Agent's server requires a static IP address and a fully qualified DNS hostname.

4.3 Planning the GroupWise Internet Agent

Use the "GroupWise Internet Agent Installation Summary Sheet" on page 96 to record your decisions about how to install the Internet Agent. The topics in this section present the required information in a convenient planning sequence. The Installation Summary Sheet organizes the information in the order in which you need it during installation.

- Section 4.3.1, "Selecting the Internet Agent Platform," on page 79
- Section 4.3.2, "Gathering Server Information," on page 79
- Section 4.3.3, "Selecting the Internet Agent Installation Directory," on page 80
- Section 4.3.4, "Gathering Domain and Gateway Information," on page 80
- Section 4.3.5, "Selecting the Gateway Object Name," on page 81
- Section 4.3.6, "Specifying the Internet Mail Domain Name for Your GroupWise System," on page 81
- Section 4.3.7, "Handling Outbound Mail," on page 81
- Section 4.3.8, "Enabling the Internet Agent Web Console," on page 82
- Section 4.3.9, "NetWare Installation Options: Automatic Startup, Protected Mode, and Clustering," on page 82

- ◆ Section 4.3.10, "Linux Installation Options: LDAP Information, Automatic Startup, and Clustering," on page 83
- ◆ Section 4.3.11, "Windows Installation Options: SNMP Traps and Service vs. Application," on page 84

For additional assistance in planning your GroupWise installation, see GroupWise Best Practices (http://wiki.novell.com/index.php/GroupWise) and GroupWise 8 Good and Bad Habits (http://wiki.novell.com/index.php/GroupWise_8_Good_and_Bad_Habits).

**IMPORTANT**: If you plan to install the Internet Agent in a clustered server environment, refer to the *GroupWise 8 Interoperability Guide* as you plan your Internet Agent installation.

4.3.1 Selecting the Internet Agent Platform

The Internet Agent is available as a NetWare NLM program, a Linux executable, and a Windows executable.

GROUPWISE INTERNET AGENT INSTALLATION SUMMARY SHEET

Under *Software Platform*, mark whether you plan to install the Internet Agent on NetWare, Linux, or Windows. Review Section 4.2, "Internet Agent System Requirements," on page 77 to ensure that the specific server you have selected meets the listed requirements.

4.3.2 Gathering Server Information

Prior to GroupWise 7, the Internet Agent and the MTA communicated by transferring message files through message queue directories, as shown in diagrams in *GroupWise 8 Troubleshooting 3: Message Flow and Directory Structure*:

- ◆ "Mapped/UNC Link: Outbound Transfer to the Internet Successful"
- ◆ "Mapped/UNC Link: Inbound Transfer from the Internet Successful"

Starting in GroupWise 7, you can configure the Internet Agent so that it uses TCP/IP to communicate with the MTA, instead of message files, as shown in these additional diagrams:

- ◆ "TCP/IP Link: Outbound Transfer to the Internet Successful"
- ◆ "TCP/IP Link: Inbound Transfer from the Internet Successful"

The GroupWise Installation program needs to know the network address of the server where the Internet Agent will run. For best performance, install the Internet Agent on the same server with the domain it belongs to. In this configuration, in a GroupWise system with a single Internet Agent, UNC links between the Internet Agent and the MTA are sufficient. Therefore, the Internet Agent Installation program displays a default port number of 0 (zero), indicating that TCP/IP will not be used.

In a larger GroupWise system with multiple Internet Agents, you can configure the Internet Agent to communicate with the MTA by way of TCP/IP. This configuration enables you to designate an alternate Internet Agent for the domain. With this configuration, if the domain's primary Internet Agent goes down, the MTA can fail over to another Internet Agent in your GroupWise system until the primary Internet Agent is up and running again. This feature is especially useful in larger GroupWise systems where multiple Internet Agents handle a large number of Internet messages.

If you want to enable TCP/IP communication between the Internet Agent and the MTA, use a port number of 7102 or any other available port number. If you do not want to enable TCP/IP communication, use 0 (zero) as the port number.

GROUPWISE INTERNET AGENT INSTALLATION SUMMARY SHEET

Under *Server Information*, list the IP address and DNS hostname of the server where you plan to install the Internet Agent. Also, specify the port number for TCP/IP communication if you want to enable it.

For a complete list of default port numbers used by the GroupWise agents, refer to "GroupWise Port Numbers" in the *GroupWise 8 Administration Guide*.

4.3.3 Selecting the Internet Agent Installation Directory

You should install the Internet Agent on the same server where the domain directory is located. The Internet Agent installation directory depends on the platform where you are installing it.

Consider these platform-specific guidelines:

NetWare: When installing the NetWare Internet Agent, we recommend that you use the `sys:\system` directory on the NetWare server. This simplifies access to the Internet Agent configuration file and ensures that the NLM program is in the server's search path. If you use a different directory, you must add that directory to the server's search path.

Linux: The Linux Internet Agent is automatically installed to `/opt/novell/groupwise/agents`.

Windows: The default installation directory is `c:\Program Files\Novell\GroupWise Server\GWIA`. However, you can install the Internet Agent to any directory you want.

GROUPWISE INTERNET AGENT INSTALLATION SUMMARY SHEET

Under *Installation Path*, record the directory where you want to install the Internet Agent software.

4.3.4 Gathering Domain and Gateway Information

The Internet Agent requires a GroupWise gateway directory in which to store configuration information and work files. The gateway directory must be located under a GroupWise domain directory. The default directory name is gwia. If you change the name, use the following platform-specific conventions:

NetWare: Use a maximum of 8 characters

Linux: Use only lowercase characters

Windows: No limitations.

After you specify the domain directory location and a gateway directory name, the GroupWise Installation program creates the gateway directory under the *domain*\wpgate directory (for example, provo\wpgate\gwia).

4.3.5 Selecting the Gateway Object Name

The Internet Agent also requires a GroupWise Gateway object in Novell eDirectory. By default, it is named the same as the gateway directory and is referred to as the Internet Agent object. This object stores the Internet Agent's information and enables configuration of the agent through ConsoleOne.

The Internet Agent's object is created below the Domain object. If you have multiple domains, the GroupWise Installation program uses the Domain object associated with the domain directory where you are creating the Internet Agent's gateway directory.

4.3.6 Specifying the Internet Mail Domain Name for Your GroupWise System

When e-mail users across the Internet address messages to GroupWise users, the address includes the Internet mail domain for your GroupWise system (for example, `novell.com`). Typically, the Internet mail domain name for your GroupWise system is the name of your company, with its accompanying domain type (`.com`, `.edu`, and so on).

4.3.7 Handling Outbound Mail

If the Internet Agent is connected to the Internet and is able to perform DNS name resolution, it can send messages from GroupWise users directly across the Internet to Internet users. However, you might prefer to keep the Internet Agent behind your firewall. To accomplish this, you can configure the Internet Agent to route all outbound messages to a relay host.

4.3.8 Enabling the Internet Agent Web Console

The Internet Agent server console enables you to monitor the Internet Agent from the server where it is running. If you want, you can enable the Internet Agent Web console. The Web console lets you view the Internet Agent's statistical and diagnostic information through a Web browser, which is useful if want to see the Internet Agent's activity without physically visiting the agent's server.

You access the Web console by entering the Internet Agent's network address and HTTP port number in a Web browser (for example, `http://172.16.5.18:9850`). If necessary, you can change the Internet Agent's default HTTP port number (9850).

If you want to restrict access to the Web console, you can assign a username and password. This can be any username and password you want. By default, the username and password are passed through a non-secure connection between the Web browser and the Internet Agent. Therefore, we recommend that you do not use an existing eDirectory username and password unless you secure this connection by using SSL. For information about securing the Internet Agent's connections, see "Internet Agent" in the *GroupWise 8 Administration Guide*.

GROUPWISE INTERNET AGENT INSTALLATION SUMMARY SHEET

Under *Enable Web Console*, select *Yes* if you want to enable the Internet Agent Web console. If you want to restrict access to the Web console, enter a username and password.

4.3.9 NetWare Installation Options: Automatic Startup, Protected Mode, and Clustering

When you install the NetWare Internet Agent, the following options specific to NetWare are available in the GroupWise Installation program:

- "Automatic Startup" on page 82
- "Protected Mode" on page 82
- "Novell Cluster Services" on page 83

Automatic Startup

You can have the Installation program add a reference to the `gwia.ncf` file in the NetWare server's `autoexec.ncf` file so that the Internet Agent is automatically loaded whenever the server is started.

GROUPWISE INTERNET AGENT INSTALLATION SUMMARY SHEET

Under *NetWare Installation Options*, mark whether you want to configure the NetWare server to start the Internet Agent automatically.

Protected Mode

You can have the Installation program configure the NetWare Internet Agent to run in Protected Mode, which starts it in its own protected address space on the NetWare server.

Novell Cluster Services

Novell Cluster Services is a server clustering system that ensures high availability and manageability of critical network resources including volumes (where GroupWise domains reside) and applications (such as the Internet Agent). Novell Cluster Services supports failover, failback, and migration of individually managed cluster resources.

The NetWare Internet Agent can be configured to take advantage of the fault-tolerant environment provided by Novell Cluster Services if the following requirements are met:

- The domain where the Internet Agent is installed has already been created on a shared NSS volume in the cluster.
- The NetWare Internet Agent is being installed to a server that is part of the same cluster.

When the Internet Agent is configured for clustering, its startup file is configured with shared volume names rather than specific server names.

4.3.10 Linux Installation Options: LDAP Information, Automatic Startup, and Clustering

When you install the Linux Internet Agent, the following Linux-specific options are available in the Installation program:

- "LDAP Information" on page 83
- "Automatic Startup" on page 84
- "Clustering on Linux" on page 84

LDAP Information

The Installation program needs to access eDirectory through LDAP. eDirectory access is required in order to create the Internet Agent object. To obtain access, the Installation program needs the IP address and port number of an LDAP server, along with an eDirectory username and password to log in with. The user must have sufficient rights to create GroupWise objects in eDirectory. Because the Installation program uses LDAP to access eDirectory, you must provide the username in LDAP format. For example:

```
cn=admin,ou=users,o=corporate
```

If you want to secure the connection to eDirectory with SSL, you can specify a certificate file. For background information about SSL, see "Trusted Root Certificates and LDAP Authentication" in "Security Administration" in the *GroupWise 8 Administration Guide*.

IMPORTANT: If you do not want to use SSL, the LDAP server must be configured to accept clear text passwords. This is configured on the server's LDAP Group object in ConsoleOne by deselecting *Require TLS for Simple Binds with Password*. The LDAP snap-in to ConsoleOne is required in order to change the setting.

GROUPWISE INTERNET AGENT INSTALLATION SUMMARY SHEET

Under *Linux LDAP Authentication*, specify the IP address and port number of an LDAP server, a username in LDAP format, the password for the username, and if necessary, the full path to your SSL root certificate file.

Automatic Startup

The Linux Internet Agent is Run Control compliant. You can have the Installation program create symbolic links to the grpwise script in the rc3.d and rc5.d directories so that the Internet Agent starts on server restart into run level 3 or 5, depending on the configuration of your Linux system.

If you want to configure the Internet Agent for high availability, as described in "Enabling the Groupwise High Availability Service for the Linux GroupWise Agents" on page 209, it must be configured to start automatically on system startup.

GROUPWISE INTERNET AGENT INSTALLATION SUMMARY SHEET

Under *Linux Installation Options*, mark whether or not you want to configure the Linux server to start the Internet Agent automatically.

Clustering on Linux

On Linux, you can install the Internet Agent on Novell Cluster Services. The Linux GroupWise Installation program provides a *Configure GroupWise for Clustering* option that simplifies the process of installing the Linux Internet Agent on multiple nodes in the cluster.

GROUPWISE INTERNET AGENT INSTALLATION SUMMARY SHEET

Under *Linux Installation Options*, mark whether or not you want to configure the Linux Internet Agent for clustering using Novell Cluster Services. If you do, follow the installation instructions provided in "Implementing the Internet Agent in a Linux Cluster" in Novell Cluster Services on Linux in the *GroupWise 8 Interoperability Guide*, rather than the installation instructions provided in this guide.

4.3.11 Windows Installation Options: SNMP Traps and Service vs. Application

When you install the Windows Internet Agent, you have choices about how the Internet Agent interacts with the Windows operating system.

- "SNMP Traps" on page 85
- "Service vs. Application" on page 85

SNMP Traps

If you want to use an SNMP manager program, such as the Management and Monitoring Services component of Novell ZENworks Server Management, to monitor the Windows Internet Agent, you must install some SNMP components along with the Internet Agent software.

GROUPWISE INTERNET AGENT INSTALLATION SUMMARY SHEET

Under *Windows Installation Path*, mark *Install and Configure SNMP for GroupWise Agents* if you want to use an SNMP manager program.

If this option is dimmed during installation, the SNMP service has not been enabled on the Windows server where you are installing the Internet Agent. If you want to monitor the Internet Agent from an SNMP management program, the SNMP service must be enabled so you can select this option.

NOTE: The NetWare and Linux Internet Agents rely on operating system components for SNMP functionality and do not require this installation option.

Service vs. Application

When you run the Windows Internet Agent as a service, it can start automatically and run without a user interface, just like any Windows service.

GROUPWISE INTERNET AGENT INSTALLATION SUMMARY SHEET

Under *Windows Installation Path*, mark *Install as Windows Service* if you want to run the Internet Agent as a service.

When you run the Windows Internet Agent as a service, it must run under a specific Windows user account.

When the Internet Agent domain is located on the same server where you are installing the Internet Agent, the Internet Agent can run under the local system account. Installing the Internet Agent on the same server with its domain is recommended.

If the Internet Agent domain is located on a remote server, you must specify a user with rights to access the domain directory.

Windows	If the Windows Internet Agent needs to log in to another Windows server, provide a Windows username and password.
NetWare:	If the Windows Internet Agent needs to log in to a NetWare server, provide an existing eDirectory username and password, or create a new account for the agents, as described in "Creating a NetWare Account for Agent Access (Optional)" on page 193.
Linux:	Configuring the Windows Internet Agent to log in to a Linux server is not recommended.

GROUPWISE INTERNET AGENT INSTALLATION SUMMARY SHEET

Under *Windows Service Information*, record the account the Internet Agent will run under, and if necessary, the password for the account.

As with all Windows services, the Windows Internet Agent can be started automatically or manually as a service each time the Windows server restarts.

GROUPWISE INTERNET AGENT INSTALLATION SUMMARY SHEET

Under *Windows Service Information*, mark how you want the Windows Internet Agent to start each time the server is restarted.

NOTE: On Windows Server 2008, the Windows Internet Agent running as a service cannot interact with the desktop. It must run as a background process.

4.4 Setting Up the Internet Agent

Complete the following tasks to set up the Internet Agent:

- Section 4.4.1, "Installing the Internet Agent," on page 86
- Section 4.4.2, "Setting Up Internet Addressing," on page 91
- Section 4.4.3, "Assigning a Postmaster," on page 92
- Section 4.4.4, "Starting the Internet Agent," on page 93
- Section 4.4.5, "Testing the Internet Agent," on page 96

4.4.1 Installing the Internet Agent

As you install the Internet Agent, you are prompted to supply configuration information. You should have already reviewed Section 4.3, "Planning the GroupWise Internet Agent," on page 78 and filled out the summary sheet. The following sections step you through the GroupWise Installation program for installing the Internet Agent.

- "NetWare and Windows: Installing the Internet Agent Software" on page 86
- "Linux: Installing the Internet Agent Software" on page 89

IMPORTANT: If you plan install the Internet Agent in a clustered server environment, see the *GroupWise 8 Interoperability Guide* before you install the Internet Agent.

NetWare and Windows: Installing the Internet Agent Software

To install the Internet Agent:

1 Select an appropriate location to run the GroupWise Installation program.

NetWare:	If you are installing the NetWare Internet Agent, you can run the Installation program from any Windows machine that meets the administrator machine requirements listed in Section 2.1, "GroupWise Administration Requirements," on page 17.
Windows:	If you are installing the Windows Internet Agent, you must run the Installation program at the Windows server were you want to install the Internet Agent. It must also meet the administrator machine requirements as well as the server operating system requirements listed in Section 2.1, "GroupWise Administration Requirements," on page 17.

2 Make sure that no other GroupWise agents are running on the server where you want to install the Internet Agent.

3 Make sure that you have access to the directory where you want to install the Internet Agent and to the domain directory.

4 Log in to eDirectory with Admin-equivalent rights to the eDirectory tree where you want the Installation program to create the Internet Agent object.

5 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program.

or

Run setup.exe from the root of the *GroupWise 8* software image.

or

If you have already copied the Internet Agent software to a software distribution directory, run setup.exe from the root of the software distribution directory to start the GroupWise Installation program.

6 Select the language in which you want to run the GroupWise Installation program, then click *OK*.

NOTE: All available languages are included on the *GroupWise 8* DVD and the multilanguage version of the downloaded *GroupWise 8* software image, but you can select which languages you want to install.

The main GroupWise System Installation page appears.

7 Click *Install GroupWise System*, then click *Yes* to accept the License Agreement and display the Installation Type page.

When you install the Internet Agent, you are performing a Standard installation. Other installation options on this page are described in "Setting Up Predefined Installations" on page 55.

8 Click *Next* to accept the default of *Standard*.
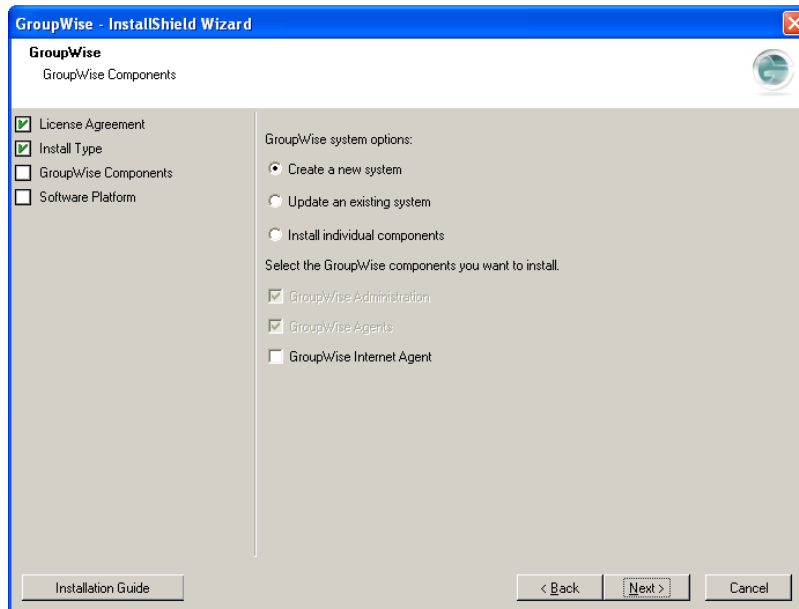
9 Select *Install Individual Components*, deselect *GroupWise Administration* and *GroupWise Agents*, then select *GroupWise Internet Agent*.

10 Follow the prompts, using the following information from the GroupWise Internet Agent Installation Summary Sheet:

Software Platform
Installation Path
NetWare Installation Options or Windows Installation Options

Server Information

Web Console Information

Relay Host

GroupWise Domain

GroupWise Internet Agent Name

Internet Mail Domain Name

11 If you are installing to a Windows server, provide the following information from your Basic GroupWise System Summary Sheet:

Windows Service Information

12 On the Summary and Modification page:

12a Review the installation information you have provided.

12b If you need to change information, select the information to change, then click *Edit Setting*.

12c Specify the desired information, then click *OK*.

13 Click *Install* to start the Internet Agent installation.

Status messages keep you informed about the installation progress.

14 Click *Finish*, when the installation is complete, then skip to Section 4.4.2, "Setting Up Internet Addressing," on page 91.

Linux: Installing the Internet Agent Software

As you install the Internet Agent, you are prompted to supply configuration information. Use Section 4.6, "GroupWise Internet Agent Installation Summary Sheet," on page 96 to understand the prompts and to record your installation and configuration information.

- ◆ "Installing the Internet Agent" on page 89
- ◆ "Configuring the Internet Agent" on page 90

IMPORTANT: If you plan to install the Internet Agent in a clustered server environment, see the *GroupWise 8 Interoperability Guide* before you install the Internet Agent.

If you are new to Linux, you might want to review Appendix A: Useful Linux Commands for Administering a GroupWise System in the *GroupWise 8 Administration Guide* before you install the Internet Agent on Linux.

Installing the Internet Agent

1 Make sure that LDAP is running on your eDirectory server and that it is configured to accept login from the Installation program.

The Installation program requires eDirectory access in order to create the Internet Agent object in eDirectory. The Installation program uses LDAP to gain the required access.

2 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program.

or

Run `install` from the root of the downloaded *GroupWise 8* software image.

or

If you have already copied the Internet Agent software to a software distribution directory, run `./install` from the root of the software distribution directory to start the GroupWise Installation program.

The X Window System is required for running the GUI GroupWise Installation program. If you are not using the X Window System, you can install GroupWise components individually, as described in "Installing the GroupWise Agents Using the Text-Based Installation Program" on page 201.

3 Select the language in which you want to run the GroupWise Installation program, then click *OK*.

NOTE: On Linux, all available languages are included in the same RPM, so all languages are always installed.

The main GroupWise System Installation page appears.
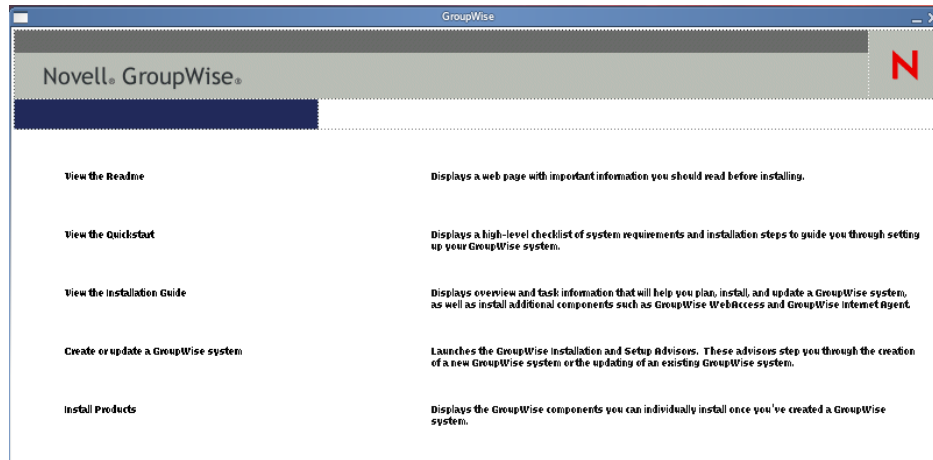
4 Click *Install Products > GroupWise Internet Agent > Install Internet Agent*

5 When the installation is complete, click *OK*.

The Internet Agent software is installed to `/opt/novell/groupwise/agents`.

6 Continue with Configuring the Internet Agent.

Configuring the Internet Agent

1 After the Internet Agent files have been installed, click *Configure Internet Agent*.

The Internet Agent installation and configuration steps are separate so that you can install updated agent software without repeating the agent configuration steps.
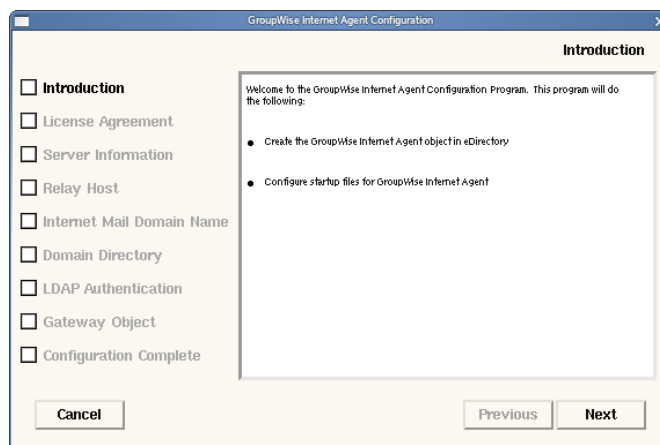
2 Follow the prompts, using the following information from the GroupWise Internet Agent Installation Summary Sheet in the order listed.

Server Information
Relay Host
Internet Mail Domain Name
Domain Directory
LDAP Authentication
Gateway Object

On the Configuration Complete page, *Launch Internet Agent on System Startup* is selected by default.

IMPORTANT: If you want to configure the Internet Agent for high availability, as described in "Enabling the Groupwise High Availability Service for the Linux GroupWise Agents" on page 209, it must be configured to start automatically on system startup.

---

3 If you do not want the Internet Agent to start automatically when the server restarts, deselect *Launch Internet Agent on System Startup*.

4 Click *Exit* to complete the configuration.

5 Continue with Setting Up Internet Addressing.

4.4.2 Setting Up Internet Addressing

When you install the GroupWise Internet Agent, GroupWise by default supports native Internet-style addressing consisting of a username and Internet domain name (for example, *userID@Internet_domain_name*). The GroupWise Installation program provided the opportunity for you to specify your Internet domain name on the Mail Domain Name page. It also offered you the alternative of entering the information from ConsoleOne. This can be convenient if you want to install the Internet Agent before you have received your Internet domain name from your Internet Service Provider (ISP). If you selected *Enter from ConsoleOne* on the Mail Domain Name page during installation, follow the instructions below to provide the Internet domain name in ConsoleOne.

1 In ConsoleOne, select the GroupWise System object, then click *Tools > GroupWise System Operations > Internet Addressing*.
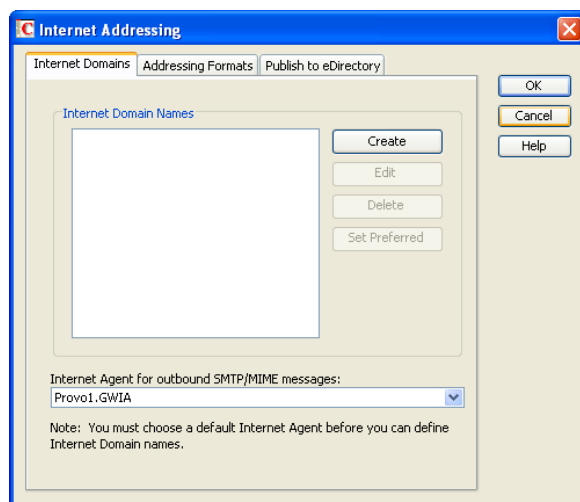
2 Click *Create*.
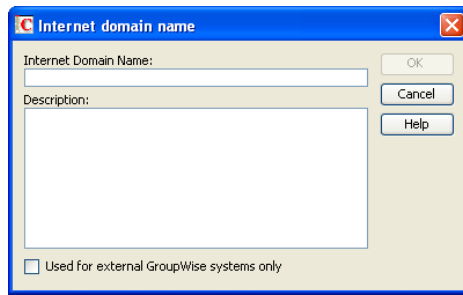
3 Specify the Internet domain name that you have received from your ISP (for example, `yourcompanyname.com`).

4 Add a description if needed, then click *OK* to add the Internet domain name to the list.

5 Click *OK* again to save the Internet domain name as part of your GroupWise system.

For more information about Internet addressing, see "Configuring Internet Addressing" in "Internet Agent" in the *GroupWise 8 Administration Guide*.

Your GroupWise system is now configured to receive e-mail addressed to that Internet domain name.

6 Continue with Assigning a Postmaster.

4.4.3 Assigning a Postmaster

The Internet requires each site to assign at least one user to be a Postmaster. The Postmaster is assigned to be the recipient of messages addressed to postmaster@*host*.

1 In ConsoleOne, right-click the Internet Agent object, then click *Properties*.

2 Click *GroupWise > Gateway Administrators*.
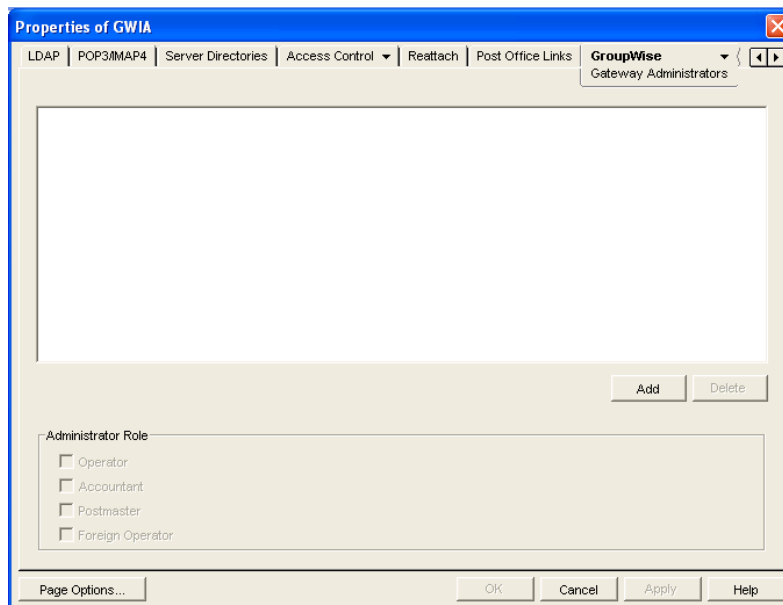
3 On the Gateway Administrators page, click *Add*, select a GroupWise user to be the Postmaster, then click *OK*.

4 Select the user from the list, then click *Postmaster*.

5 Click *OK* to save the information.

6 Continue with Starting the Internet Agent.

The Internet Agent can also be configured to send problem messages to the Postmaster. For instructions, see "Determining What to Do with Undeliverable Messages" in "Internet Agent" in the *GroupWise 8 Administration Guide*.

4.4.4 Starting the Internet Agent

After you've installed the Internet Agent, set up Internet addressing, and configured a Postmaster, you can start the Internet Agent.

- ◆ "NetWare: Starting the Internet Agent" on page 93
- ◆ "Linux: Starting the Internet Agent" on page 93
- ◆ "Windows: Starting the Internet Agent" on page 95

NetWare: Starting the Internet Agent

During installation, the Installation program copied the `gwia.ncf` startup file to the `sys:\system` directory (unless you specified a different directory). You use this file when you load the Internet Agent.

If you chose to have the Installation program add the `gwia.ncf` command to your `autoexec.ncf`, the Internet Agent loads whenever you start the server.

To manually start the Internet Agent:

1 At the NetWare server console, enter `gwia` to run the `gwia.ncf` file.

If the Internet Agent does not start successfully, see "Starting the NetWare GroupWise Agents" on page 197.

After you have started the Internet Agent, verify that the program is running. You can monitor the program from the Internet Agent server console. Press *F10-Options*, then press *F9-Stats*. If you see an error message in the Statistics window, the program has not loaded properly.

2 If you enabled the Internet Agent Web console, you can use the following URL to view the Web console:

`http://internet_agent_network_address:http_port`

For example:

`http://172.16.5.18:9850`

For more information, see "Using the Internet Agent Web Console" in "Internet Agent" in the *GroupWise 8 Administration Guide*.

3 Skip to with Section 4.4.5, "Testing the Internet Agent," on page 96.

Linux: Starting the Internet Agent

To start the Linux Internet Agent with a user interface:

1 If Sendmail, Postfix, or any other SMTP daemon is enabled on your Linux server, disable it before starting the Internet Agent.

For example, use the following commands to stop and disable Postfix:

```
/etc/init.d/postfix stop
chkconfig postfix off
```

As an alternative, you could configure the Internet Agent to bind exclusively to the server IP address, as described in "Binding the Internet Agent to a Specific IP Address" in "Internet Agent" in the *GroupWise 8 Administration Guide*, so that the Internet Agent does not conflict with the default Postfix IP address of 127.0.0.1 (the loopback address).

2 If you want to use the Internet Agent for POP3 and IMAP4 mail, make sure no POP3 or IMAP4 daemons are running on your Linux server.

3 Make sure that the MTA for the domain is running.

4 In a terminal window, become `root` by entering `su -` and the `root` password.

5 Change to the `/opt/novell/groupwise/agents/bin` directory.

6 Enter the following command to start the Internet Agent:

```
./gwia --show @gwia.cfg &
```

The --show switch starts the Internet Agent with a server console interface similar to that provided for the NetWare and Window Internet Agent. This user interface requires that the X Window System and Open Motif be running on the Linux server.

The @ startup switch points to the Internet Agent startup file and is required to start the Internet Agent.

The ampersand (&) causes the Internet Agent to run in the background, so that the terminal window you started it in is again available for use.

To remind yourself of this command when you are at your Linux server, view the gwia man page.
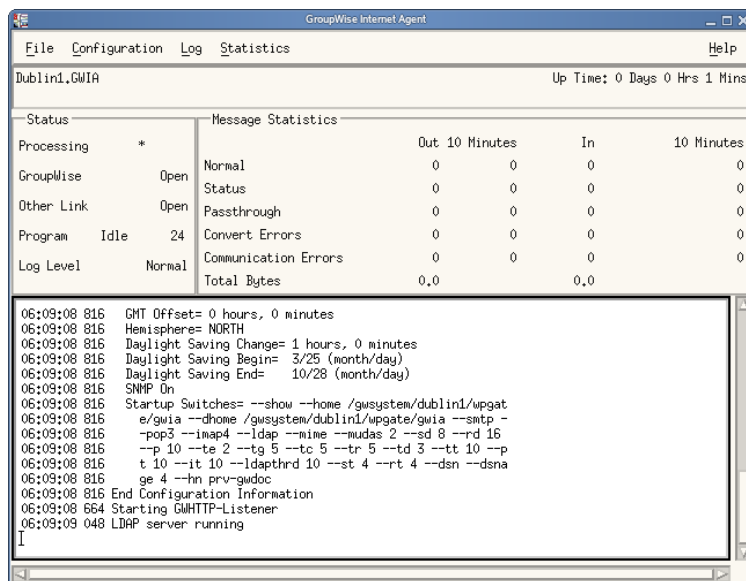
The status messages displayed on the Internet Agent server console are also written to the Internet Agent log file (*mmdd*log.*nnn*) in the `/var/log/novell/groupwise/`*domain*`.gwia` directory. The log file name includes the month and day when it was created, along with an incrementing extension to accommodate multiple log files on the same day.

After the Internet Agent starts successfully, refer to the following sections in Chapter 8, "Installing GroupWise Agents," on page 181 for additional information about managing the Internet Agent on Linux:

   ◆ "Starting the Linux GroupWise Agents as Daemons" on page 204

7 Skip to Section 4.4.5, "Testing the Internet Agent," on page 96

Windows: Starting the Internet Agent

1 If the domain directory is not on the Internet Agent server, map a drive to the domain directory as a user that has rights to access the domain directory.

2 If the Internet Agent is installed as a Windows application, click *Start > All Programs > GroupWise Internet Agent > GroupWise Internet Agent*.
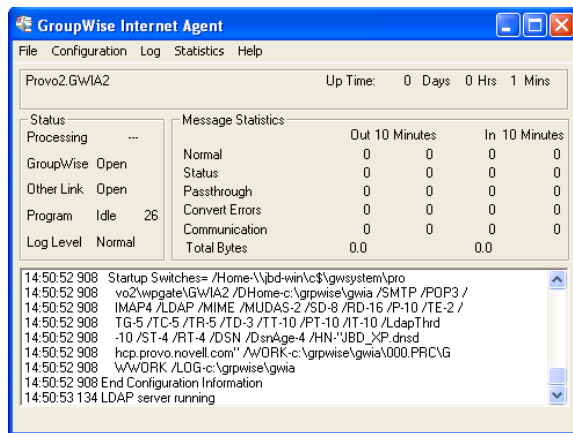
or

If the Internet Agent is installed as a Windows service, click the *Start menu > Control Panel > Administrative Tools > Services*. Right-click the GWIA service, then click *Start*.

If the Internet Agent does not start successfully, see "Starting the Windows GroupWise Agents" on page 222.

3 If you enabled the Internet Agent Web console, use the following URL to log into the Web console:

```
http://internet_agent_network_address:http_port
```

For example:

```
http://172.16.5.18:9850
```

For more information, see "Using the Internet Agent Web Console" in "Internet Agent" in the *GroupWise 8 Administration Guide*.

4 Continue with Testing the Internet Agent.

4.4.5 Testing the Internet Agent

After you've started the Internet Agent, you should send a message to ensure that the system is working properly.

1 Open a new mail message in your GroupWise client.

2 In the To field, enter the Internet address of a colleague or friend that is not in your GroupWise system.

3 Send the message, then contact the recipient to verify that he or she received it.

4 Have the recipient reply to your message to verify that you receive the reply in your GroupWise mailbox.

5 Continue with What's Next.

4.5 What's Next

The "Internet Agent" section of the *GroupWise 8 Administration Guide* provides information to help you further configure and maintain the Internet Agent, including how to:

- Configure addressing options. See "Configuring Internet Addressing" and "Configuring How the Internet Agent Handles E-Mail Addresses".

- Optimize configuration settings for the SMTP/MIME, IMAP, POP, and LDAP services. See "Configuring Internet Services".

- Use SSL to secure connections between the Internet Agent and other SMTP hosts, POP/IMAP clients, and the Internet Agent Web console. See "Securing Internet Agent Connections with SSL"

- Control users' access to SMTP/MIME (inbound and outbound), IMAP, and POP services. See "Controlling User Access to the Internet"

- Protect users from spam. See "Blocking Unwanted E-Mail from the Internet"

- Control logging for the Internet Agent. See "Using Internet Agent Log Files"

4.6 GroupWise Internet Agent Installation Summary Sheet

Installation Program Field	Value for Your GroupWise System	Explanation
Agent Software Platform: • NetWare • Windows • Linux		Section 4.3.1, "Selecting the Internet Agent Platform," on page 79
Installation Path:		Section 4.3.3, "Selecting the Internet Agent Installation Directory," on page 80

Installation Program Field	Value for Your GroupWise System	Explanation
NetWare Installation Options: ◆ Launch the Internet Agent on system startup ◆ Launch the Internet Agent in Protected Mode ◆ Configure the Internet Agent for clustering		Section 4.3.9, "NetWare Installation Options: Automatic Startup, Protected Mode, and Clustering," on page 82
Linux Installation Options: ◆ Launch the Internet Agent on system Startup ◆ Configure the Internet Agent for clustering		Section 4.3.10, "Linux Installation Options: LDAP Information, Automatic Startup, and Clustering," on page 83
Windows Installation Options: ◆ Install and configure SNMP for the Internet Agent ◆ Install the Internet Agent as a Windows service		Section 4.3.11, "Windows Installation Options: SNMP Traps and Service vs. Application," on page 84
Server Information: ◆ TCP/IP address IP address DNS hostname ◆ Message transfer port (default 7102)		Section 4.3.2, "Gathering Server Information," on page 79
Enable Web Console: ◆ Yes Username Password HTTP port (default 9850) ◆ No		Section 4.3.8, "Enabling the Internet Agent Web Console," on page 82
Relay Host: ◆ Send outbound mail directly to Internet hosts ◆ Send outbound mail through a relay host IP address of the relay host machine		Section 4.3.7, "Handling Outbound Mail," on page 81

Installation Program Field	Value for Your GroupWise System	Explanation
GroupWise Domain: ◆ Domain directory ◆ Internet Agent subdirectory ◆ Domain context in LDAP format		Section 4.3.4, "Gathering Domain and Gateway Information," on page 80

LDAP Authentication:
 	
Linux only
 	
◆ LDAP server IP address
 	
◆ Port
 	
◆ Username
 	
◆ Password
 	
◆ Use SSL connection
 	
   ◆ Yes
 	
     Path to SSL certificate file
 	
   ◆ No
		Section 4.3.10, "Linux Installation Options: LDAP Information, Automatic Startup, and Clustering," on page 83

Internet Agent Object Name: ◆ DNS hostname or IP address of tree ◆ Username ◆ Context ◆ Password ◆ Internet Agent object name Domain name and context		"Accessing the eDirectory Tree" on page 27 Section 4.3.5, "Selecting the Gateway Object Name," on page 81
Internet Mail Domain Name: ◆ Enter from ConsoleOne		Section 4.3.6, "Specifying the Internet Mail Domain Name for Your GroupWise System," on page 81

Installation Program Field	Value for Your GroupWise System	Explanation

Service Information:
 	
Windows only
 	
   ◆ User local system account
       ◆ Allow service to interact with desktop
   ◆ Use this Windows user account
       ◆ Name of Windows user account
       ◆ Password
   ◆ Startup type
       ◆ Automatic
       ◆ Manual
       ◆ Disabled
		Section 4.3.11, "Windows Installation Options: SNMP Traps and Service vs. Application," on page 84

5 Installing GroupWise WebAccess

Novell GroupWise WebAccess enables user access to GroupWise mailboxes through Web browsers, WAP-enabled cellular phones, and Pocket PCs. The following sections provide information to help you successfully install GroupWise WebAccess (including GroupWise WebPublisher if desired) in your existing GroupWise system.

- Section 5.1, "GroupWise WebAccess Overview," on page 101
- Section 5.2, "WebAccess System Requirements," on page 105
- Section 5.3, "Planning GroupWise WebAccess," on page 107
- Section 5.4, "Setting Up GroupWise WebAccess," on page 115
- Section 5.5, "What's Next," on page 129
- Section 5.6, "GroupWise WebAccess Installation Summary Sheets," on page 130

IMPORTANT: If you plan to install WebAccess in a clustered server environment, see the *GroupWise 8 Interoperability Guide* before you install WebAccess.

5.1 GroupWise WebAccess Overview

- Section 5.1.1, "GroupWise WebAccess Introduction," on page 101
- Section 5.1.2, "GroupWise WebAccess Components," on page 102
- Section 5.1.3, "One WebAccess Server vs. Two," on page 103
- Section 5.1.4, "WebAccess Security Requirements," on page 103
- Section 5.1.5, "GroupWise Document Viewer Agent," on page 105

5.1.1 GroupWise WebAccess Introduction

GroupWise WebAccess, when used in a Web browser, provides most of the functionality available in the other GroupWise clients. For information about tasks that can be completed using the WebAccess client, see the WebAccess Help after installation. WebAccess client functionality on mobile devices or PDAs might be limited in comparison to the other GroupWise clients.

GroupWise WebAccess also includes GroupWise WebPublisher, an optional extension to GroupWise WebAccess. GroupWise WebPublisher lets GroupWise users publish documents from a GroupWise library to the Web. Web users can then view the published documents in their Web browsers.

Figure 5-1 *Login Requirements for WebAccess v.s WebPublisher*
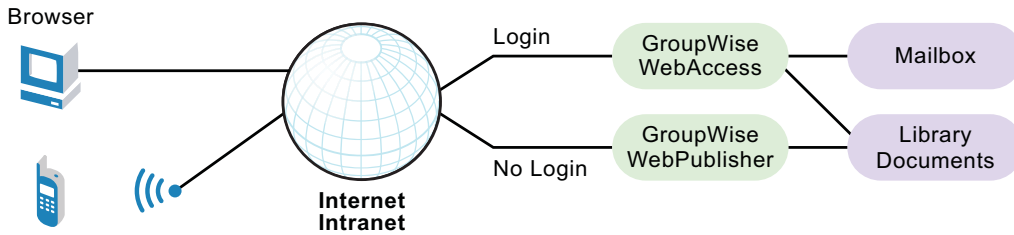
As shown above, GroupWise WebAccess requires users to have a mailbox in a GroupWise post office. GroupWise WebPublisher, on the other hand, is designed to provide public access to GroupWise library documents; WebPublisher users do not require a mailbox.

After you've finished setting up GroupWise WebAccess, you should look at Section 5.5, "What's Next," on page 129 for additional information you might want to be aware of as you configure, maintain, and expand GroupWise WebAccess.

5.1.2 GroupWise WebAccess Components

GroupWise WebAccess consists of four components: the WebAccess Application, the WebPublisher Application, the WebAccess Agent, and the Document Viewer Agent.

Figure 5-2 *GroupWise WebAccess Components*
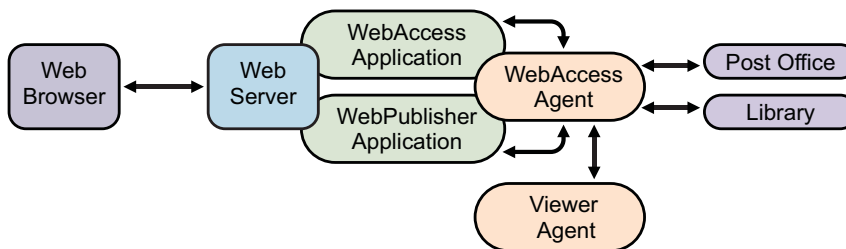
WebAccess Application: The WebAccess Application, which resides on the Web server, provides the WebAccess user interface. As users perform actions in the WebAccess client, the WebAccess Application passes information between the Web browser and the WebAccess Agent.

WebPublisher Application: The WebPublisher Application, which resides on the Web server, provides the WebPublisher user interface. As users perform actions in the WebPublisher client, the WebPublisher Application passes information between the Web browser and the WebAccess Agent.

WebAccess Agent: The WebAccess Agent receives user requests from the WebAccess Application and WebPublisher Application, accesses post offices and libraries to process the requests, and then passes information back to the applications.

The WebAccess Agent is required for both WebAccess and WebPublisher. The WebAccess Application must be installed in order to use WebAccess. Likewise, the WebPublisher Application must be installed in order to use WebPublisher.

Document Viewer Agent: The Document Viewer Agent isolates the document conversion task from the WebAccess Agent. The Viewer Agent can simultaneously convert multiple documents into HTML format. If it encounters a problem converting a document, the problem does not affect conversion of other documents, nor does it affect the functioning of the WebAccess Agent. Therefore, WebAccess users do not experience interruptions because of documents that fail to convert into HTML.

5.1.3 One WebAccess Server vs. Two

The WebAccess Application and WebPublisher Application can be installed to a NetWare, Linux, or Windows Web server. If desired, you can install the WebAccess Agent and the Viewer Agent on the same server with the Web server.

Figure 5-3 *The GroupWise WebAccess Application, WebPublisher Application, WebAccess Agent, and Viewer Agent Are All Installed on the Web Server*
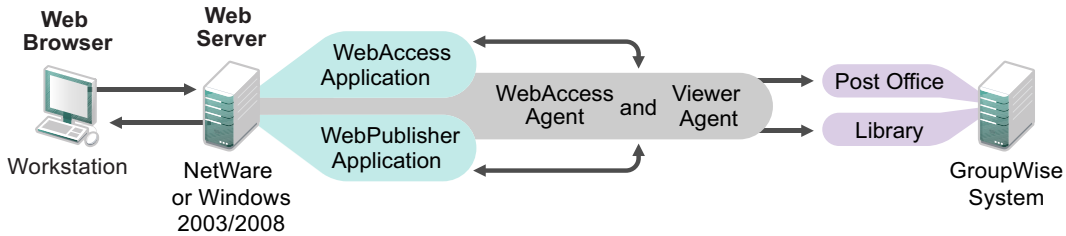
The server where they run together must be a Web server because the WebAccess Application is installed into the Web server installation.

The WebAccess Agent and Viewer Agent can also run on a different server from where the WebAccess Application runs.

Figure 5-4 *The GroupWise WebAccess and WebPublisher Applications Are Installed on the Web Server, and the WebAccess Agent and Viewer Agent Are Installed on a NetWare or Windows Server*
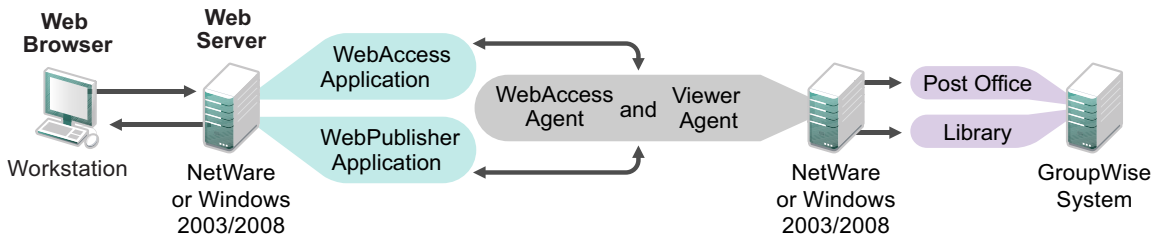
Security, which discussed in Section 5.1.4, "WebAccess Security Requirements," on page 103, might also determine whether you run the WebAccess Agent and Viewer Agent on the same server as the Web server.

5.1.4 WebAccess Security Requirements

GroupWise WebAccess can be configured to support the level of security you have established for your Internet/intranet communication.

If you are not concerned about security issues (for example, you only plan to use WebAccess on a secured intranet), you can install the WebAccess components to any servers that provide access for your users and meet the requirements listed in Section 5.2, "WebAccess System Requirements," on page 105.

If you plan to use WebAccess to provide users with access to their mailboxes from anywhere on the Internet (rather than simply within a secured intranet), and you already have a firewall in place to provide security, you have the following options for configuring WebAccess:

- Install all WebAccess components inside your firewall and use a proxy service. See "Configuration with a Proxy Service" on page 104. This is the recommended configuration.
- Install the WebAccess and WebPublisher Applications on a Web server outside your firewall and the WebAccess Agent and Viewer Agent on a server inside your firewall. See "Configuration without a Proxy Service" on page 104.

Configuration with a Proxy Service

If your firewall includes a proxy service, you can install the WebAccess Application and WebPublisher Application to a Web server inside your firewall, and the WebAccess Agent and Viewer Agent to another server inside the firewall, as shown in the following illustration.

Figure 5-5   *WebAccess Installed inside the Firewall*

Internet — Firewall Server with Proxy Service — Web Server with WebAccess and WebPublisher Applications — Network Server with WebAccess Agent and Viewer Agent — GroupWise System
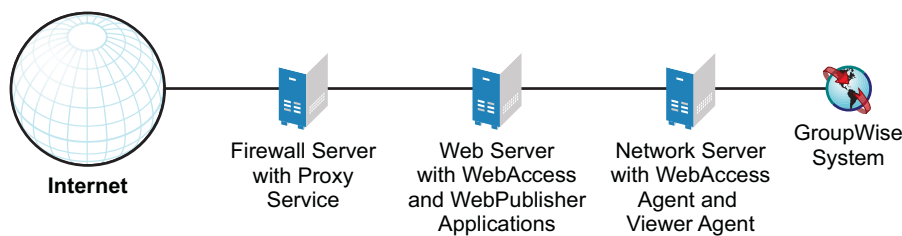
If desired, the WebAccess Agent and Viewer Agent can also be installed to the Web server rather than a separate server, as discussed in Section 5.1.3, "One WebAccess Server vs. Two," on page 103.

Configuration without a Proxy Service

If your firewall does not provide a proxy service, you need to install the WebAccess Application and WebPublisher Application to a Web server that is outside the firewall. Because the WebAccess Agent requires direct access (mapped drive or UNC path) to a GroupWise domain directory, it needs to be installed to a server that is located within the firewall.

Figure 5-6   *WebAccess Installed outside the Firewall*
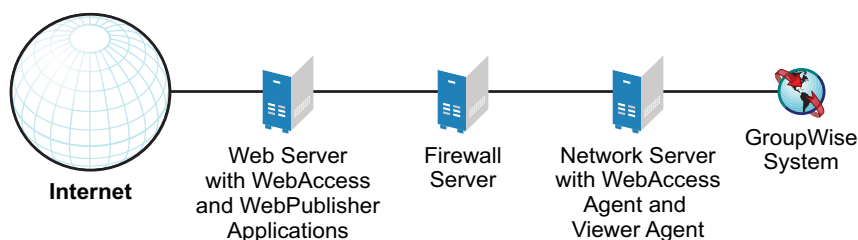
Internet — Web Server with WebAccess and WebPublisher Applications — Firewall Server — Network Server with WebAccess Agent and Viewer Agent — GroupWise System

The firewall must allow inbound IP packets to be sent from the Web server to the IP address and port number of the WebAccess Agent (for example, 172.16.5.18:7205).

In addition, the firewall must allow outbound IP packets to be sent from the WebAccess Agent to the Web server. This requires all high ports (above 1023) to be open to outbound IP packets.

5.1.5 GroupWise Document Viewer Agent

The documents that users attach to e-mail messages are as varied as the combinations of document formats, tools, and users throughout the world. In order to display documents in your Web browser, WebAccess must convert them to HTML. Because some documents contain unexpected data, WebAccess cannot convert them. Before GroupWise 7, the WebAccess Agent sometimes shut down when it could not convert a document. This occurrence then interrupted the activities of all WebAccess users.

Starting in GroupWise 7, the Document Viewer Agent resolved the problem by taking over the document conversion task from the WebAccess Agent. The Viewer Agent processes multiple documents simultaneously, and if it encounters a problem with a document, the problem does not affect its processing of other documents, nor does it affect the functioning of the WebAccess Agent. Therefore, WebAccess users no longer experience interruptions because of documents that fail to convert into HTML.

The Viewer Agent is automatically installed along with the WebAccess Agent, and the WebAccess Agent manages the Viewer Agent, starting and stopping it as needed. The default configuration of the Viewer Agent is sufficient to provide basic document conversion functionality. The default configuration includes a minimum of 5 worker threads that run independently of the Viewer Agent process. Additional Viewer Agent functionality can be enabled using startup switches in the Viewer Agent startup file (gwdva.dva). Configuring the Viewer Agent in ConsoleOne is not currently possible. For more information, see "Configuring the Document Viewer Agent" in "WebAccess" in the *GroupWise 8 Administration Guide*.

5.2 WebAccess System Requirements

❑ GroupWise 8 system: The GroupWise 8 WebAccess Agent can only access GroupWise 8 post offices and libraries

❑ x86-32 processor or x86-64 processor

   On a 64-bit processor, GroupWise still runs as a 32-bit application.

❑ Any of the following server operating systems for the WebAccess Agent and the Viewer Agent:

   ◆ Novell Open Enterprise Server (OES) 2 (NetWare or Linux version) or OES 11, plus the latest Support Pack

   ◆ NetWare 6.5, plus the latest Support Pack

   ◆ SUSE Linux Enterprise Server (SLES) 10 or SLES 11, plus the latest Support Pack

   ◆ Windows Server 2003, Windows Server 2003 R2, Windows Server 2008, or Windows Server 2008 R2, plus the latest Service Pack

❑ Adequate server memory as required by the operating system

   NOTE: On NetWare only, the Document Viewer Agent requires 1 GB of memory for its own use in its default configuration of 5 worker threads.

❑ Any of the following Web servers for the WebAccess Application and the WebPublisher Application:

   ◆ NetWare 6.5: Apache 2.0 plus:

      ◆ Tomcat 4.1

      ◆ JVM 1.4.2

      ◆ Jakarta Connector 1.2

- OES 2 Linux / SLES 10: Apache 2.2 plus:
    - Tomcat 5.0 or later
    - JVM 1.4.2 or later
    - ModProxy Module
- OES 11 / SLES 11: Apache 2.2 plus:
    - Tomcat 6.0 or later
    - JVM 1.5 or later
    - ModProxy Module
- Windows Server 2003/2003 R2: Microsoft Internet Information Server (IIS) 6 or later plus:
    - Tomcat 5.5 or later
    - JVM 1.5 or later
    - Jakarta Connector 1.2 or later
- Windows Server 2008/2008 R2: Microsoft Internet Information Server (IIS) 7 or later plus:
    - Tomcat 5.5 or later
    - JVM 1.5 or later
    - Jakarta Connector 1.2 or later

❒ Any of the following Web browsers for the WebAccess client and the WebAccess Agent Web console:
- Windows: Microsoft Internet Explorer 6.0 or later; Mozilla Firefox
- Macintosh: The latest version of Safari for your version of Mac OS; Mozilla Firefox
- Linux: Mozilla Firefox

❒ Any mobile device that supports Wireless Access Protocol (WAP) and has a microbrowser that supports Hypertext Markup Language (HTML) 4.0 or later, or Wireless Markup Language (WML) 1.1 or later

❒ Any of the following environments for running the GroupWise Installation program:
- Windows XP, Windows Vista, or Windows 7, plus the latest Service Pack, plus the Novell Client
- Windows Server 2003, Windows Server 2003 R2, Windows Server 2008, or Windows Server 2008 R2, plus the latest Service Pack, plus the Novell Client
- Novell Open Enterprise Server (OES) 2 (Linux version) or OES 11, plus the latest Support Pack
- SUSE Linux Enterprise Server (SLES) 10 or SLES 11, plus the latest Support Pack

    The X Window System is required by the GUI GroupWise Installation program that steps you through the process of creating a new GroupWise system. A text-based Installation program is also available.

❒ Adequate server disk space:
- Approximately 215 MB for the WebAccess program files (111 MB shared with Monitor; varies by platform)
- Approximately 50 MB for the Document Viewer Agent program files (varies by platform)
- Adequate disk space for the document cache and document quarantine used by the associated Document Viewer Agent, as described in "Configuring the Document Viewer Agent" in "WebAccess" in the *GroupWise 8 Administration Guide*

5.3 Planning GroupWise WebAccess

Use the "GroupWise WebAccess Installation Summary Sheets" on page 130 to record your decisions about how to install WebAccess. The topics in this section present the required information in a convenient planning sequence. The Installation Summary Sheets organize the information in the order in which you need it during installation.

- Section 5.3.1, "Deciding Where to Install the GroupWise WebAccess Components," on page 107
- Section 5.3.2, "Determining the WebAccess Agent's Configuration," on page 108
- Section 5.3.3, "Determining the WebAccess and WebPublisher Applications' Configuration," on page 114

For additional assistance in planning your GroupWise installation, see GroupWise Best Practices (http://wiki.novell.com/index.php/GroupWise) and GroupWise 8 Good and Bad Habits (http://wiki.novell.com/index.php/GroupWise_8_Good_and_Bad_Habits).

IMPORTANT: If you plan to install WebAccess in a clustered server environment, refer to the *GroupWise 8 Administration Guide* as you plan your WebAccess installation.

5.3.1 Deciding Where to Install the GroupWise WebAccess Components

After reviewing Section 5.1, "GroupWise WebAccess Overview," on page 101 and the system requirements listed in Section 5.2, "WebAccess System Requirements," on page 105, plan where you want to install the WebAccess components in your system.

- "Web Access Server" on page 107
- "Web Server" on page 108

Web Access Server

For best performance, the WebAccess Agent should be installed on the same server where the domain it belongs to is located. If you need to install it on a remote server, you can create a secondary domain on the remote server so that the WebAccess Agent has a local domain and MTA to communicate with. The default installation directories are

NetWare:	`sys:\system`
Linux:	`/opt/novell/groupwise/agents`
Windows:	`c:\Program Files\Novell\GroupWise Server\WebAccess`

GROUPWISE WEBACCESS AGENT INSTALLATION SUMMARY SHEET

Under *Agent Software Platform*, mark the platform where you will install the WebAccess Agent.

Under *Server Information*, specify the directory where you want to install the WebAccess Agent software.

Web Server

The WebAccess Application integrates with your Web server. The location of the Monitor Application files that are installed depends on the Web server that it is being integrated with. The default Web server paths vary by platform:

Apache Web Server for NetWare:	`drive:\Apache2`
Apache Web Server for OES Linux:	`/etc/opt/novell/httpd/conf.d`
Tomcat for OES Linux:	`/var/opt/novell/tomcat5/webapps`
Apache Web Server for SLES:	`/etc/apache2/conf.d`
Tomcat for SLES:	`/srv/www/tomcat5/base/webapps`
Microsoft Internet Information Server (IIS) for Windows:	`c:\inetpub\wwwroot`

The Web server uses a servlet engine in order to incorporate product-specific components, such as the WebAccess Application, into its functioning.

GROUPWISE WEBACCESS APPLICATION INSTALLATION SUMMARY SHEET

Under *Web Server Information*, select the type of Web server where you will install the WebAccess Application and WebPublisher Application, then specify the Web server's root directory.

On Windows, if the Internet Information Server services more than one Web site, specify the Web site where you want to install the WebAccess Application.

IMPORTANT: Starting with GroupWise 8, you must update the WebAccess Agent and the WebAccess Application at the same time. Mixed-version configurations are no longer supported.

5.3.2 Determining the WebAccess Agent's Configuration

As you install the WebAccess Agent, you are prompted to supply the configuration information described in the following sections:

- "Network Address" on page 108
- "Gateway Directory Location and Name" on page 109
- "Gateway Object Name" on page 109
- "Domain and Post Office Access" on page 110
- "Web Console" on page 111
- "WebPublisher" on page 111
- "NetWare Installation Option: Clustering" on page 112
- "Linux Installation Options: LDAP Information and Clustering" on page 112
- "Windows Installation Options: SNMP Traps and Service vs. Application" on page 113

Network Address

The WebAccess Agent communicates with the WebAccess Application and WebPublisher Application (on the Web server) through TCP/IP.

For a complete list of default port numbers used by the GroupWise agents, refer to "GroupWise Port Numbers" in the *GroupWise 8 Administration Guide*.

Gateway Directory Location and Name

The WebAccess Agent requires a GroupWise gateway directory in which to store configuration information and work files. The gateway directory must be located under a GroupWise domain directory. The default directory name is webac80a. If you change the name, use the following platform-specific conventions:

NetWare: Use a maximum of 8 characters

Linux: Use only lowercase characters

Windows: No limitations.

After you specify the domain directory location and a gateway directory name, the Installation program creates the gateway directory under the *domain*\wpgate directory (for example, provo\wpgate\webac80a).

Gateway Object Name

The WebAccess Agent also requires a GroupWise Gateway object in Novell eDirectory. By default, it is named the same as the gateway directory and is referred to as the WebAccess Agent object. This object stores the WebAccess Agent's information and enables configuration of the agent through ConsoleOne.

The WebAccess Agent object is created below the Domain object. If you have multiple domains, the Installation program uses the Domain object associated with the domain directory where you are creating the WebAccess Agent gateway directory.

Domain and Post Office Access

The WebAccess Agent requires access to the domain. It also requires access to each post office where mailboxes or libraries are located that WebAccess or WebPublisher users will access.

- ◆ **Domain:** The WebAccess Agent needs direct access to the domain directory so that it can write to its gateway directory (`domain\wpgate\webac80a`). If the WebAccess Agent cannot be installed on the same server where the domain directory is located, you can create an intermediary domain on the WebAccess Agent server so that the WebAccess Agent has a local MTA to communicate with.

- ◆ **Post Office:** The WebAccess Agent needs direct access to the post office directory so that it can write to the POA's input queue, or it needs client/server access (TCP/IP) to the post office's POA. By default, the WebAccess Agent uses whatever access mode has been established for the post office on the Post Office Settings property page of the Post Office object in ConsoleOne. TCP/IP is highly recommended.

If the WebAccess Agent must access a remote server in order to access a domain or post office, it needs to be able to log in to the remote server.

NetWare:	Ensure that an eDirectory user account exists that provides the required access to the domain and post office directories. For direct access to the domain directory or a post office directory, the WebAccess Agent needs Read, Write, Create, Erase, Modify, and File Scan rights.
Windows:	Ensure that a Windows user account exists on the Windows server for the agent.
	If the domain or any post office directories directly accessed by the WebAccess Agent are on remote Windows servers, ensure that the Windows user account provides Full Control access to those directories.
	If the domain directory or any post office directories directly accessed by the WebAccess Agent are on remote NetWare servers, ensure that the WebAccess Agent has an eDirectory user account with the same username and password as the agent's Windows user account. The eDirectory account must provide Read, Write, Create, Erase, Modify, and File Scan rights to the directories.

GROUPWISE WEBACCESS INSTALLATION SUMMARY SHEET

Under *NetWare eDirectory Authentication*, specify the eDirectory username and password you want the WebAccess Agent to use to access the domain directory and post office directories. This applies to the NetWare WebAccess Agent only.

If you are using the Windows WebAccess Agent, ensure that the appropriate Windows and eDirectory user accounts exist. Specify them under *WIndows Service User* and *NetWare eDirectory Authentication* so that the Windows WebAccess Agent can access domains on Windows and NetWare servers.

Web Console

The WebAccess Agent server console enables you to monitor the WebAccess Agent from the server where it is running. If you want, you can enable the WebAccess Agent Web console. The Web console lets you view the WebAccess Agent's statistical and diagnostic information through a Web browser, which is useful if want to see the WebAccess Agent's activity without physically visiting the agent's server.

You access the Web console by entering the WebAccess Agent's network address and HTTP port number in a Web browser (for example, `http://172.16.5.18:7211`). If necessary, you can change the WebAccess Agent's default HTTP port number (7211).

If you want to restrict access to the Web console, you can assign a username and password. This can be any username and password you want. By default, the username and password are passed through a non-secure connection between the Web browser and the WebAccess Agent. Therefore, do not use an existing eDirectory username and password unless you secure this connection by using SSL. For information about securing the WebAccess Agent's connections, see "WebAccess" in the *GroupWise 8 Administration Guide*.

GROUPWISE WEBACCESS AGENT INSTALLATION SUMMARY SHEET

Under *Enable Web Console*, select *Yes* if you want to enable the Web console. If you want to restrict access to the Web console, provide a username and password.

WebPublisher

You can choose whether or not you want the WebAccess Agent to support GroupWise WebPublisher. If you enable WebPublisher support, you need to specify a GroupWise account (mailbox ID and password). The GroupWise account serves two purposes:

- GroupWise users publish documents to WebPublisher users by sharing the documents with this GroupWise account.
- When Internet users access WebPublisher, the WebAccess Agent logs in to this GroupWise account. This lets the WebAccess Agent know which documents have been shared with WebPublisher users. It can then retrieve these documents (and only these documents) for the WebPublisher users.

Create a new GroupWise account specifically for GroupWise WebPublisher. If you've already created an eDirectory account for the WebAccess Agent to use when accessing domain or post office directories, as described in "Domain and Post Office Access" on page 110, you might want to create the GroupWise account under that eDirectory user account.

GROUPWISE WEBACCESS AGENT INSTALLATION SUMMARY SHEET

Under WebPublisher Support, select *Yes* if you want to enable the WebAccess Agent to support WebPublisher, then enter the Mailbox ID and password for the GroupWise account you want the WebAccess Agent to use.

If you enable GroupWise WebPublisher support, you need to select the libraries that you want to make public. The WebAccess Agent, acting on behalf of WebPublisher users, only accesses documents in public libraries.

Making a library public does not automatically give WebPublisher users access to all documents in the library. For WebPublisher users to have access to a document in a public library, the document's owner must have shared the document with the WebPublisher user account.

NOTE: When a WebPublisher user requests a library document in HTML format rather than its native format, the Viewer Agent renders the document from its native format to HTML format. The Viewer Agent can be configured to cache the HTML document to a subdirectory of the WebAccess Agent installation directory. This enables the WebAccess Agent to use the cached document for future requests. For instructions to configure the Viewer Agent, see "WebAccess" in the *GroupWise 8 Administration Guide*.

NetWare Installation Option: Clustering

Novell Cluster Services is a server clustering system that ensures high availability and manageability of critical network resources including volumes (where GroupWise domains and post offices reside) and applications (such as the GroupWise WebAccess Agent). Novell Cluster Services supports failover, failback, and migration of individually managed cluster resources.

During installation, the NetWare WebAccess Agent can be configured to take advantage of the fault-tolerant environment provided by Novell Cluster Services if the following requirements are met:

- The domains and post offices to be serviced by the NetWare WebAccess Agent have already been created on shared NSS volumes in the cluster.
- The NetWare WebAccess Agent is being installed to a server that is part of the same cluster.

When the WebAccess Agent is configured for clustering, its startup file (`webac80a.waa`) is configured with shared volume names rather than specific server names.

Linux Installation Options: LDAP Information and Clustering

When you install the Linux WebAccess Agent, the following Linux-specific options are available in the Installation program:

- "LDAP Information" on page 112
- "Clustering on Linux" on page 113

LDAP Information

If you are installing the Linux WebAccess Agent and WebAccess Application, the Installation program needs to access eDirectory through LDAP. eDirectory access is required in order to create the WebAccess Agent and WebAccess Application objects. To obtain access, the Installation program needs the IP address and port number of an LDAP server, along with an eDirectory username and

password to log in with. The user must have sufficient rights to create GroupWise objects in eDirectory. Because the Linux Installation program uses LDAP to access eDirectory, you must provide the username in LDAP format. For example:

```
cn=admin,ou=users,o=corporate
```

If you want to secure the connection to eDirectory with SSL, you can specify a certificate file. For background information about SSL, see "Trusted Root Certificates and LDAP Authentication" in "Security Administration" in the *GroupWise 8 Administration Guide*.

IMPORTANT: If you do not want to use SSL, the LDAP server must be configured to accept clear text passwords. This is configured on the server's LDAP Group object in ConsoleOne by deselecting *Require TLS for Simple Binds with Password*. The LDAP snap-in to ConsoleOne is required in order to change the setting.

GROUPWISE WEBACCESS AGENT INSTALLATION SUMMARY SHEET

Under *Linux LDAP Authentication*, specify the IP address and port number of an LDAP server, a username in LDAP format, the password for the username, and if necessary, the full path to your SSL root certificate file.

Clustering on Linux

On Linux, you can install the WebAccess Agent on Novell Cluster Services. The Linux GroupWise Installation program provides a *Configure GroupWise for Clustering* option that simplifies the process of installing the Linux WebAccess Agent on multiple nodes in the cluster.

GROUPWISE WEBACCESS AGENT INSTALLATION SUMMARY SHEET

Under *Linux Installation Options*, mark whether you want to configure the Linux WebAccess Agent for clustering using Novell Cluster Services. If you do, follow the installation instructions in "Implementing WebAccess in a Linux Cluster" in Novell Cluster Services on Linux in the *GroupWise 8 Interoperability Guide*, rather than the installation instructions in this guide.

Windows Installation Options: SNMP Traps and Service vs. Application

The Windows WebAccess Agent can be configured to support SNMP. This enables the WebAccess Agent to be monitored and managed through an SNMP management program.

GROUPWISE WEBACCESS AGENT INSTALLATION SUMMARY SHEET

If you want the WebAccess Agent to support SNMP, under *Windows Execution*, select *Install and Configure SNMP for WebAccess Agent*.

NOTE: The NetWare and Linux WebAccess Agents rely on operating system components for SNMP functionality and do not require this installation option.

The WebAccess Agent can run as a Windows service rather than a standard Windows application. To do so, the WebAccess Agent service requires a user account. The requirements for the Windows service user account are the same as those listed for the Windows WebAccess Agent in "Domain and Post Office Access" on page 110.

NOTE: On Windows Server 2008, the Windows WebAccess Agent running as a service cannot interact with the desktop. It must run as a background process.

5.3.3 Determining the WebAccess and WebPublisher Applications' Configuration

As you install the WebAccess Application and/or the WebPublisher Application to a Web server, you are prompted to supply the configuration information described in the following sections:

- ◆ "Default Language" on page 114
- ◆ "eDirectory Objects and Configuration Files" on page 114

NOTE: You should have already selected the Web server where you will install the WebAccess Application and WebPublisher Application. If you have not, see Section 5.3.1, "Deciding Where to Install the GroupWise WebAccess Components," on page 107.

Default Language

The Installation program installs all available languages. You need to specify which language should be used when displaying the Novell Web Services page. When users access the Novell Web Services page, they can use the default language for WebAccess or WebPublisher, or they can select another language.

For more information, see "Multilingual GroupWise Systems" in the *GroupWise 8 Administration Guide*.

eDirectory Objects and Configuration Files

WebAccess Application and WebPublisher Application configuration information is stored in two places:

- ◆ eDirectory objects

- The `webacc.cfg` and `webpub.cfg` files, located in the following directories:

NetWare:	`sys:\novell\groupwise\webaccess` `sys:\novell\groupwise\webpublisher`
Linux:	`/var/opt/novell/groupwise/webaccess` `/var/opt/novell/groupwise/webpublisher`
Windows	`c:\novell\groupwise\webaccess` `c:\novell\groupwise\webpublisher`

The WebAccess Application object and WebPublisher Application object allow you to easily modify configuration information in ConsoleOne. The eDirectory information is the master information; any changes made to the objects in eDirectory are also written to the configuration files.

In some installation scenarios, such as installing to a Web server outside a firewall, you might not have access to eDirectory, which means the Installation program cannot create the objects. It can, however, still create the configuration files on the Web server. In this case, to change the application's configuration, you need to manually modify the `webacc.cfg` and `webpub.cfg` files.

You need to select the eDirectory container where you want the objects created. They are all created in the same container. The default container is the Domain object, which means the objects are created beneath the Domain object along with the MTA, Internet Agent, and WebAccess objects.

NOTE: Each application also has several providers associated with it. For example, the WebAccess Application has a GroupWise Provider and an LDAP Provider. The GroupWise Provider is the component that actually communicates with the WebAccess Agent to request information for users. The LDAP Provider communicates with LDAP servers to enable users to search LDAP address books. Provider objects are created in the same location as the application objects.

GROUPWISE WEBACCESS APPLICATION INSTALLATION SUMMARY SHEET

Under *WebAccess Application Object* and if needed, under *WebPublisher Application Object*, specify the tree where you want the objects created, then specify the context. If you will be installing from a location where you don't have access to eDirectory, you can skip this item.

5.4 Setting Up GroupWise WebAccess

IMPORTANT: Starting with GroupWise 8, you must update the WebAccess Agent and the WebAccess Application at the same time. Mixed-version configurations are no longer supported.

- Section 5.4.1, "NetWare and Windows: Setting Up GroupWise WebAccess," on page 115
- Section 5.4.2, "Linux: Setting Up GroupWise WebAccess," on page 122
- Section 5.4.3, "Testing GroupWise WebAccess and WebPublisher," on page 127

5.4.1 NetWare and Windows: Setting Up GroupWise WebAccess

Complete the following tasks to set up GroupWise WebAccess and WebPublisher:

- "Installing the WebAccess Agent" on page 116
- "Installing the WebAccess Application and WebPublisher Application" on page 118
- "Starting GroupWise WebAccess" on page 121

IMPORTANT: If you plan to install GroupWise WebAccess in a clustered server environment, see the *GroupWise 8 Interoperability Guide* before you install WebAccess.

Installing the WebAccess Agent

The following steps provide instructions for installing the WebAccess Agent. For information about installing the WebAccess and WebPublisher Applications to a Web server, see "Installing the WebAccess Application and WebPublisher Application" on page 118.

1 Select an appropriate location to run the GroupWise Installation program.

NetWare:	If you are installing the NetWare WebAccess Agent, you can run the Installation program from any Windows machine that meets the administrator machine requirements listed in Section 2.1, "GroupWise Administration Requirements," on page 17.
Windows:	If you are installing the Windows WebAccess Agent, you must run the Installation program at the Windows server were you want to install the WebAccess Agent. It must also meet the administrator machine requirements and server operating system requirements listed in Section 2.1, "GroupWise Administration Requirements," on page 17.

2 Make sure that no other GroupWise agents are running on the server where you want to install the WebAccess Agent.

3 Make sure that you have access to the directory where you want to install the WebAccess Agent and to the domain directory.

4 Log in to eDirectory with Admin-equivalent rights to the eDirectory tree where you want the Installation program to create the WebAccess Agent object.

5 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program.

or

Run setup.exe from the root of the downloaded *GroupWise 8* software image.

or

If you have already copied the WebAccess Agent software to a software distribution directory, run setup.exe from the root of the software distribution directory to start the GroupWise Installation program.

6 Select the language in which you want to run the GroupWise Installation program, then click *OK*.

NOTE: All available languages are included on the *GroupWise 8* DVD and the multilanguage version of the downloaded *GroupWise 8* software image, but you can select which languages you want to install.

The main GroupWise System Installation page appears.

7 Click *More Components*, then click *Install WebAccess*.

8 Select the interface language for the Installation program, then click *OK*.

9 Click *Yes* to accept the License Agreement and display the GroupWise WebAccess: Components dialog box.
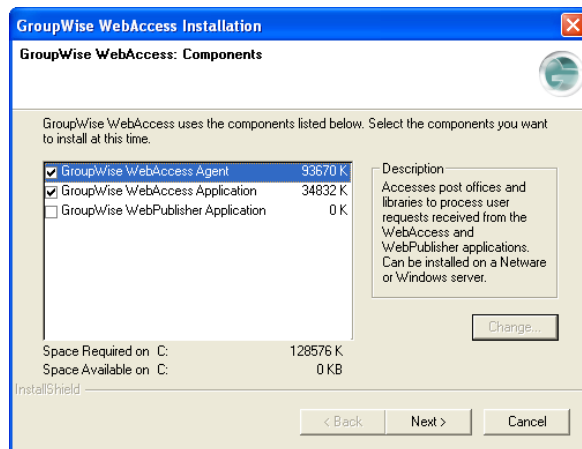
10 Select *GroupWise WebAccess Agent* and deselect *GroupWise WebAccess Application* and *GroupWise WebPublisher Application*.

You can also install the WebAccess Application and WebPublisher Application to your Web server at this time, if you have the appropriate Web server file system access and eDirectory access, as described in "Installing the WebAccess Application and WebPublisher Application" on page 118.

11 Follow the prompts to provide information about WebAccess Agent configuration, using the following information from the GroupWise WebAccess Agent Installation Summary Sheet.

Server Information
Server Address
Gateway Directory
Gateway Object

Windows Execution (Windows only)

Directory Authentication (NetWare only)

Windows Service User (Windows only)

Enable Web Console

WebPublisher Support (WebPublisher only)

WebPublisher Libraries (WebPublisher only)

12 If you are installing the WebAccess Application and WebPublisher Application along with the WebAccess Agent, skip to Step 12 in Installing the WebAccess Application and WebPublisher Application.

or

If you are installing the WebAccess Application and WebPublisher Application on a different server as a separate task, continue with Step 1 in Installing the WebAccess Application and WebPublisher Application.

Installing the WebAccess Application and WebPublisher Application

The following steps provide instructions for installing the WebAccess Application and WebPublisher Application. For information about installing the WebAccess Agent, see "Installing the WebAccess Agent" on page 116.

1 Select an appropriate location to run the GroupWise Installation program.

NetWare:	If you are installing to a NetWare Web server, you can run the WebAccess Installation program on any Windows machine that meets the administrator machine requirements listed in Section 2.1, "GroupWise Administration Requirements," on page 17.
Windows:	If you are installing to a Windows Web server, you must run the WebAccess Installation program on that server. It must meet the administrator machine requirements listed in Section 2.1, "GroupWise Administration Requirements," on page 17.

2 Make sure that you have access to the domain directory.

3 Make sure that you have the file system access required to install the WebAccess Application and the WebPublisher Application:

◆ You need full file system rights to the GroupWise domain directory. See "Gateway Directory Location and Name" on page 109.

◆ You need full file system rights to the Web server. See Section 5.3.1, "Deciding Where to Install the GroupWise WebAccess Components," on page 107.

4 Shut down the Web server and Java.

NetWare:	NetWare 6.5:

```
unload apache2
unload java
```

Linux:	Novell Open Enterprise Server 2 Linux installation of Apache:

```
/etc/init.d/apache2 stop
/etc/init.d/novell-tomcat5 stop
```

SUSE Linux Enterprise Server 10 installation of Apache:

```
/etc/init.d/apache2 stop
/etc/init.d/tomcat5 stop
```

Windows:	1. At the Windows server, click *Start > Administrative Tools > Services*.
	2. Right-click *World Wide Web Publishing Service*, then click *Stop*.

5 Log in to eDirectory with Admin-equivalent rights to the eDirectory tree where you want the Installation program to create the WebAccess objects.

6 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program.

or

Run setup.exe from the root of the downloaded *GroupWise 8* software image.

or

If you have already copied the WebAccess Agent software to a software distribution directory, run setup.exe from the root of the software distribution directory to start the GroupWise Installation program.
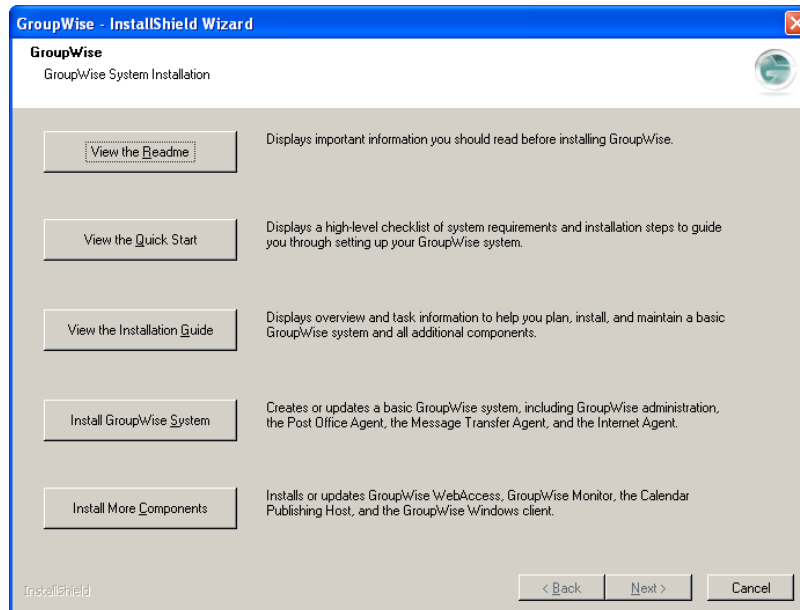
7 Click *More Components*, then click *Install WebAccess*.

8 Select the interface language for the Installation program, then click *OK*.

9 Click *Yes* to accept the License Agreement and display the GroupWise WebAccess: Components dialog box.
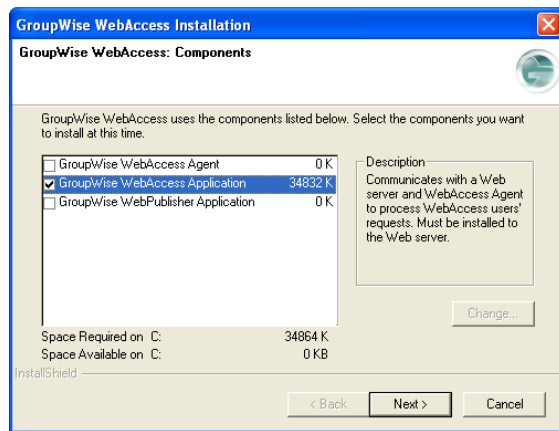
10 Select *GroupWise WebAccess Application* and *GroupWise WebPublisher Application* (if you plan to use WebPublisher).

11 Deselect the *GroupWise WebAccess Agent* option, then click *OK*.

12 Follow the prompts to provide information about WebAccess Application and WebPublisher configuration, using the following information from the GroupWise WebAccess/WebPublisher Application Installation Summary Sheet.

Gateway Directory

Web Server Information

Default Language

WebAccess Application Object

WebPublisher Application Object

13 When the installation is complete, select from the following options:

Launch Installation Summary: This option displays a list of the information you provided during installation. You can print it for future reference.

Start the GroupWise WebAccess Agent: This option starts the WebAccess Agent immediately. If you want to configure the server to start the WebAccess Agent automatically each time the server restarts, see "Starting the NetWare GroupWise Agents" on page 197 or "Starting the Windows GroupWise Agents" on page 222.

NOTE: If you installed only the applications, this option does not appear.

Restart the Web Server: This option starts the Web server, which loads the WebAccess Application (and WebPublisher Application if you installed it).

NOTE: If you installed the WebAccess Application to the Internet Information Server (IIS) on Windows, the WebAccess Installation program automatically installed Tomcat 5.5 to the following directory on your Windows Web server:

`c:\novell\groupwise\tomcat5.5`

The Installation program then starts Tomcat as a Windows service for use by WebAccess.

---

14 Click *Finish* to exit the WebAccess Installation program.

15 Click *Finish* to exit the GroupWise Installation program as well.

16 Skip to Section 5.4.3, "Testing GroupWise WebAccess and WebPublisher," on page 127.

Starting GroupWise WebAccess

If you did not have the Installation program start the WebAccess Agent, complete the following steps:

1 Restart Java and the Web server.

NetWare:	NetWare 6.5:

```
tomcat4
apache2
```

Linux:	Novell Open Enterprise Server 2 Linux installation of Apache:

```
/etc/init.d/novell-tomcat5 start
/etc/init.d/apache2 start
```

SUSE Linux Enterprise Server 10 installation of Apache:

```
/etc/init.d/tomcat5 start
/etc/init.d/apache2 start
```

Windows:	1. At the Windows server, click *Start > Administrative Tools > Services*.
	2. Right-click *Tomcat 5.5*, then click *Start*.
	3. Right-click *World Wide Web Publishing Service*, then click *Start*.

This loads the WebAccess Application (and WebPublisher Application if you installed it).

2 Start the WebAccess Agent

NetWare:	Enter `strtweb.ncf` at the NetWare server console.
Windows:	To run as an application, click *Start > All Programs > Novell GroupWise WebAccess > GroupWise WebAccess*.
	To run as a service, from the Control Panel click *Administrative Tools > Services*. Right-click the WebAccess service, then click *Start*.

When you start the WebAccess Agent, the Document Viewer Agent also starts. However, the Viewer Agent cannot run as a Windows service.

If the WebAccess Agent does not start successfully, see "Starting the NetWare GroupWise Agents" on page 197.

3 If you enabled the WebAccess Agent Web console, you can use the following URL to view the Web console:

```
http://webaccess_agent_network_address:http_port
```

For example:

```
http://172.16.5.18:7211
```

For more information, see "Using the WebAccess Agent Web Console" in "WebAccess" in the *GroupWise 8 Administration Guide*.

4 Skip to Section 5.4.3, "Testing GroupWise WebAccess and WebPublisher," on page 127.

5.4.2 Linux: Setting Up GroupWise WebAccess

Complete the following tasks to set up GroupWise WebAccess and WebPublisher. These tasks are designed to help you get Linux WebAccess up and running as quickly as possible and to help you manage the WebAccess Agent in the future.

- "Installing the Linux WebAccess Agent" on page 122
- "Configuring the Linux WebAccess Agent" on page 123
- "Installing and Configuring the WebAccess Application and WebPublisher Application" on page 124
- "Configuring WebPublisher" on page 125
- "Restarting the Web Server" on page 126
- "Starting the Linux WebAccess Agent" on page 126

IMPORTANT: If you are installing GroupWise WebAccess in a clustered server environment, see the *GroupWise 8 Interoperability Guide* before you install WebAccess.

If you are new to Linux, you might want to review Appendix A: Useful Linux Commands for Administering a GroupWise System in the *GroupWise 8 Administration Guide* before you install GroupWise WebAccess on Linux.

Installing the Linux WebAccess Agent

1 Make sure that Apache 2 and Tomcat 5 are installed as your Web server.

They might not be installed by default on your system.

2 Make sure that LDAP is running on your eDirectory server and that it is configured to accept login from the Installation program.

The Installation program requires eDirectory access in order to create the WebAccess Agent object in eDirectory. The Installation program uses LDAP to gain the required access.

3 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program.

or

Run `install` from the root of the *GroupWise 8* software image.

or

If you have already copied the Internet Agent software to a software distribution directory, run `./install` from the root of the software distribution directory to start the GroupWise Installation program.

The X Window System is required for running the GUI GroupWise Installation program. If you are not using the X Window System, you can install GroupWise components individually, as described in "Installing the GroupWise Agents Using the Text-Based Installation Program" on page 201.

4 Select the language in which you want to run the GroupWise Installation program, then click *OK*.

NOTE: On Linux, all available languages are included in the same RPM, so all languages are always installed.

The main GroupWise System Installation page appears.

5 Click *Install Products > GroupWise WebAccess > Install WebAccess Agent*.

6 When the installation is complete, click *OK*.

The WebAccess Agent software is installed to `/opt/novell/groupwise/agents`.

7 Continue with Configuring the Linux WebAccess Agent.

Configuring the Linux WebAccess Agent

1 After the WebAccess Agent files have been installed, click *Configure WebAccess Agent*.

The WebAccess Agent installation and configuration steps are separate so that you can install updated agent software without repeating the agent configuration steps.
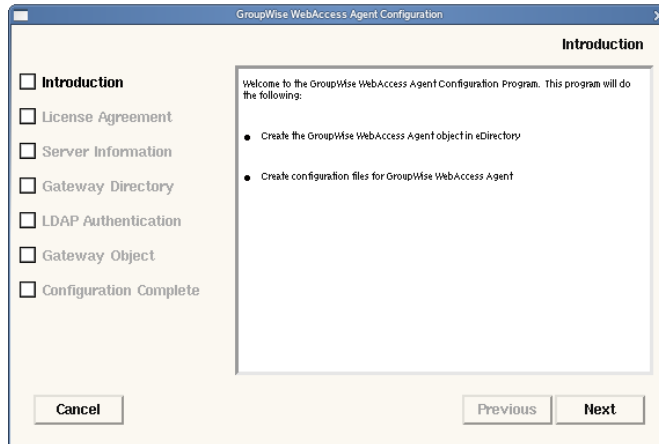
2 Follow the prompts to configure the WebAccess Agent, using the following information from the GroupWise WebAccess Installation Summary Sheets in the order listed.

Server Address
Gateway Directory
LDAP Authentication
Gateway Object

On the Configuration Complete page, *Launch WebAccess Agent on System Startup* is selected by default.

IMPORTANT: If you want to configure the WebAccess Agent for high availability, as described in "Enabling the Groupwise High Availability Service for the Linux GroupWise Agents" on page 209, it must be configured to start automatically on system startup.

3 If you do not want the WebAccess Agent to start automatically when the server restarts, deselect *Launch WebAccess Agent on System Startup*.

4 Click *Exit* to complete the configuration.

5 Continue with Installing and Configuring the WebAccess Application and WebPublisher Application.

Installing and Configuring the WebAccess Application and WebPublisher Application

1 After installing and configuring the WebAccess Agent, click *Install GroupWise WebAccess Application*.

2 When the installation is complete, click *OK*.

3 Click *Configure WebAccess Application*.
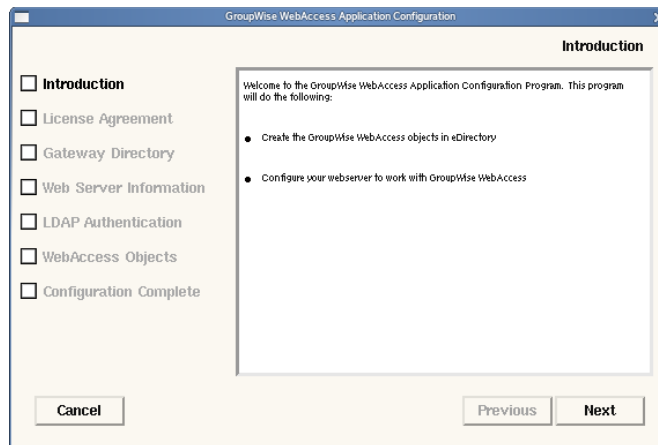
4 Follow the prompts to provide information about the WebAccess Application, using the following information from the GroupWise WebAccess Installation Summary Sheets in the order listed.

Gateway Directory
Web Server Information
LDAP Authentication
WebAccess Objects

5 On the Configuration Complete page, click *Exit* to complete the configuration.

The WebAccess Application and the WebPublisher Application are installed into the following directories:

```
/etc/opt/novell/groupwise/webaccess
/var/opt/novell/groupwise/webaccess
/etc/opt/novell/groupwise/webpublisher
/var/opt/novell/groupwise/webpublisher
```

and are linked into your Web server.

6 If you installed WebPublisher, continue with Configuring WebPublisher.

or

Skip to "Restarting the Web Server" on page 126

Configuring WebPublisher

After installing and configuring WebAccess, as described in Section 5.4.2, "Linux: Setting Up GroupWise WebAccess," on page 122, if you want to enable WebPublisher as well, you must perform some manual configuration.

1 In ConsoleOne, connect to the domain where the WebAccess Agent object was created during installation.

2 In a convenient context, create a new user specifically for use with WebPublisher.

3 Add the new user to a post office and provide a GroupWise password for the WebPublisher user.

4 Browse to and right-click the WebAccess Agent object (by default, `webac80a`), then click *Properties > WebPublisher*.
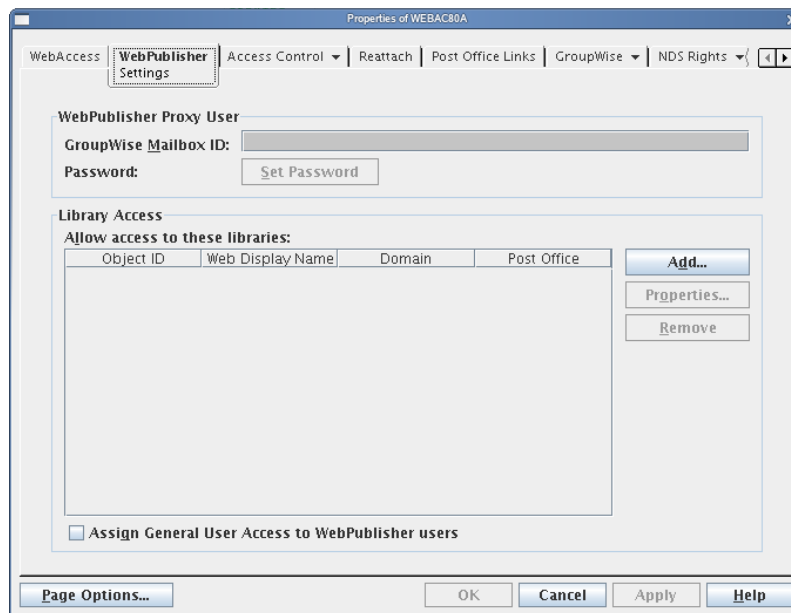
5 In the *GroupWise Mailbox ID* field, specify the WebPublisher user you created in Step 2 above.

6 Click *Add*, then select the library for WebPublisher to access for documents.

7 Select *Assign General User Access to WebPublisher Users*.

8 Click *OK* to save the WebPublisher configuration information.

9 Restart your Web server, as described in "Restarting the Web Server" on page 126

10 Restart the WebAccess Agent, as described in "Starting the Linux WebAccess Agent" on page 126.

In order to add documents to the library so that they can be viewed on the Internet, WebPublisher users must use the GroupWise Windows client. See "Publishing Documents to the Web with WebPublisher" in "Document Management" in the *GroupWise 8 Windows Client User Guide*.

NOTE: WebPublisher functionality is not currently available in the GroupWise Mac/Linux client.

Restarting the Web Server

In order to load the WebAccess Application (and WebPublisher Application if you installed it), you must restart the Web server.

NetWare:	NetWare 6.5:
	
	`unload apache2`
	`unload java`
	`tomcat4`
	`apache2`

Linux:	Novell Open Enterprise Server 2 Linux installation of Apache:
	
	`/etc/init.d/apache2 stop`
	`/etc/init.d/novell-tomcat5 stop`
	`/etc/init.d/novell-tomcat5 start`
	`/etc/init.d/apache2 start`
	
	SUSE Linux Enterprise Server 10 installation of Apache:
	
	`/etc/init.d/apache2 stop`
	`/etc/init.d/tomcat5 stop`
	`/etc/init.d/tomcat5 start`
	`/etc/init.d/apache2 start`

Windows	1. At the Windows server, click *Start > Administrative Tools > Services*. 2. Right-click *Tomcat 5.5*, then click *Restart*. 3. Right-click *World Wide Web Publishing Service*, then click *Restart*.

Starting the Linux WebAccess Agent

To start the Linux WebAccess Agent with a user interface:

1 Make sure you are logged in as root.

2 Make sure that the MTA for the domain is running.

3 Change to the /opt/novell/groupwise/agents/bin directory.

4 To start the WebAccess Agent, enter one of the following commands:

```
./gwinter --show --home domain_directory/wpgate/webac80a &
./gwinter --show @webac80a.waa &
```
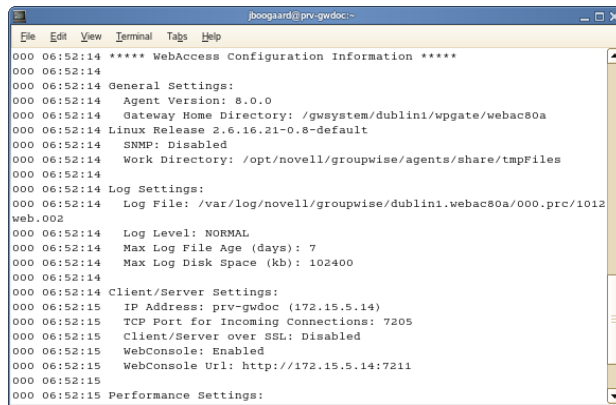
The WebAccess Agent --show switch does not display a server console interface like the other GroupWise agents. Instead, WebAccess configuration and status information displays in the terminal window where you start the WebAccess Agent.

The --home startup switch specifies the gateway directory and is required to start the WebAccess Agent.

The *@webac80a*.waa startup switch specifies the WebAccess Agent startup file, which contains the --home startup switch.

The ampersand (&) causes the WebAccess Agent to run in the background, so that the terminal window you started it in is again available for use.

To remind yourself of these commands when you are at your Linux server, view the gwinter man page.

NOTE: When you start the WebAccess Agent, the Document Viewer Agent also starts.

Status messages for the WebAccess Agent are written to the WebAccess Agent log file (*mmdd*log.*nnn*) in the `/var/log/novell/groupwise/`*domain*`.webac80a/000.prc` directory. The log file name includes the month and day when it was created, along with an incrementing extension to accommodate multiple log files on the same day.

After the WebAccess Agent starts successfully, refer to the following sections in Chapter 8, "Installing GroupWise Agents," on page 181 for additional information about managing the WebAccess Agent on Linux:

- "Starting the Linux GroupWise Agents as Daemons" on page 204
- "Monitoring the Linux GroupWise Agents from Your Web Browser" on page 205
- "Starting the Linux GroupWise Agents on System Startup" on page 206
- "Running the Linux GroupWise Agents As a Non-root User" on page 207
- "Enabling the Groupwise High Availability Service for the Linux GroupWise Agents" on page 209
- "Stopping the Linux GroupWise Agents" on page 215
- "Uninstalling the Linux GroupWise Agents" on page 217

5 Continue with Testing GroupWise WebAccess and WebPublisher.

5.4.3 Testing GroupWise WebAccess and WebPublisher

To test GroupWise WebAccess and WebPublisher, complete the steps in the following sections:

- "Testing WebAccess on a Workstation" on page 127
- "Testing WebAccess on a Mobile Device" on page 128
- "Testing GroupWise WebPublisher" on page 129

Testing WebAccess on a Workstation

1 To access the WebAccess client, enter the IP address or hostname of the Web server plus the directory where the Novell Web Services page is located:.

`http://`*web_server_address*`/gw`
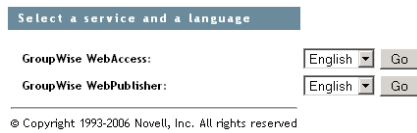
2 Select a GroupWise WebAccess language and service, then click *Go* to display the Login page.

You can bypass the Novell Web Services page to go directly to the Login page by using the following URL:

`http://`*`web_server_address`*`/gw/webacc`

where *web_server_address* is the IP address or DNS hostname of your Web server. If the Web server uses SSL, use `https` rather than `http`.

3 Type your GroupWise user ID or GroupWise full name in the *Name* box and your GroupWise mailbox password in the *Password* box.

4 Select the desired connection speed.

High (Broadband): Select this option if your connection to the Internet is faster than a 56 KB modem.

Low (Dial-up): Select this option if your are on a 56 KB modem or slower. This reduces the amount of data downloaded from the server by disabling Name Completion so that the Frequent Contacts Address Book does not need to be downloaded, and by disabling some aspects of AutoUpdate in the message list, such as no updating after a send or delete action.

5 Select additional settings as needed.

Use the Basic Interface: Select this option for a mobile device. It uses simplified templates and assumes a smaller display area. A few features, such as Name Completion, right-click menus, and drag-and-drop functionality, are not available in the basic interface. For more information, see the *GroupWise WebAccess Basic Interface Quick Start*.

Remember My Settings: Select this option to use the options you selected above as the defaults the next time you log in to the WebAccess client.

6 Click *Login* to display the GroupWise WebAccess main window.

7 Click *Help* for more information about using GroupWise WebAccess.

Testing WebAccess on a Mobile Device

1 Enter the following URL:

`http://`*`web_server_address`*`/gw/webacc`

where *web_server_address* is the IP address or DNS hostname of your Web server. If the Web server uses SSL, use `https` rather than `http`.

Follow the instructions in your mobile device's documentation to add this URL to your Favorites or Bookmarks so you don't need to type the URL every time you log in.

2 Enter your GroupWise user ID and GroupWise mailbox ID.

Testing GroupWise WebPublisher

GroupWise WebPublisher only supports access through a Web browser on a computer. Mobile devices are not supported.

1 To access the WebPublisher client, enter the IP address or hostname of the Web server plus the directory where the Novell Web Services page is located:

`http://`*web_server_address*`/gw`

where *web_server_address* is the IP address or DNS hostname of your Web server.

2 Select a GroupWise WebPublisher language, then click *Go* to display GroupWise WebPublisher.

You can bypass the Novell Web Services page to go directly to WebPublisher by using the following URL:

`http://`*web_server_address*`/gw/webpub`

where *web_server_address* is the IP address or DNS hostname of your Web server. If the Web server uses SSL, use `https` rather than `http`.

3 To search for a specific document, enter the search words, then click *Search*.

or

To browse the documents in a library, click *Document Browse*, then click the library you want to browse. When you browse a library, the first 10 documents are listed. You can list additional documents if desired.

4 Click *Help* for more information about using GroupWise WebPublisher.

5.5 What's Next

The "WebAccess" section of the *GroupWise 8 Administration Guide* provides information to help you further configure and maintain GroupWise WebAccess, including how to:

- ◆ Scale GroupWise WebAccess to meet the needs of your users and environment. See "Scaling Your WebAccess Installation".
- ◆ Control users' access to GroupWise WebAccess. See "Managing User Access".
- ◆ Secure connections via SSL. See "Securing WebAccess Agent Connections with SSL".
- ◆ Modify the WebAccess Agent's configuration information, including the number of threads allocated for request processing. See "Configuring the WebAccess Agent".
- ◆ Monitor the WebAccess Agent and the WebAccess Application. See "Monitoring WebAccess Operations".
- ◆ Control logging for the WebAccess Agent, WebAccess Application, and WebPublisher Application. See "Using WebAccess Log Files"
- ◆ Modify configuration information for the WebAccess Application and WebPublisher Application. See "Configuring the WebAccess Application" and "Configuring the WebPublisher Application"

If you want to use the WebAccess client on a mobile device, see the *GroupWise WebAccess Basic Interface Quick Start* (http://www.novell.com/documentation/gw8).

5.6   GroupWise WebAccess Installation Summary Sheets

5.6.1   GroupWise WebAccess Agent Installation Summary Sheet

Installation Program Field	Value for Your GroupWise System	Explanation
Agent Software Platform: ◆ NetWare ◆ Windows ◆ Linux		Section 5.3.1, "Deciding Where to Install the GroupWise WebAccess Components," on page 107
Components: ◆ GroupWise WebAccess Agent		Section 5.1.2, "GroupWise WebAccess Components," on page 102
Server Information: ◆ Installation path		Section 5.3.1, "Deciding Where to Install the GroupWise WebAccess Components," on page 107

Server Address:
 	
◆ Network address
 	
    IP address
 	
    DNS hostname
 	
    TCP port
 	
    (default 7205)
 	
◆ Configure the WebAccess Agent for clustering
		"Network Address" on page 108
		
		"NetWare Installation Option: Clustering" on page 112

Gateway Directory: ◆ Domain name ◆ Domain directory path ◆ Gateway directory name ◆ Domain context		"Gateway Directory Location and Name" on page 109
Gateway Object:		"Gateway Object Name" on page 109

Installation Program Field	Value for Your GroupWise System	Explanation

eDirectory Authentication
 	
NetWare only
 	
   ◆ Username
 	
   ◆ Password
		"Domain and Post Office Access" on page 110

Execution Options:
 	
Windows only
 	
   ◆ Install and configure SNMP for the WebAccess Agent
 	
   ◆ Run the WebAccess Agent as a Windows service
 	
      Automatic startup
 	
      Normal startup
		"Windows Installation Options: SNMP Traps and Service vs. Application" on page 113

Service User:
 	
Windows only
 	
   ◆ Username
 	
   ◆ Password
		"Domain and Post Office Access" on page 110

Enable Web Console:
 	
   ◆ Yes
 	
      Username
 	
      Password
 	
      HTTP port
 	
      (default 9850)
 	
   ◆ No
		"Web Console" on page 111

WebPublisher Support:
 	
   ◆ Yes
 	
      Mailbox ID
 	
      Password
 	
   ◆ No
		"WebPublisher" on page 111

WebPublisher Libraries:		"WebPublisher" on page 111

Installation Program Field	Value for Your GroupWise System	Explanation

LDAP Authentication:
 	
Linux only
 	
    ◆ LDAP Server IP Address
    ◆ Port
    ◆ Username
    ◆ Password
    ◆ Use SSL Connection
        ◆ Yes
          Path to SSL certificate file
        ◆ No
		"Linux Installation Options: LDAP Information and Clustering" on page 112

5.6.2 GroupWise WebAccess/WebPublisher Application Installation Summary Sheet

Installation Program Field	Value for Your GroupWise System	Explanation

Components:
 	
    ◆ GroupWise WebAccess Application
    ◆ GroupWise WebPublisher Application
		Section 5.1.2, "GroupWise WebAccess Components," on page 102

Gateway Directory:		"Gateway Directory Location and Name" on page 109

Installation Program Field	Value for Your GroupWise System	Explanation

Web Server Information:
 	
NetWare/Windows
 	
   ◆ Apache Web Server for NetWare
 	
   ◆ Path to the Web server's root directory
 	
Windows
 	
   ◆ Microsoft Internet Information Server (IIS) for Windows
 	
   ◆ Path to the Web server's root directory
 	
   ◆ Web site
 	
Linux
 	
   ◆ Apache path
 	
     `/etc/apache2/conf.d`
 	
   ◆ Tomcat path
 	
     `/srv/www/tomcat5/base/`
     `webapps`		

Installation Program Field	Value for Your GroupWise System	Explanation

Default Language:
 	
Windows only
 	
    ◆ Arabic
    ◆ Brazilian Portuguese
    ◆ Chinese Simplified
    ◆ Chinese Traditional
    ◆ Czech
    ◆ Danish
    ◆ Dutch
    ◆ English
    ◆ Finnish
    ◆ French
    ◆ German
    ◆ Hebrew
    ◆ Hungarian
    ◆ Italian
    ◆ Japanese
    ◆ Korean
    ◆ Norwegian
    ◆ Polish
    ◆ Russian
    ◆ Spanish
    ◆ Swedish
		"Default Language" on page 114

WebAccess Application Object:
 	
    ◆ Tree
    ◆ Context
		"eDirectory Objects and Configuration Files" on page 114

WebPublisher Application Object:
 	
    ◆ Tree
    ◆ Context
		"eDirectory Objects and Configuration Files" on page 114

6 Installing the GroupWise Calendar Publishing Host

The Novell GroupWise Calendar Publishing Host publishes GroupWise users' personal calendars to the Internet, so that they are readily available to colleagues who are not part of the GroupWise system. Items on users' main GroupWise Calendars that are not included on personal calendars are not published. The Calendar Publishing Host also returns free/busy schedule status to Internet colleagues who want to set up appointments with GroupWise users. The free/busy search checks the main GroupWise Calendar as well as personal calendars.

6.1 GroupWise Calendar Publishing Host Overview

6.1.1 Calendar Publishing Host Introduction

The GroupWise Calendar Publishing Host enables Internet users to view GroupWise users' published calendars and to retrieve free/busy information from their calendars to assist with scheduling available appointment times. Internet users do not need access to the GroupWise system in order to view published calendars and obtain free/busy status.

Figure 6-1 *No Login Required for the Calendar Publishing Host*
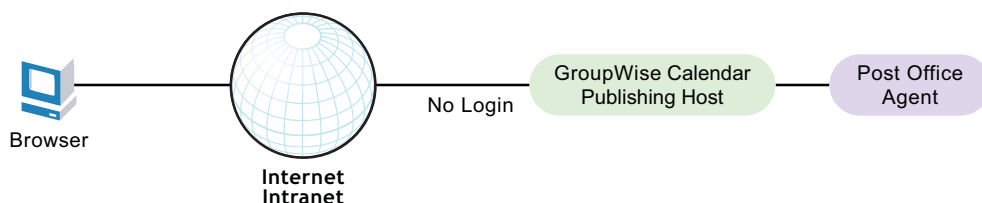
As shown above, users at Web browsers can access the Calendar Publishing Host across the Internet without needing to log in. Information provided by the Calendar Publishing Host is publicly available to Internet users everywhere.

6.1.2 Calendar Publishing Host Components

The GroupWise Calendar Publishing Host includes two components: the Calendar Publishing Host itself, which connects to the Internet through a Web server, and the Post Office Agent (POA), which connects to your GroupWise system:

Figure 6-2   *GroupWise Calendar Publishing Host Components*
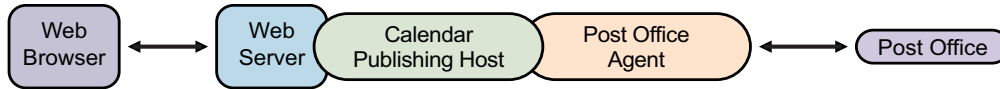
Calendar Publishing Host: The Calendar Publishing Host, which resides on the Web server, provides the browser interface for users across the Internet. As users request calendar and free/busy information from GroupWise users, the Calendar Publishing Host passes the information between the Web browser and the POA.

Post Office Agent: The POA receives user requests from the Calendar Publishing Host, accesses post offices and mailboxes to process the requests, and then passes information back to the Calendar Publishing Host in the form of ICS (Internet Calendaring and Scheduling) files and IFB (Internet Free Busy) files. These files can be imported into GroupWise, Outlook, and Mac iCal calendaring applications.

6.1.3 Calendar Publishing Host Security Requirements

The GroupWise Calendar Publishing Host can be configured to support the level of security you have established for your Internet/intranet communication.

If you are not concerned about security issues (for example, you only plan to use the Calendar Publishing Host on a secured intranet), you can install the Calendar Publishing Host to any server that provides access for your users and meets the requirements listed in Section 6.2, "Calendar Publishing Host System Requirements," on page 137.

If you plan to use the Calendar Publishing Host to provide calendar and free/busy information to users anywhere on the Internet (rather than simply within a secured intranet), and you already have a firewall in place to provide security, you have the following options for configuring the Calendar Publishing Host:

- Install the Calendar Publishing Host inside your firewall and use a proxy service, as described in "Configuration with a Proxy Service" on page 136. This is the recommended configuration.
- Install the Calendar Publishing Host on a Web server outside your firewall and have it communicate with a POA through your firewall, as described in "Configuration without a Proxy Service" on page 137.

Configuration with a Proxy Service

If your firewall includes a proxy service, you can install the Calendar Publishing Host to a Web server inside your firewall, and it can communicate with a POA that is also inside the firewall, as shown in the following illustration:

Figure 6-3 *Calendar Publishing Host Installed inside the Firewall*
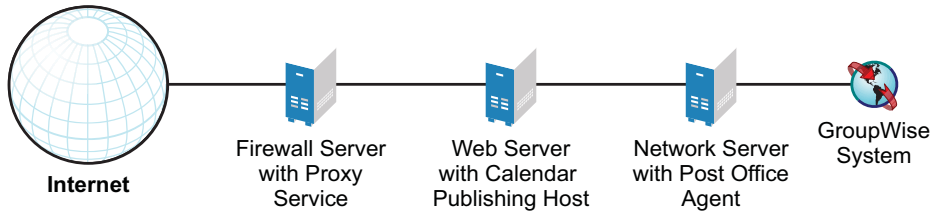
Configuration without a Proxy Service

If your firewall does not provide a proxy service, you need to install the Calendar Publishing Host to a Web server that is outside the firewall. Because the POA requires direct access (mapped drive or UNC path) to a GroupWise post office directory, the POA needs to be installed to a server that is inside your firewall.

Figure 6-4 *Calendar Publishing Host Installed outside the Firewall*
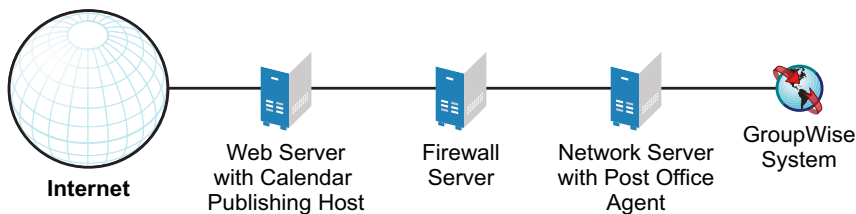
The firewall must allow inbound IP packets to be sent from the Web server to the IP address and calendar publishing port number of the POA (for example, 172.16.5.18:7171).

In addition, the firewall must allow outbound IP packets to be sent from the POA to the Web server. This requires all high ports (above 1023) to be open to outbound IP packets.

6.2   Calendar Publishing Host System Requirements

❑ x86-32 processor or x86-64 processor

On a 64-bit processor, GroupWise still runs as a 32-bit application.

❑ Any of the following Web servers:

- NetWare 6.5: Apache 2.0 plus:

    - Tomcat 4.1
    - JVM 1.4.2
    - Jakarta Connector 1.2

- OES 2 Linux / SLES 10: Apache 2.2 plus:

    - Tomcat 5.0 or later
    - JVM 1.4.2 or later
    - ModProxy Module

- OES 11 / SLES 11: Apache 2.2 plus:

    - Tomcat 6.0 or later

- ◆ JVM 1.5 or later
- ◆ ModProxy Module
- ◆ Windows Server 2003/2003 R2: Microsoft Internet Information Server (IIS) 6 or later plus:
  - ◆ Tomcat 5.5 or later
  - ◆ JVM 1.5 or later
  - ◆ Jakarta Connector 1.2 or later
- ◆ Windows Server 2008/2008 R2: Microsoft Internet Information Server (IIS) 7 or later plus:
  - ◆ Tomcat 5.5 or later
  - ◆ JVM 1.5 or later
  - ◆ Jakarta Connector 1.2 or later

❒ Adequate server memory as required by the Web server operating system

❒ Any of the following Web browsers for the GroupWise Calendar Publishing Host user Web pages and the Calendar Publishing Host Administration Web console:
  - ◆ Windows: Microsoft Internet Explorer 6.0 or later; Mozilla Firefox
  - ◆ Macintosh: The latest version of Safari for your version of Mac OS; Mozilla Firefox
  - ◆ Linux: Mozilla Firefox

❒ Any of the following environments for running the GroupWise Installation program:
  - ◆ Windows XP, Windows Vista, or Windows 7, plus the latest Service Pack, plus the Novell Client
  - ◆ Windows Server 2003, Windows Server 2003 R2, Windows Server 2008, or Windows Server 2008 R2, plus the latest Service Pack, plus the Novell Client
  - ◆ Novell Open Enterprise Server (OES) 2 (Linux version) or OES 11, plus the latest Support Pack
  - ◆ SUSE Linux Enterprise Server (SLES) 10 or SLES 11, plus the latest Support Pack

    The X Window System is required by the GUI GroupWise Installation program that steps you through the process of creating a new GroupWise system. A text-based Installation program is also available.

❒ Adequate server disk space:
  - ◆ Approximately 7 MB for the Calendar Publishing Host software
  - ◆ 50 KB per published calendar

6.3 Planning a Calendar Publishing Host

Use the "GroupWise Calendar Publishing Host Installation Summary Sheet" on page 155 to record your decisions about how to install and configure the Calendar Publishing Host. The topics in this section present the required information in a convenient planning sequence. The Installation Summary Sheet organizes the information in the order in which you need it during installation and configuration.

- ◆ Section 6.3.1, "Selecting the Calendar Publishing Host Platform," on page 139
- ◆ Section 6.3.2, "Gathering Web Server Information," on page 139
- ◆ Section 6.3.3, "Determining the Configuration of the Calendar Publishing Host," on page 139
- ◆ Section 6.3.4, "Connecting the Calendar Publishing Host to a POA," on page 140

For additional assistance in planning your GroupWise installation, see GroupWise Best Practices (http://wiki.novell.com/index.php/GroupWise) and GroupWise 8 Good and Bad Habits (http://wiki.novell.com/index.php/GroupWise_8_Good_and_Bad_Habits).

6.3.1 Selecting the Calendar Publishing Host Platform

The GroupWise Calendar Publishing Host can be installed to a Web server on NetWare, Linux, or Windows. See Section 6.2, "Calendar Publishing Host System Requirements," on page 137 for supported Web servers.

GROUPWISE CALENDAR PUBLISHING HOST INSTALLATION SUMMARY SHEET

Under *Software Platform*, mark whether you plan to install the Calendar Publishing Host to a NetWare, Linux, or Windows Web server

6.3.2 Gathering Web Server Information

The Installation program needs to know the root directory for your Web server. For Linux, the path to Tomcat is also required. The default paths vary by platform:

Apache Web Server for NetWare:	`drive:\Apache2`
Apache Web Server for OES Linux:	`/etc/opt/novell/httpd/conf.d`
Tomcat for OES Linux:	`/var/opt/novell/tomcat5/webapps`
Apache Web Server for SLES:	`/etc/apache2/conf.d`
Tomcat for SLES:	`/srv/www/tomcat5/base/webapps`
Microsoft Internet Information Server (IIS) for Windows:	`c:\inetpub\wwwroot`

GROUPWISE CALENDAR PUBLISHING HOST INSTALLATION SUMMARY SHEET

Under *Web Server Information*, mark the Web server you are using and specify the path to its root directory. The default path is usually appropriate.

On Windows, if the Internet Information Server services more than one Web site, specify the Web site where you want to install the Calendar Publishing Host.

6.3.3 Determining the Configuration of the Calendar Publishing Host

In ConsoleOne, the Calendar Publishing Host is identified by a unique name. The name might include the platform or location of the Calendar Publishing Host, or perhaps the users it serves.

IMPORTANT: Do not use any double-byte characters in the name.

The Calendar Publishing Host name is stored in the `calhost.cfg` file, located in the following directories

NetWare:	`sys:\novell\groupwise\calhost`
Linux:	`/var/opt/novell/groupwise/calhost`
Windows	`c:\novell\groupwise\calhost`

You typically need only one Calendar Publishing Host. However, depending on the size of your GroupWise system and the locations of your GroupWise users, you might need several in different locations if some users experience slowness when accessing the initial location. You specify the name of the Calendar Publishing Host during installation and in ConsoleOne. The name must match in both places.

The Calendar Publishing Host uses the DNS hostname of the Web server as part of its base URL.

`http://`*`web_server_address`*`:`*`port`*`/gwcal`

where *web_server_address* is the DNS hostname of the Web server and *port* is the port number on which the Calendar Publishing Host communicates with the Web server. The default port number is 80; it does not need to be specified if your Web server uses that default.

IMPORTANT: Select the URL carefully. This URL is disseminated by GroupWise users to their Internet colleagues when they publish their personal calendars and free/busy information. If you change the URL later, GroupWise users would need to send updated information to Internet colleagues.

The Calendar Publishing Host also needs the IP address and TCP port number of the Web server so that they can communicate.

GROUPWISE CALENDAR PUBLISHING HOST INSTALLATION SUMMARY SHEET

Under *Calendar Publishing Host Name*, specify a unique name for this Calendar Publishing Host.

Under *Calendar Publishing Host Configuration*, list the same name for the Calendar Publishing Host, along with its base URL (`http://`*`web_server_address`*`/gwcal`), the IP address of the Web server, and the Web server port number (by default, 80).

For a complete list of default port numbers used by the GroupWise agents, refer to "GroupWise Port Numbers" in the *GroupWise 8 Administration Guide*.

6.3.4 Connecting the Calendar Publishing Host to a POA

The Calendar Publishing Host connects to your GroupWise system through the POA of a post office. For initial installation, you enable one POA for calendar publishing. As you roll out calendar publishing to your GroupWise users, you must enable calendar publishing for the POA of every post office where users publish calendars and free/busy information.

The initially selected POA must be configured to communicate with the Calendar Publishing Host. The POA server's IP address or DNS hostname is required, along with a calendar publishing port (7171 by default). Use the default port number unless it is already in use by another program on the server where you plan to install the Calendar Publishing Host.

Under *Calendar Publishing Post Office*, specify the name of the post office you have chosen to enable for calendar publishing during initial installation (for example, the POA for your own post office). Specify the IP address or DNS hostname of the POA that services the post office, along with the calendar publishing port number. The default port number is 7171.

Under *Post Office Agent Information*, transfer the IP address or DNS hostname and the calendar publishing port. You need this information when you install the Calendar Publishing Host.

For a complete list of default port numbers used by the GroupWise agents, refer to "GroupWise Port Numbers" in the *GroupWise 8 Administration Guide*.

6.3.5 Designing Your Calendar Browse List

The Calendar Publishing Host collects a list of published calendars for Internet users to browse and select from at the following URL:

```
http://web_server_address/gwcal/calendar
```

However, by default, no calendars are displayed in the calendar browse list. You can handle the calendar browse list in three different ways:

- Do not provide a calendar browse list, so that users need to notify Internet colleagues by e-mail of the URL to access their published calendars.
- Use the calendar browse list only for calendars of general corporate interest. If you want to have such a corporate browse list, you restrict which users can list calendars on the browse list, by allowing only a few specific users who manage the corporate calendars to publish to the calendar browse list.
- Allow most, if not all, users to publish their personal calendars on the calendar browse list. This open approach to the calendar browse list makes users' published calendars easily accessible to anyone who knows the URL of the calendar browse list for your GroupWise system.

Under *Calendar Browse List*, mark whether you want to enable the calendar browse list, and if so, what kind (corporate or open).

6.3.6 Selecting Calendar Publishing Settings

After you have set up the Calendar Publishing Host, you can configure how you want it to work for your GroupWise users. The following settings are available in ConsoleOne:

- **Enable Calendar Publishing:** Select this option to let users publish personal GroupWise calendars on the Internet. Calendar publishing is disabled by default. When you enable it, users of the Windows client and the WebAccess client can right-click a personal calendar, then click *Publish* to select options for publishing the personal calendar.
- **Enable Rules to Move Items to a Published Calendar:** Select this option so that users can create rules to automatically transfer certain types of calendar items to specific personal calendars that are published. Using rules is disabled by default.

- **Enable Subscribe to Calendar:** Select this option to allow users to subscribe to Internet calendars that are updated on a regular basis, such as calendars for sporting events. Calendar subscription is disabled by default.

- **Enable Publish Free/Busy Search:** Select this option to allow users to make their appointment information available to external users, so that external users can perform free/busy searches on users' GroupWise calendars. Free/busy searching is disabled by default

---

GROUPWISE CALENDAR PUBLISHING HOST INSTALLATION SUMMARY SHEET

Under *Calendar Publishing Options*, mark the options you want to enable for the Calendar Publishing Host.

6.3.7 Configuring Authentication to the Administration Web Console

An Administration Web console is provided for additional configuration of the Calendar Publishing Host. To protect that Administration Web console, you must create or select at least one calendar publishing administrator user and an administrative group for that user to belong to. For example, you might create a user named `CalPubAdmin` and a group named `CalPubAdminGrp`. You could also select an existing user and add this user to the administrative group. This user does not need any special administrative rights. It does not need a GroupWise mailbox.

You can have the User object and the Group object in any convenient eDirectory container. The container must exist before you install the Calendar Publishing Host. Because you specify the container context during installation, you do not need to specify it each time you log in to the Administration Web console.

GROUPWISE CALENDAR PUBLISHING HOST INSTALLATION SUMMARY SHEET

Under *Authentication Information*, specify the name of the Calendar Publishing Host administrator user (for example, `CalPubAdmin`), the context of the administrator User object (for example, `ou=Users,o=yourcompanyname`), and the name of the administrative group (for example, `CalPubAdminGrp`). You specify the context of the user and the group when you install the Calendar Publishing Host. You set up the User and Group objects in ConsoleOne.

As an administrator, you use the Calendar Publishing Host Administration Web console to manage the Calendar Publishing Host. The Calendar Publishing Host uses LDAP authentication to allow you to log in to the Administration Web console. For secure logins, configure the Calendar Publishing Host to use SSL for the LDAP connection. During Calendar Publishing Host installation, you must specify a trusted root certificate file that is used to establish the LDAP SSL connection. For more information about LDAP SSL, see "Trusted Root Certificates and LDAP Authentication" in "Security Administration" in the *GroupWise 8 Administration Guide*.

GROUPWISE CALENDAR PUBLISHING HOST INSTALLATION SUMMARY SHEET

Under *LDAP Server Information*, specify the IP address or DNS hostname of a server where LDAP is enabled. Also specify the LDAP port. The default secure port is 636. Specify the full path to the SSL root certificate file.

How to use the Administration Web console for ongoing administration is described in "Configuring the Calendar Publishing Host" in "Calendar Publishing Host" in the *GroupWise 8 Administration Guide*.

6.4 Setting Up a Calendar Publishing Host

As you set up the Calendar Publishing Host, use the GroupWise Calendar Publishing Host Installation Summary Sheet that you filled out in Section 6.3, "Planning a Calendar Publishing Host," on page 138 to provide the required information.:

- Section 6.4.1, "Installing the Calendar Publishing Host," on page 143
- Section 6.4.2, "Configuring the Calendar Publishing Host in ConsoleOne," on page 148
- Section 6.4.3, "Enabling Calendar Publishing," on page 149
- Section 6.4.4, "Restarting the Web Server and Tomcat," on page 150
- Section 6.4.5, "Configuring a POA for Calendar Publishing," on page 151
- Section 6.4.6, "Setting Up Calendar Publishing Administration," on page 151
- Section 6.4.7, "Using the Published Calendar Browse List," on page 152
- Section 6.4.8, "Testing Calendar Publishing," on page 152

6.4.1 Installing the Calendar Publishing Host

- "NetWare and Windows: Installing the Calendar Publishing Host Software" on page 143
- "Linux: Installing the Calendar Publishing Host Software" on page 145

NetWare and Windows: Installing the Calendar Publishing Host Software

1 Make sure that you have created the Calendar Publishing Host administrative user and group, and that the Calendar Publishing Host server is configured for an SSL LDAP connection, as described in Section 6.3.7, "Configuring Authentication to the Administration Web Console," on page 142.

2 Select an appropriate location to run the GroupWise Installation program.

NetWare:	If you are installing the Calendar Publishing Host on NetWare, you can run the Installation program from any Windows machine that meets the administrator machine requirements listed in Section 2.1, "GroupWise Administration Requirements," on page 17.
Windows:	If you are installing the Calendar Publishing Host on Windows, you must run the Installation program at the Windows Web server were you want to install the Calendar Publishing Host. It must meet the administrator machine requirements as well as the server operating system requirements listed in Section 2.1, "GroupWise Administration Requirements," on page 17.

3 Log in as an Admin equivalent to the eDirectory tree where GroupWise is installed.

4 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program.

or

Run `setup.exe` from the root of the downloaded *GroupWise 8* software image.

or

If you have already copied the Calendar Publishing Host software to a software distribution directory, run `setup.exe` from the root of the software distribution directory.

5 Select the language in which you want to run the GroupWise Installation program, then click *OK*.

NOTE: All available languages are included on the *GroupWise 8* DVD and the multilanguage version of the downloaded *GroupWise 8* software image, but you can select which languages you want to install.

The main GroupWise System Installation page appears.
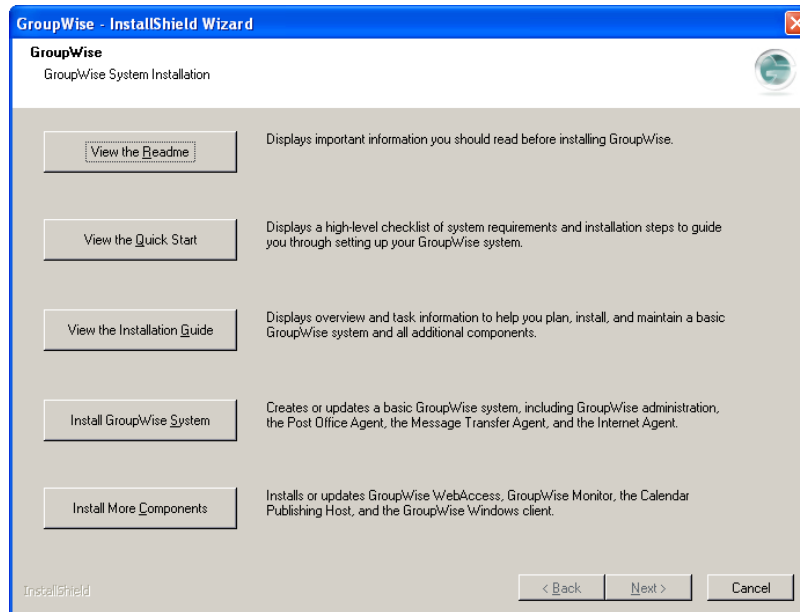
6 Click *More Components*, then click *Install Calendar Publishing Host* to start the Calendar Publishing Host Installation program.

7 Select the language in which you want to run the Calendar Publishing Host Installation program, then click *OK*.

8 Click *Yes* to accept the License Agreement and start the Calendar Publishing Host installation.
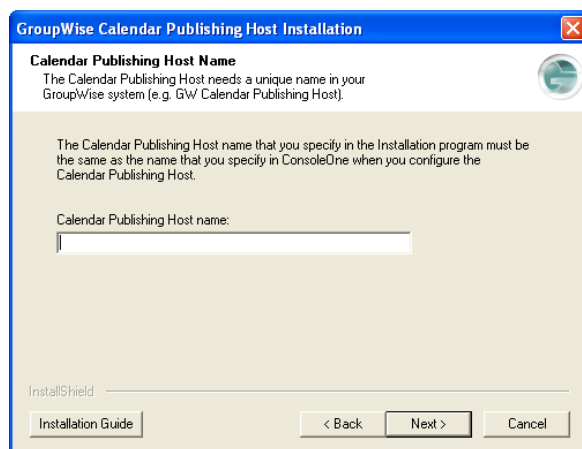
9 Follow the prompts to provide the information from your GroupWise Calendar Publishing Host Installation Summary Sheet.

Calendar Publishing Host Name
Post Office Agent Information
Web Server Information

10 When the installation is complete, select from the following options:
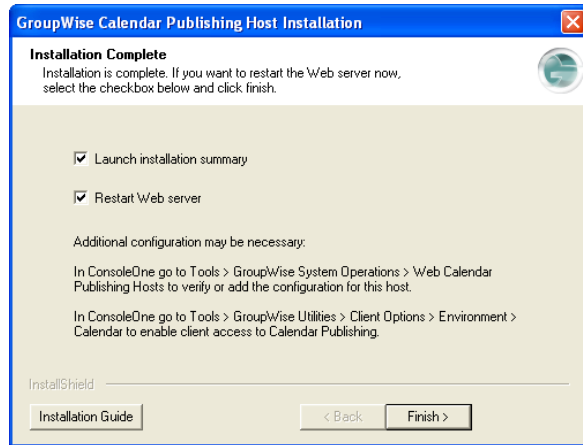
Launch Installation Summary: This option displays a list of the information you provided during installation. You can print it for future reference.

Restart the Web Server: This option starts the Web server, which loads the Calendar Publishing Host Application.

NOTE: If you installed the Calendar Publishing Host to the Internet Information Server (IIS) on Windows, the Calendar Publishing Host Installation program automatically installed Tomcat 5.5 to the following directory on your Windows Web server:

`c:\novell\groupwise\tomcat5.5`

The Installation program then starts Tomcat as a Windows service for use by the Calendar Publishing Host.

---

11 Click *Finish* to exit the Calendar Publishing Host Installation program.

12 Click *Finish* to exit the GroupWise Installation program as well.

After installing the Calendar Publishing Host, additional configuration in ConsoleOne is still required.

13 Skip to Section 6.4.2, "Configuring the Calendar Publishing Host in ConsoleOne," on page 148.

Linux: Installing the Calendar Publishing Host Software

1 Make sure that Apache 2 and Tomcat 5 are installed as your Web server.

They might not be installed by default on your Linux server.

2 Make sure that LDAP is running on your eDirectory server.

3 Make sure that you have created the Calendar Publishing Host administrative user and group, and that the Calendar Publishing Host server is configured for an SSL LDAP connection, as described in Section 6.3.7, "Configuring Authentication to the Administration Web Console," on page 142.

4 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program.

or

Run `install` from the root of the downloaded *GroupWise 8* software image.

or

If you have already copied the Calendar Publishing Host software to a software distribution directory, run `./install` from the root of the software distribution directory.

The X Window System is required for running the GUI GroupWise Installation program. If you are not using the X Window System, you can install GroupWise components individually, as described in "Installing the GroupWise Agents Using the Text-Based Installation Program" on page 201.

5 Select the language in which you want to run the GroupWise Installation program, then click *OK*.

NOTE: On Linux, all available languages are included in the same RPM, so all languages are always installed.

The main GroupWise System Installation page appears.
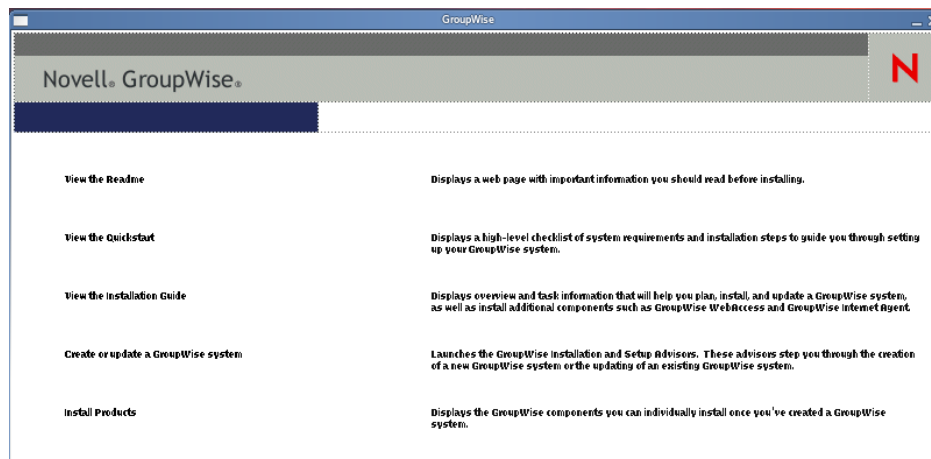
6 Click *Install Products > GroupWise Calendar Publishing Host > Install Calendar Publishing Host Application* to start the Calendar Publishing Host Installation program.

7 When the software installation is complete, click *OK*.

The Calendar Publishing Host software is installed to the following directories:

```
/opt/novell/groupwise/calhost
/etc/opt/novell/groupwise/calhost
/var/opt/novell/groupwise/calhost
```

and is linked into Tomcat.

8 Click *Configure Calendar Publishing Host Application*.
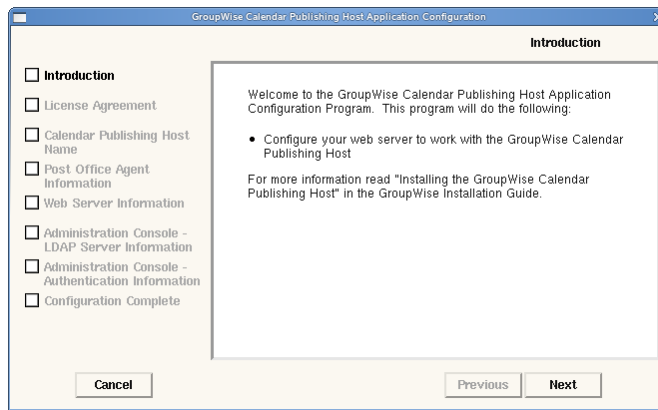
9 Click *Next*, accept the License Agreement, then click *Next*.

10 Follow the prompts to configure the Calendar Publishing Host, using the following information from the GroupWise Calendar Publishing Host Installation Summary Sheet:

Calendar Publishing Host Name
Post Office Agent Information
Web Server Information
LDAP Server Information
Authentication Information
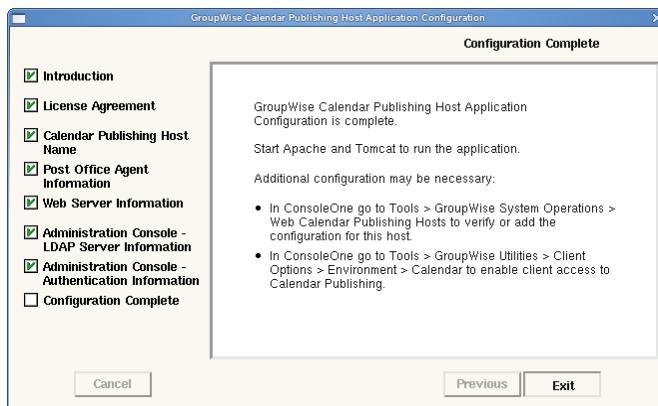
11 Click *Exit* to exit the Calendar Publishing Host Installation program.

12 Exit the GroupWise Installation program as well.

After installing the Calendar Publishing Host, additional configuration in ConsoleOne is still required.

13 Continue with Configuring the Calendar Publishing Host in ConsoleOne.

6.4.2 Configuring the Calendar Publishing Host in ConsoleOne

Use the information under *Calendar Publishing Host Configuration* and *Calendar Browse List* on your GroupWise Calendar Publishing Host Installation Summary Sheet as you configure the Calendar Publishing Host.

1 In ConsoleOne, select the GroupWise System object, then click *Tools > GroupWise System Operations > Web Calendar Publishing Hosts*.

2 Click *Add*.
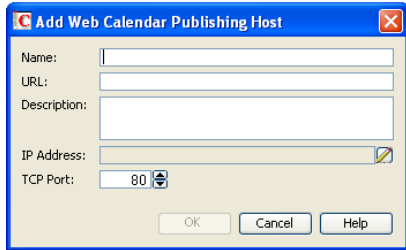
3 Specify a unique name by which the Calendar Publishing Host will be known in your GroupWise system.

> **IMPORTANT**: This must be the same name that you used during installation, as described in Section 6.3.3, "Determining the Configuration of the Calendar Publishing Host," on page 139. If you decide that you want to use a different name after you have already installed the Calendar Publishing Host software, you must reinstall the software, then specify the same name that you provided during installation when you configure the Calendar Publishing Host in ConsoleOne.

4 Specify the base URL for the Calendar Publishing Host in the following format:

```
http://web_server_address:port/gwcal
```

where `web_server_address` is the IP address or DNS hostname of the Web server where you installed the Calendar Publishing Host software and `port` is the port number on which the Calendar Publishing Host communicates with the Web server. The default port number is 80 and does not need to be specified if your Web server uses that default.

The base URL does not point to information that is displayable in your browser. Displayable URLs are listed in Section 6.3.3, "Determining the Configuration of the Calendar Publishing Host," on page 139.

5 Specify the IP address of the server where the Calendar Publishing Host is running.

This information enables the POA to communicate with the Calendar Publishing Host.

6 Specify the TCP port number on which the Calendar Publishing Host is configured to communicate with the POA.

The default is 7171.

7 Click *OK* to save the Calendar Publishing Host configuration information.
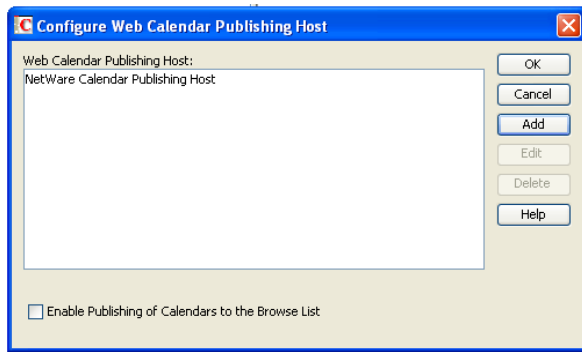
8 If you want to allow users to add their published calendars to the calendar browse list as the default for your GroupWise system, select *Enable Publishing of Calendars to the Browse List*.

or

If you want to set up a corporate calendar browse list or provide no calendar browse list, leave *Enable Publishing of Calendars to the Browse List* deselected.

9 Click *OK* when you are finished.

10 Restart the POA so that it picks up the configuration information for the new Calendar Publishing Host.

11 Continue with Enabling Calendar Publishing.

6.4.3 Enabling Calendar Publishing

Use the information under *Calendar Publishing Options* on your GroupWise Calendar Publishing Host Installation Summary Sheet as you enable calendar publishing.

1 In ConsoleOne, browse to and select post office where you want to enable calendar publishing.

For convenience in testing your Calendar Publishing Host setup, you might want to start with your post office.

2 Click *Tools > GroupWise Utilities*.

3 Click *Client Options > Environment > Calendar*.
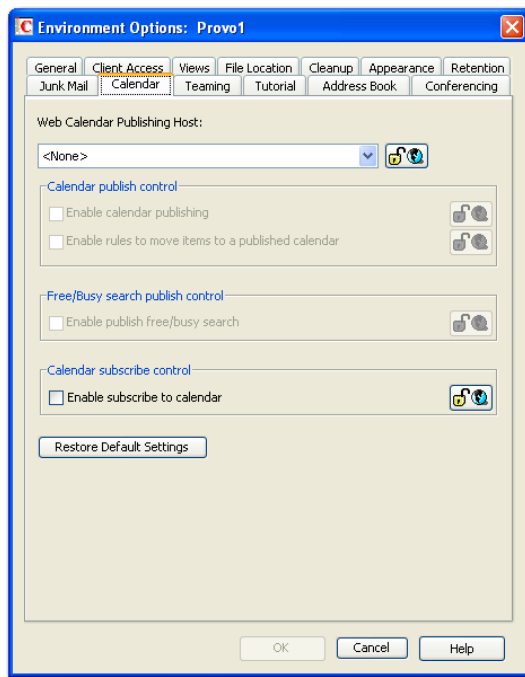
The calendar publishing options are disabled by default. As you roll out calendar publishing, you can use Client Options to enable it at the domain, post office, and user level.

4 Select a Calendar Publishing Host from the drop-down list.

5 Set the Calendar options as you planned under Calendar Publishing Options on your GroupWise Calendar Publishing Host Installation Summary Sheet.

6 Click *OK* to save the calendar publishing settings, then click *Close*.

7 Continue with Restarting the Web Server and Tomcat

6.4.4 Restarting the Web Server and Tomcat

To put the ConsoleOne settings into effect, you must restart the Web server and Tomcat.

NetWare: NetWare 6.5:

```
unload apache2
unload java
tomcat4
apache2
```

Linux: Novell Open Enterprise Server 2 Linux installation of Apache:

```
/etc/init.d/apache2 stop
/etc/init.d/novell-tomcat5 stop
/etc/init.d/novell-tomcat5 start
/etc/init.d/apache2 start
```

SUSE Linux Enterprise Server 10 installation of Apache:

```
/etc/init.d/apache2 stop
/etc/init.d/tomcat5 stop
/etc/init.d/tomcat5 start
/etc/init.d/apache2 start
```

Windows	1.	At the Windows server, click *Start > Administrative Tools > Services*.
	2.	Right-click *Tomcat 5.5*, then click *Restart*.
	3.	Right-click *World Wide Web Publishing Service*, then click *Restart*.

This loads the Calendar Publishing Host into your Web server so that it is available for use.

Continue with Configuring a POA for Calendar Publishing.

6.4.5 Configuring a POA for Calendar Publishing

After calendar publishing is enabled, the POA can look up calendar information and return it to the Calendar Publishing Host in the form of ICS (Internet Calendaring and Scheduling) or IFB (Internet Free Busy) files. Internet users can import these files into GroupWise, Outlook, and Mac iCal calendaring applications.

Use the information under *Calendar Publishing Post Office* on your GroupWise Calendar Publishing Host Installation Summary Sheet as you configure the POA.

1 In ConsoleOne, browse to and select the post office where calendar publishing is enabled, right-click the POA object for the post office, then click *Properties*.

2 Click *GroupWise > Agent Settings*.

3 Select *Enable Calendar Publishing*.

4 Adjust the number in the *Max Calendar Publishing Threads* field as needed.

The default maximum number of calendar publishing threads is 4. By default, the POA creates 2 calendar publishing threads and automatically creates additional threads as needed until the maximum number is reached. You cannot set the maximum higher than 4, but you can reduce the number of threads to conserve POA resources for other activities.

5 Click *OK* to save the calendar publishing configuration settings.

6 As you roll out calendar publishing to your GroupWise users, enable calendar publishing on the POA for each post office where users will publish calendars and free/busy information.

To determine which POAs have been enabled for calendar publishing, see "Viewing Calendar Publishing Status at the POA Web Console" in "Calendar Publishing Host" in the *GroupWise 8 Administration Guide*.

6.4.6 Setting Up Calendar Publishing Administration

After calendar publishing has been enabled and the POA is communicating with the Calendar Publishing Host, you use the Calendar Publishing Host Administration Web console to monitor the Calendar Publishing Host and to make configuration changes as needed.

Use the information under *Authentication Information* on your GroupWise Calendar Publishing Host Installation Summary Sheet as you set up Calendar Publishing Host administration. You now set up the objects in ConsoleOne that correspond to the objects you specified during installation.

1 In ConsoleOne, browse to and select the container where you want to have the calendar publishing administrator User and Group objects.

2 If you want to create a new User object:

2a Right-click the container, then click *New > User*.

2b Fill in the required fields, including a password

2c Click *OK* to create the new User object.

3 Create the new administrative group.

    3a Right-click the container where the administrator User object is located, then click *New > Group*.

    3b Fill in the required fields.

    3c Click *OK* to create the new Group object.

4 Right-click the new User object or an existing User object, then click *Properties*.

5 Click *Memberships > Group Membership*.

6 Click *Add*, select the new administrative group you created in Step 3, then click *OK* to assign the administrator user to the group.

7 Click *OK* to close the Group Membership page.

8 Continue with Using the Published Calendar Browse List.

6.4.7 Using the Published Calendar Browse List

If you selected *Enable Publishing of Calendars to the Browse List* as your GroupWise system default in Step 8 in Section 6.4.2, "Configuring the Calendar Publishing Host in ConsoleOne," on page 148, skip to Section 6.4.8, "Testing Calendar Publishing," on page 152.

If you are planning to implement a corporate calendar browse list, you can enable publishing of calendars to the browse list for yourself for testing purposes.

1 Browse to and right-click your User object, then click *Properties*.

2 Click *GroupWise > Calendar Publishing*.

3 Select *Override*, then select *Enable Publishing of Calendars to the Browse List*.

This give you the right to add your calendars to the calendar browse list so that you can test the setup of the Calendar Publishing Host.

4 Continue with Testing Calendar Publishing.

6.4.8 Testing Calendar Publishing

Now that you have set up a Calendar Publishing Host, you can test it by:

- ◆ "Publishing a Personal Calendar" on page 152
- ◆ "Displaying the Browse List of Calendars" on page 153
- ◆ "Publishing Free/Busy Information" on page 154

Publishing a Personal Calendar

1 In the GroupWise Windows client, create and populate a personal calendar, as described in "Creating a Personal Calendar" in "Calendar" in the *GroupWise 8 Windows Client User Guide*.

2 Right-click the personal calendar, then click *Publish*.
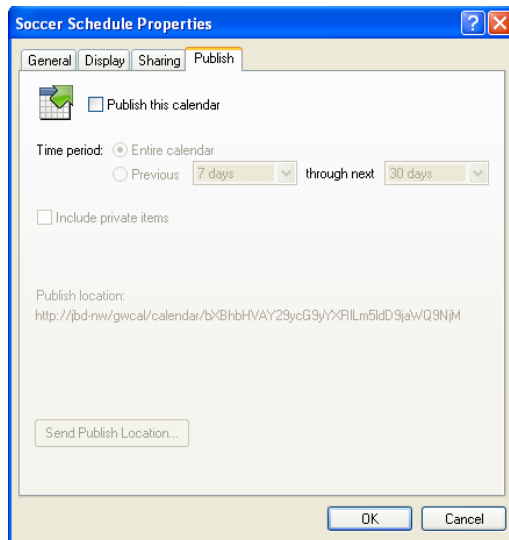
3 Select *Publish This Calendar.*

For more information, see "Publishing Personal Calendars on the Internet" in "Calendar" in the *GroupWise 8 Windows Client User Guide*.

This feature is also available in the GroupWise WebAccess Client, as described in "Publishing Personal Calendars on the Internet" in the *GroupWise 8 WebAccess Client User Guide*.

For more information, see the *GroupWise 8 Calendar Publishing Host User Quick Start* (http://www.novell.com/documentation/gw8/gw8_calpubuser_qs/gw8_calpubuser_qs.html).

4 Click *Send Publish Location*, then address and send the resulting message, which provides the URL from which Internet colleagues can obtain your calendar information.

5 Click *OK* to publish the selected personal calendar.

6 Check your mailbox for the notification sent by the Calendar Publishing Host.

7 Continue with Displaying the Browse List of Calendars.

Displaying the Browse List of Calendars

1 Display the following URL:

```
http://web_server_address/gwcal/calendar
```


Your newly published personal calendar should appear on the list.

2 Click your calendar to view it in its published format.

This assures you that your calendar is available for access by users across the Internet.

Publishing Free/Busy Information

1 In the GroupWise Windows client, click *Tools > Options*.

2 Click *Calendar > Free/Busy*.
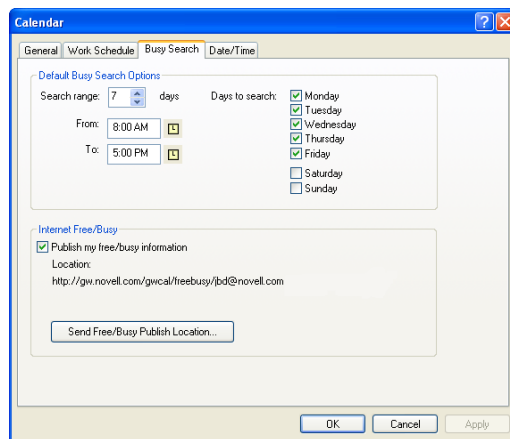
3 Click *Send Free/Busy Publish Location*, then address and send the resulting message, which provides the URL from which Internet colleagues can obtain your free/busy information.

4 Click *OK*, then click *Close*.

5 Check your mailbox for the notification sent by the Calendar Publishing Host.

6.5 What's Next

The "Calendar Publishing Host" section of the *GroupWise 8 Administration Guide* provides information to help you further configure and maintain the Calendar Publishing Host:

- Using the Administration Web console to change the configuration of the Calendar Publishing Host. See "Configuring the Calendar Publishing Host".

- Changing the appearance of the calendar browse list to represent your company. See "Customizing the Calendar Publishing Host Logo".

- Restricting the posted list of calendars to those of corporate importance. See "Creating a Corporate Calendar Browse List".

- Monitoring the Calendar Publishing Host at the POA Web console and through Calendar Publishing Host log files. See "Monitoring Calendar Publishing".

6.6 GroupWise Calendar Publishing Host Installation Summary Sheet

Installation Program Field	Value for Your GroupWise System	Explanation
Software Platform: ◆ NetWare ◆ Windows ◆ Linux		Section 6.3.1, "Selecting the Calendar Publishing Host Platform," on page 139
Calendar Publishing Host Name:		Section 6.3.3, "Determining the Configuration of the Calendar Publishing Host," on page 139

Post Office Agent Information:
 	
◆ POA network address
    ◆ IP address
    ◆ DNS hostname
◆ Calendar publishing port
		Section 6.3.4, "Connecting the Calendar Publishing Host to a POA," on page 140

NetWare Web Server Information: ◆ Apache Web Server for NetWare *drive*:\apache2		Section 6.3.2, "Gathering Web Server Information," on page 139
Windows Web Server Information: ◆ Microsoft Internet Information Server (IIS) for Windows c:\inetpub\wwwroot ◆ Web site		Section 6.3.2, "Gathering Web Server Information," on page 139

Installation Program Field	Value for Your GroupWise System	Explanation

Linux Web Server Information:
 	
Novell Open Enterprise Server Linux
 	
   ◆ Apache path
 	
   `/etc/opt/novell/httpd/`
   `conf.d`
 	
   ◆ Tomcat path
 	
   `/var/opt/novell/tomcat5/`
   `webapps`
 	
SUSE Linux Enterprise Server
 	
   ◆ Apache path
 	
   `/etc/apache2/conf.d`
 	
   ◆ Tomcat path
 	
   `/srv/www/tomcat5/webapps`
		Section 6.3.2, "Gathering Web Server Information," on page 139

LDAP Server Information:
 	
   ◆ LDAP server address
   ◆ Port
   ◆ Root certificate of the LDAP server
		Section 6.3.7, "Configuring Authentication to the Administration Web Console," on page 142

Authentication Information:
 	
   ◆ Administrator username
   ◆ User container for contextless login
   ◆ Administrative group that the user must belong to
		Section 6.3.7, "Configuring Authentication to the Administration Web Console," on page 142

Calendar Publishing Host Configuration:
 	
   ◆ Name
   ◆ URL
   ◆ Description
   ◆ IP address
   ◆ TCP port
		Section 6.3.3, "Determining the Configuration of the Calendar Publishing Host," on page 139

Calendar Browse List:
 	
   ◆ Yes
 	
      ◆ Corporate (restricted)
      ◆ Open
 	
   ◆ No
		Section 6.3.5, "Designing Your Calendar Browse List," on page 141

Installation Program Field	Value for Your GroupWise System	Explanation
Calendar Publishing Options:		Section 6.3.6, "Selecting Calendar Publishing Settings," on page 141
◆ Enable calendar publishing		
◆ Enable rules to move items to a published calendar		
◆ Enable subscribe to calendar		
◆ Enable publish free/busy searches		
Calendar Publishing Post Office:		Section 6.3.4, "Connecting the Calendar Publishing Host to a POA," on page 140
◆ Name:		
◆ POA network address		
◆ IP address		
◆ DNS hostname		
◆ Calendar publishing port		

7 Installing GroupWise Monitor

Novell GroupWise Monitor is a monitoring and management tool that allows you to monitor GroupWise agents and gateways from any location where you are connected to the Internet and have access to a Web browser. Some agent administration can also be performed from your Web browser. The topics below help you plan and set up GroupWise Monitor:

IMPORTANT: If you plan to install GroupWise Monitor in a clustered server environment, see the *GroupWise 8 Interoperability Guide* before you install Monitor.

7.1 GroupWise Monitor Overview

GroupWise Monitor consists of two components:

Monitor Agent: The Monitor Agent continuously polls other GroupWise agents (POA, MTA, Internet Agent, WebAccess Agent, as well as the Messenger Agents, and GroupWise gateways), gathers status information from them, and displays the status information at the Monitor Agent server console. The Monitor Agent also services requests for agent status information from the Monitor Application.

NOTE: The Monitor Agent server console is available on Windows, but not on Linux.

Monitor Application: The Monitor Application extends the capability of your Web server so that agent status information can be displayed in your Web browser. Two browser-based consoles are available:

- The Monitor Web console, provided by the Monitor Application, takes advantage of your Web server's capabilities to make agent status information available to you when you are outside your firewall.
- The Monitor Agent Web console, provided by the Monitor Agent itself, can be used only behind your firewall but provides capabilities not available in the Monitor Web console. This section focuses on using the full-featured Monitor Agent Web console. Specific differences in functionality between the two Web consoles are summarized in "Comparing the Monitor Consoles" in "Monitor" in the *GroupWise 8 Administration Guide*.

NOTE: The Monitor browser-based consoles are available on both Windows and Linux.

The Monitor Agent and the Monitor Application can run on the same server or on different servers, depending on the needs of your system.

- ◆
- ◆

7.1.1 One Monitor Server vs. Two

The Monitor Agent and the Monitor Application can run together on a Linux server or a Windows server, as illustrated below:

Figure 7-1 *Monitor Agent and Application Installed on the Same Machine*
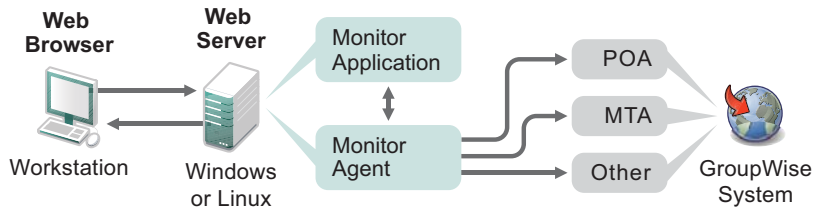
The server where they run together must be a Web server because the Monitor Application is installed into the Web server installation.

The Monitor Agent and the Monitor Application can also run on different servers. In addition to running on a Linux or Windows server, the Monitor Application can also run on a NetWare server in conjunction with a Web server running on that platform, as illustrated below:

Figure 7-2 *Monitor Agent Installed on a Windows Machine with the Monitor Application Installed on a NetWare, Linux, or Windows*
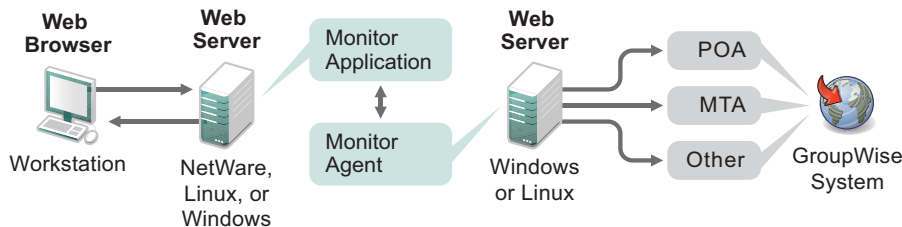
Security, discussed in the Monitor Security Requirements, might also determine whether you run the Monitor Agent on the same server as the Web server.

7.1.2 Monitor Security Requirements

GroupWise Monitor can be configured to support the level of security you have established for your Internet/intranet communication.

If you are not concerned about security issues (for example, you only plan to use Monitor on a secured intranet), you can install the Monitor components to any servers that provide access for your GroupWise administrators and that meet the requirements listed in Section 7.2, "Monitor System Requirements," on page 161.

If you plan to use Monitor to provide GroupWise administrators with access to your GroupWise system from anywhere on the Internet (rather than simply within a secured intranet), and you already have a firewall in place to provide security, you have the following options for configuring Monitor:

- Install both Monitor components inside your firewall and use a proxy service. See "Configuring Monitor with a Proxy Service" on page 161. This is the recommended configuration.
- Install the Monitor Application on a Web server outside your firewall and the Monitor Agent on a server inside your firewall. See "Configuring Monitor without a Proxy Service" on page 161.

Configuring Monitor with a Proxy Service

If your firewall includes a proxy service, you can install the Monitor Application to a Web server inside your firewall, and the Monitor Agent to another server inside the firewall, as shown in the following illustration.

Figure 7-3 *Monitor Installed inside the Firewall*
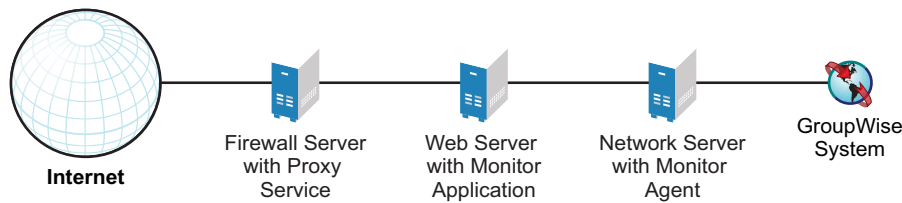
If desired, the Monitor Agent can also be installed to the Web server rather than a separate server, as discussed in Section 7.1.1, "One Monitor Server vs. Two," on page 160.

Configuring Monitor without a Proxy Service

If your firewall does not provide a proxy service, you need to install the Monitor Application to a Web server that is outside the firewall. Because the Monitor Agent requires direct access to a GroupWise domain directory, it needs to be installed to a server that is located within the firewall. It should be installed to the same server where a domain directory is located.

Figure 7-4 *Monitor Installed outside the Firewall*
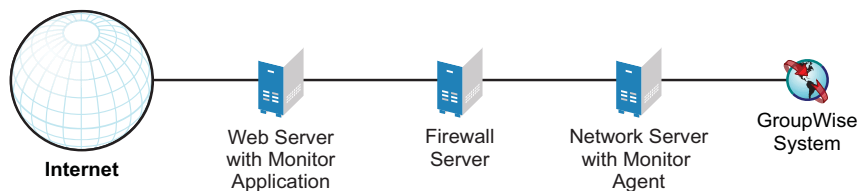
The firewall must allow inbound IP packets to be sent from the Web server to the IP address and port number of the Monitor Agent (for example, 172.16.5.18:8200).

In addition, the firewall must allow outbound IP packets to be sent from the Monitor Agent to the Web server. This requires all high ports (above 1023) to be open to outbound IP packets.

7.2 Monitor System Requirements

❑ x86-32 processor or x86-64 processor

On a 64-bit processor, GroupWise still runs as a 32-bit application.

❒ Any of the following server operating systems for the Monitor Agent:

- ◆ Novell Open Enterprise Server (OES) 2 (Linux version) or OES 11, plus the latest Support Pack
- ◆ SUSE Linux Enterprise Server (SLES) 10 or SLES 11, plus the latest Support Pack
- ◆ Windows Server 2003, Windows 2003 R2, Windows Server 2008, or Windows Server 2008 R2, plus the latest Service Pack

❒ Adequate server memory as required by the operating system

❒ Any of the following Web servers for the Monitor Application:

- ◆ NetWare 6.5: Apache 2.0 plus:
    - ◆ Tomcat 4.1
    - ◆ JVM 1.4.2
    - ◆ Jakarta Connector 1.2
- ◆ OES 2 Linux / SLES 10: Apache 2.2 plus:
    - ◆ Tomcat 5.0 or later
    - ◆ JVM 1.4.2 or later
    - ◆ ModProxy Module
- ◆ OES 11 / SLES 11: Apache 2.2 plus:
    - ◆ Tomcat 6.0 or later
    - ◆ JVM 1.5 or later
    - ◆ ModProxy Module
- ◆ Windows Server 2003/2003 R2: Microsoft Internet Information Server (IIS) 6 or later plus:
    - ◆ Tomcat 5.5 or later
    - ◆ JVM 1.5 or later
    - ◆ Jakarta Connector 1.2 or later
- ◆ Windows Server 2008/2008 R2: Microsoft Internet Information Server (IIS) 7 or later plus:
    - ◆ Tomcat 5.5 or later
    - ◆ JVM 1.5 or later
    - ◆ Jakarta Connector 1.2 or later

❒ Any of the following Web browsers for the Monitor Web consoles:

- ◆ Windows: Microsoft Internet Explorer 6.0 or later; Mozilla Firefox
- ◆ Macintosh: The latest version of Safari 1.0 for your version of Mac OS; Mozilla Firefox
- ◆ Linux: Mozilla Firefox

❒ Any of the following environments for running the GroupWise Installation program:

- ◆ Windows XP, Windows Vista, or Windows 7, plus the latest Service Pack, plus the Novell Client
- ◆ Windows Server 2003, Windows Server 2003 R2, Windows Server 2008, or Windows Server 2008 R2, plus the latest Service Pack, plus the Novell Client
- ◆ Novell Open Enterprise Server (OES) 2 (Linux version) or OES 11, plus the latest Support Pack

- ◆ SUSE Linux Enterprise Server (SLES) 10 or SLES 11, plus the latest Support Pack

  The X Window System is required by the GUI GroupWise Installation program that steps you through the process of creating a new GroupWise system. A text-based Installation program is also available.

- ❒ Adequate server disk space:

  - ◆ Approximately 140 MB for the Monitor program files (111 MB shared with WebAccess; varies by platform)

  - ◆ 50 MB to 100 MB for log files if you plan to use Monitor's reporting capabilities that rely on MTA message logging, as described in "Generating Reports" in "Monitor" in the *GroupWise 8 Administration Guide*

7.3 Planning GroupWise Monitor

Use the "GroupWise Monitor Installation Summary Sheets" on page 177 to record your decisions about how to install GroupWise Monitor. The topics in this section present the required information in a convenient planning sequence. The Installation Summary Sheet organizes the information in the order in which you need it during installation.

- ◆ Section 7.3.1, "Deciding Where to Install the GroupWise Monitor Components," on page 163
- ◆ Section 7.3.2, "Determining the Monitor Agent's Configuration," on page 165
- ◆ Section 7.3.3, "Determining the Monitor Application's Configuration," on page 166

For additional assistance in planning your GroupWise installation, see GroupWise Best Practices (http://wiki.novell.com/index.php/GroupWise) and GroupWise 8 Good and Bad Habits (http://wiki.novell.com/index.php/GroupWise_8_Good_and_Bad_Habits).

IMPORTANT: If you plan to install GroupWise Monitor in a clustered server environment, refer to the *GroupWise 8 Interoperability Guide* as you plan your Monitor installation.

7.3.1 Deciding Where to Install the GroupWise Monitor Components

After reviewing Section 7.1, "GroupWise Monitor Overview," on page 159 and the system requirements listed in Section 7.2, "Monitor System Requirements," on page 161, plan where you want to install the Monitor components in your system.

- ◆ "Monitor Server" on page 163
- ◆ "Web Server" on page 164

Monitor Server

The Monitor Agent runs on Linux and Windows. On Linux, the Monitor Agent runs as a daemon. On Windows, the Monitor Agent runs as an application. The Monitor Agent cannot be run as a Windows service.

If you want to install the Monitor Agent and the Monitor Application on the same server, you can install them at the same time. If you want to install them on different servers, you must run the Monitor Installation program twice, once for each server. For example, you might want to install the Monitor Application on NetWare for use with a NetWare Web server, but you must always install the Monitor Agent on Linux or Windows.

The Monitor Agent needs to communicate with an MTA. If possible, install the Monitor Agent on the same server where a domain and MTA are already located. If you want to install the Monitor Agent on its own server, consider creating a domain on that server specifically for helping the Monitor Agent communicate with the rest of your GroupWise system.

The installation directory for the Monitor Agent depends on the platform:

Linux:	The Linux Monitor Agent is automatically installed to `/opt/novell/groupwise/agents`.
Windows:	The default installation directory is `c:\Program Files\Novell\GroupWise Server\Monitor`.

GROUPWISE MONITOR AGENT INSTALLATION SUMMARY SHEET

Under *Agent Software Platform*, mark the platform (Linux or Windows) where you plan to install the Monitor Agent.

Under *Server Information*, specify the directory on the Linux or Windows server where you want to install the Monitor Agent software.

Web Server

The Monitor Application integrates with your Web server to pass agent status information gathered by the Monitor Agent to your Web browser for display in the Monitor Web console. The location of the Monitor Application files that are installed depends on the Web server that it is being integrated with. The default Web server paths vary by platform:

Apache Web Server for NetWare:	`drive:\Apache2`
Apache Web Server for OES Linux:	`/etc/opt/novell/httpd/conf.d`
Tomcat for OES Linux:	`/var/opt/novell/tomcat5/webapps`
Apache Web Server for SLES:	`/etc/apache2/conf.d`
Tomcat for SLES:	`/srv/www/tomcat5/base/webapps`
Microsoft Internet Information Server (IIS) for Windows:	`c:\inetpub\wwwroot`

The Web server uses a servlet engine in order to incorporate product-specific components, such as the Monitor Application, into its functioning.

GROUPWISE MONITOR APPLICATION INSTALLATION SUMMARY SHEET

Under *Web Server Information*, select the type of Web server you want to use with Monitor, and specify the directory path to the Web server root directory.

On Windows, if the Internet Information Server services more than one Web site, specify the Web site where you want to install the Monitor Application.

7.3.2 Determining the Monitor Agent's Configuration

As you install the Monitor Agent, you are prompted to supply the configuration information described in the following sections:

Systems to Monitor

The Monitor Agent can monitor both GroupWise agents and Messenger agents. In addition, the Monitor Agent works in conjunction with the GroupWise High Availability service on Linux to automatically restart GroupWise and Messenger agents that go down unexpectedly

It is not necessary to have an entire GroupWise system installed in order for the Monitor Agent to monitor Messenger agents. For more information, see "Setting Up the High Availability Service" in "Installing a Novell Messenger System" in the *Novell Messenger 2.2 Installation Guide*.

GROUPWISE MONITOR AGENT INSTALLATION SUMMARY SHEET

Under *System Options*, mark whether you want to monitor a GroupWise system, a Messenger system, or both.

Monitor Agent Network Address

The Monitor Agent communicates with the Monitor Application and with monitored agents by way of TCP/IP.

GROUPWISE MONITOR AGENT INSTALLATION SUMMARY SHEET

Under *Server Information*, record the IP address or DNS hostname of the Linux or Windows server where you plan to install the Monitor Agent software. Use the default port number of 8200 unless that number is already in use on that server.

For a complete list of default port numbers used by the GroupWise agents, refer to "GroupWise Port Numbers" in the *GroupWise 8 Administration Guide*.

Domain Directory Path

The Monitor Agent can gather information about the locations of GroupWise agents to monitor by reading from a domain database. Using the gathered information, the Monitor Agent can display a list of monitored agents when you start it for the first time.

GROUPWISE MONITOR AGENT INSTALLATION SUMMARY SHEET

Under *Domain Directory*, specify the directory path to a domain where a GroupWise 6.*x* or later MTA is running.

Windows Installation Option: Default Monitor Agent Language

GroupWise Monitor is automatically installed in all available languages. During installation, you can select a default language for the Monitor Agent server console interface, which is available only on Windows.

GROUPWISE MONITOR AGENT INSTALLATION SUMMARY SHEET

Under *Default Language*, specify a default language.

NOTE: On Linux, you use the Monitor Web consoles exclusively.

For more information, see "Multilingual GroupWise Systems" in the *GroupWise 8 Administration Guide*.

Linux Installation Option: LDAP Information

If you are installing the Linux Monitor Agent and Monitor Application, the Installation program needs to access eDirectory through LDAP. eDirectory access is required in order to create the Monitor Application objects. To obtain access, the Installation program needs the IP address and port number of an LDAP server, along with an eDirectory username and password to log in with. The user must have sufficient rights to create GroupWise objects in eDirectory. Because the Linux Installation program uses LDAP to access eDirectory, you must provide the username in LDAP format. For example:

```
cn=admin,ou=users,o=corporate
```

If you want to secure the connection to eDirectory with SSL, you can specify a root certificate file. For background information about SSL, see "Trusted Root Certificates and LDAP Authentication" in "Security Administration" in the *GroupWise 8 Administration Guide*.

IMPORTANT: If you do not want to use SSL, the LDAP server must be configured to accept clear text passwords. This is configured on the server's LDAP Group object in ConsoleOne by deselecting *Require TLS for Simple Binds with Password*.

GROUPWISE MONITOR AGENT INSTALLATION SUMMARY SHEET

Under *LDAP Authentication*, specify the IP address and port number of an LDAP server, a username in LDAP format, the password for the username, and if necessary, the full path to your SSL root certificate file.

7.3.3 Determining the Monitor Application's Configuration

As you install the Monitor Application to a Web server, you are prompted to supply the configuration information described in the following sections:

- "eDirectory Objects and Configuration File" on page 167
- "Default Monitor Web Console Language" on page 167

eDirectory Objects and Configuration File

Monitor Application configuration information is stored in two places:

* In Novell eDirectory
* In a configuration file (gwmonitor.cfg), located in the following directories:

Linux: `/var/opt/novell/groupwise/monitor/gwmonitor.cfg`

Windows: `c:\Novell\GroupWise\gwmonitor`

You can easily modify the configuration information in ConsoleOne by editing the properties of the GroupWise Monitor Application object (named GroupWiseMonitor). However, the configuration file is required if you need to install the Monitor Application to a Web server that is outside your firewall, where access to eDirectory is not available.

GROUPWISE MONITOR APPLICATION INSTALLATIONSUMMARY SHEET

Under *Monitor Application Object*, specify the tree and context where you want the Installation program to create the GroupWise Monitor Application object (named GroupWiseMonitor) and the accompanying Monitor Provider object (named GroupWiseProvider).

---

eDirectory is considered the master location for the Monitor Application configuration information. Any changes made directly to the Monitor Application configuration file are overwritten the next time the information in eDirectory is modified and saved.

The default configuration information is sufficient for an initial Monitor installation. For more information about configuring Monitor, see "Monitor" in the *GroupWise 8 Administration Guide*.

Default Monitor Web Console Language

GroupWise Monitor is automatically installed in all available languages. If necessary, you can select a different default language for the Monitor Web console interface than you selected for the Monitor Agent server console interface.

NOTE: The Monitor Agent server console interface is available only on Windows.

GROUPWISE MONITOR AGENT INSTALLATION SUMMARY SHEET

Under Default Language, specify a default language for the Monitor Web console

---

For more information, see "Multilingual GroupWise Systems" in the *GroupWise 8 Administration Guide*.

7.4 Setting Up GroupWise Monitor

Follow the instructions for the platform where you are setting up GroupWise Monitor:

IMPORTANT: If you are installing GroupWise Monitor in a clustered server environment, see the *GroupWise 8 Interoperability Guide* before you install Monitor.

7.4.1 Windows: Setting Up GroupWise Monitor

1 At a Windows server that meets the requirements listed in Section 2.1, "GroupWise Administration Requirements," on page 17, log in as an Admin equivalent to the eDirectory tree in which you are installing Monitor.

2 If you want to monitor non-HTTP-enabled agents (such as earlier versions of any GroupWise agent), install the SNMP service for Windows.

This enables the Monitor Agent to use SNMP in addition to HTTP.

3 Make sure no GroupWise agents are currently running on the Windows server where you plan to install the Monitor Agent.

4 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program.

or

Run setup.exe from the root of the downloaded *GroupWise 8* software image.

or

If you have already copied the Monitor Agent software to a software distribution directory, run setup.exe from the root of the software distribution directory to start the GroupWise Installation program.

5 Select the language in which you want to run the GroupWise Installation program, then click *OK*.

NOTE: All available languages are included on the *GroupWise 8* DVD and the multilanguage version of the *GroupWise 8* software image, but you can select which languages you want to install.

The main GroupWise System Installation page appears.
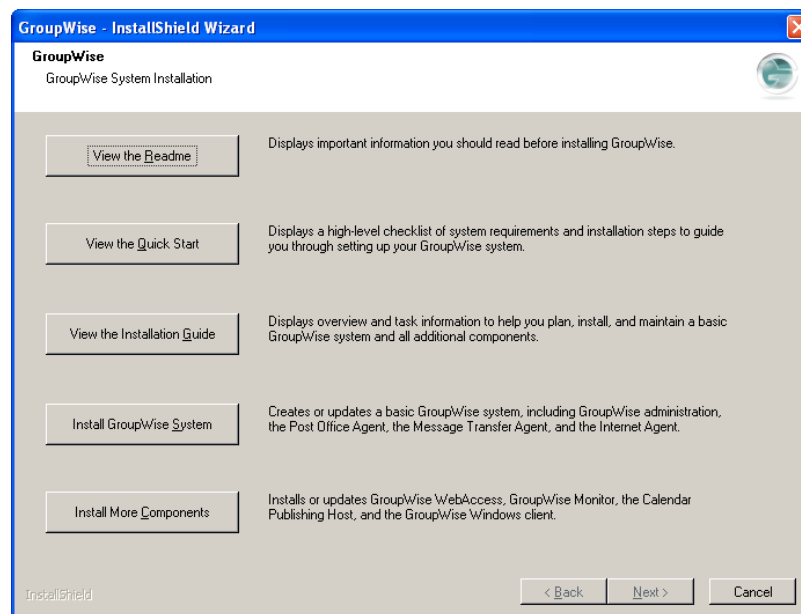
6 Click *More Components*, then click *Install Monitor*.

7 Select the interface language for the Installation program, then click *OK*.

8 Click *Yes* to accept the License Agreement and display the GroupWise Monitor: Components dialog box.
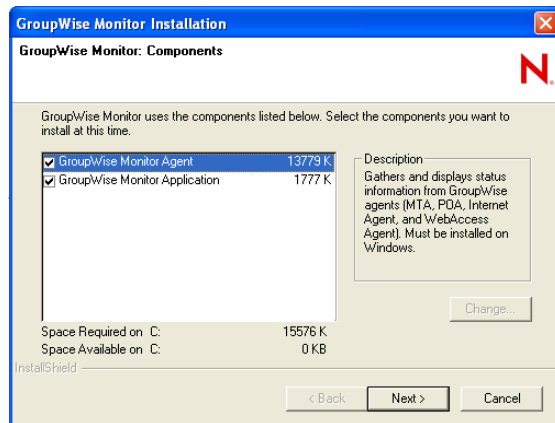
9 Follow the prompts to provide information about Monitor Agent configuration, using the following information from the GroupWise Monitor Installation Summary Sheets.

Components
Server Information
System Options
Domain Directory
Default Language

10 Follow the prompts to provide information about Monitor Application configuration, using the following information from the GroupWise Monitor Installation Summary Sheets.

Agent Information
Web Server Information
Default Language
Monitor Application Object

11 When the installation is complete, select from the following options:

Launch Installation Summary: This option displays a list of the information you provided during installation. You can print it for future reference.

Start the GroupWise Monitor Agent: This option starts the Monitor Agent immediately. If you want to configure the server to start the Monitor Agent automatically each time the server restarts, see "Starting the NetWare GroupWise Agents" on page 197 or "Starting the Windows GroupWise Agents" on page 222.

NOTE: If you installed only the Monitor Application, this option does not appear.

Restart the Web Server: This option starts the Web server, which loads the Monitor Application.

NOTE: If you installed the Monitor Application to the Internet Information Server (IIS) on Windows, the Monitor Installation program automatically installed Tomcat 5.5 to the following directory on your Windows Web server:

```
c:\novell\groupwise\tomcat5.5
```

The Installation program then starts Tomcat as a Windows service for use by Monitor.

12 Click *Finish* to exit the Monitor Installation program.

13 Click *Finish* to exit the GroupWise Installation program as well.

If you chose to start the Monitor Agent immediately, the Monitor Agent server console displays on the Windows server.
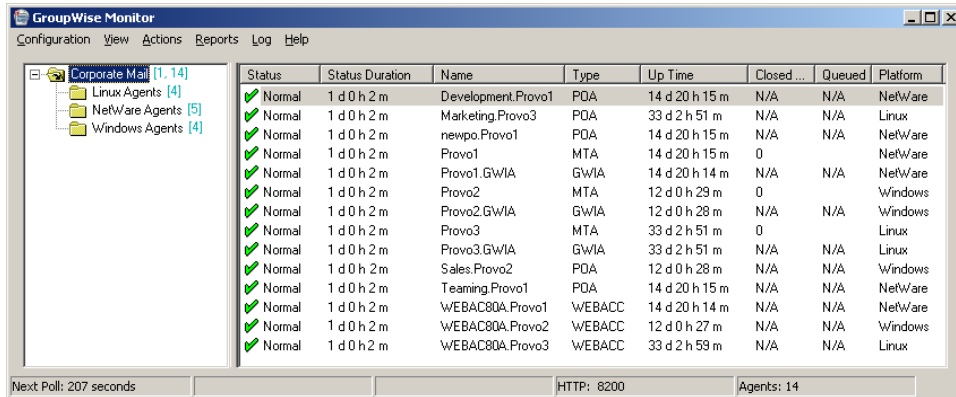
If the Monitor Agent does not start successfully, see "Starting the Windows GroupWise Agents" on page 222

14 If you use a proxy service, follow the instructions in "Configuring Proxy Service Support for the Monitor Web Console" in "Monitor" in the *GroupWise 8 Administration Guide*.

7.4.2 Linux: Setting Up GroupWise Monitor

Complete the following tasks to install GroupWise Monitor on Linux:

- "Installing the Linux Monitor Agent" on page 170
- "Configuring the Linux Monitor Agent" on page 171
- "Installing and Configuring the Monitor Application" on page 172
- "Restarting the Web Server" on page 173
- "Starting the Linux Monitor Agent as a Daemon" on page 173

IMPORTANT: If you plan to install GroupWise Monitor in a clustered server environment, see the *GroupWise 8 Interoperability Guide* before you install Monitor.

If you are new to Linux, you might want to review Appendix A: Useful Linux Commands for Administering a GroupWise System in the *GroupWise 8 Administration Guide* before you install the GroupWise Monitor on Linux.

Installing the Linux Monitor Agent

1 Make sure that Apache 2 and Tomcat 5 are installed as your Web server.

They might not be installed by default on your system.

2 Make sure that LDAP is running on your eDirectory server and that it is configured to accept login from the Installation program.

The Installation program requires eDirectory access in order to create the Monitor objects in eDirectory. The Installation program uses LDAP to gain the required access.

3 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program.

or

Run `install` from the root of the downloaded *GroupWise 8* software image.

or

If you have already copied the Monitor Agent software to a software distribution directory, run `./install` from the root of the software distribution directory to start the GroupWise Installation program.

The X Window System is required for running the GUI GroupWise Installation program. If you are not using the X Window System, you can install GroupWise components individually, as described in "Installing the GroupWise Agents Using the Text-Based Installation Program" on page 201.

4 Select the language in which you want to run the GroupWise Installation program, then click *OK*.

NOTE: On Linux, all available languages are included in the same RPM, so all languages are always installed.

The main GroupWise System Installation page appears.

5 Click *Install Products > GroupWise Monitor > Install GroupWise Monitor Agent*.

6 When the installation is complete, click *OK*.

The Monitor Agent software is installed to `/opt/novell/groupwise/agents`.

7 Continue with Configuring the Linux Monitor Agent.

Configuring the Linux Monitor Agent

1 After the Monitor Agent files have been installed, click *Configure Monitor*.

The Monitor Agent installation and configuration steps are separate so that you can install updated agent software without repeating the agent configuration steps.
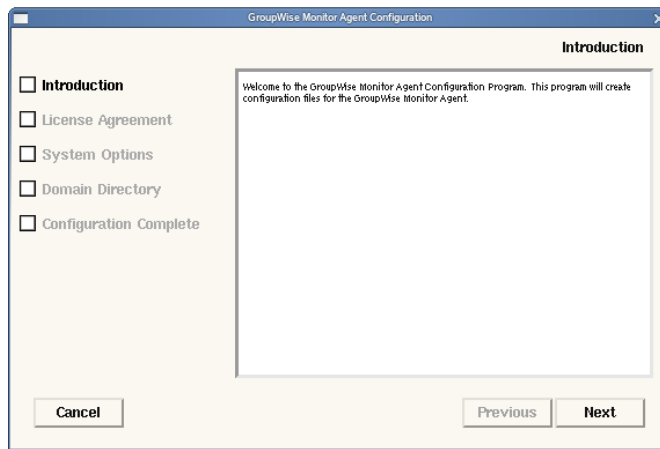
2 Follow the prompts to configure the Monitor Agent, using the following information from the GroupWise Monitor Agent Installation Summary Sheet.

System Options
Domain Directory

On the Configuration Complete page, *Launch Monitor Agent on System Startup* is selected by default.

3 Click *Exit* to complete the installation.

4 Continue with Installing and Configuring the Monitor Application.

Installing and Configuring the Monitor Application

1 After installing and configuring the Monitor Agent, if necessary, click *Install Monitor Application*.

The Monitor Application is installed into the following directories:

```
/etc/opt/novell/groupwise/monitor
/var/opt/novell/groupwise/monitor
```

and is linked into your Web server.

2 When the file copy is complete, click *OK*.

3 Click *Configure Monitor Application*.
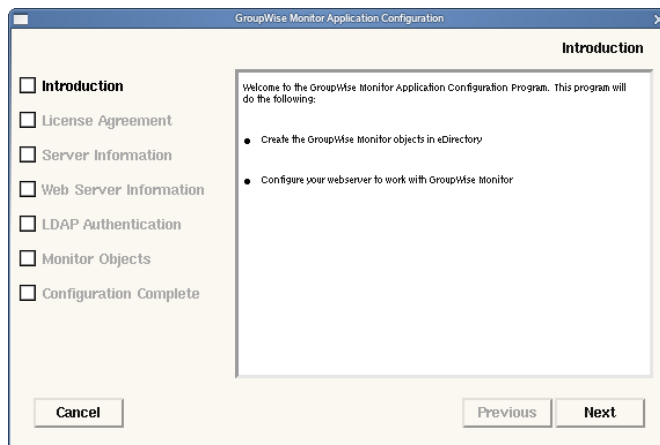
4 Follow the prompts to provide information about Monitor Application, using the following information from the GroupWise Monitor Application Installation Summary Sheet in the order listed.

Server Information
Web Server Information
LDAP Authentication
Monitor Application Object

5 Click *Exit* to complete the configuration.

6 If you use a proxy service, follow the instructions in "Configuring Proxy Service Support for the Monitor Web Console" in "Monitor" in the *GroupWise 8 Administration Guide*.

7 Continue with Restarting the Web Server.

Restarting the Web Server

In order to load the Monitor Application, you must restart the Web server.

NetWare:	NetWare 6.5:
	``` unload apache2 unload java tomcat4 apache2 ```
Linux:	Novell Open Enterprise Server 2 Linux installation of Apache: ``` /etc/init.d/apache2 stop /etc/init.d/novell-tomcat5 stop /etc/init.d/novell-tomcat5 start /etc/init.d/apache2 start ``` SUSE Linux Enterprise Server 10 installation of Apache: ``` /etc/init.d/apache2 stop /etc/init.d/tomcat5 stop /etc/init.d/tomcat5 start /etc/init.d/apache2 start ```
Windows	1. At the Windows server, click *Start > Administrative Tools > Services*. 2. Right-click *Tomcat 5.5*, then click *Restart*. 3. Right-click *World Wide Web Publishing Service*, then click *Restart*.

Starting the Linux Monitor Agent as a Daemon

NOTE: Unlike the other GroupWise agents, you do not need to be logged in as root in order to start the Monitor Agent.

1 Make sure you know the path to a domain directory where a domain database (wpdomain.db) is located or the IP address of a server where the MTA is running.

2 Change to the GroupWise agent bin directory.

```
cd /opt/novell/groupwise/agents/bin
```

3 Use one of the following commands to start the Monitor Agent:

```
./gwmon --home /domain_directory &
./gwmon --ipa IP_address --ipp port_number &
```

The --home startup switch specifies a domain directory where the Monitor Agent can access a domain database.

The --ipa startup switch specifies the IP address of a server where an MTA is running, which is another way for the Monitor Agent to obtain information from a domain database. The --ipp startup switch specifies the port number of the MTA's HTTP port on which the Monitor Agent communicates with the MTA.

The ampersand (&) causes the Monitor Agent to run in the background, so that the terminal window you started it in is again available for use.

To remind yourself of these commands when you are at your Linux server, view the gwmon man page.

You can also start the Monitor Agent by using its startup script (/etc/init.d/grpwise-ma), as described in the grpwise-ma man page.

The Monitor Agent does not have a --show switch. The Monitor log file (*mmdd*mon.*nnn*) for status messages is located in the /var/log/novell/groupwise/gwmon directory. The log file name includes the month and day when it was created, along with an incrementing extension to accommodate multiple log files on the same day. The Monitor Agent can also be monitored from your Web browser.

If the Monitor Agent does not start successfully, see "Starting the Linux GroupWise Agents as Daemons" on page 204.

4 If you use a proxy service, follow the instructions in "Configuring Proxy Service Support for the Monitor Web Console" in "Monitor" in the *GroupWise 8 Administration Guide*.

5 After the Monitor Agent starts successfully, refer to the following sections in Chapter 8, "Installing GroupWise Agents," on page 181 for additional information about managing the Monitor Agent on Linux:

   ◆ "Starting the Linux GroupWise Agents on System Startup" on page 206
   ◆ "Configuring the Monitor Agent to Communicate with the Groupwise High Availability Service" on page 214
   ◆ "Stopping the Linux GroupWise Agents" on page 215
   ◆ "Uninstalling the Linux GroupWise Agents" on page 217

6 For instructions on using the Monitor Web consoles, skip to Section 7.5, "Using GroupWise Monitor," on page 174.

7.5 Using GroupWise Monitor
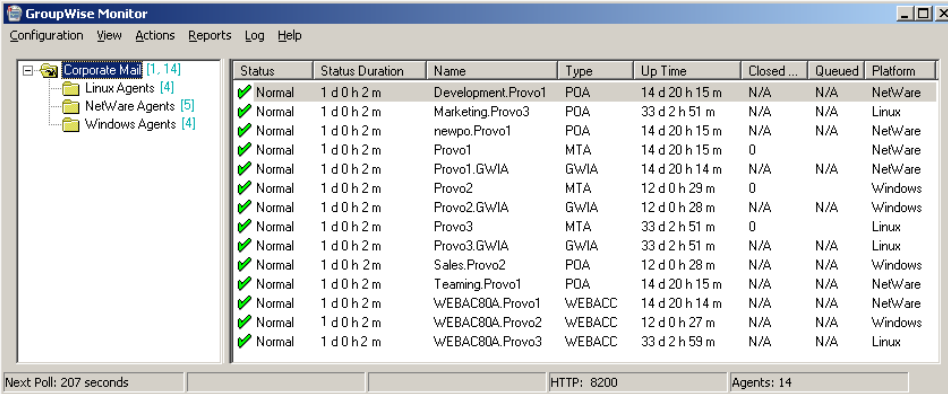
You can use GroupWise Monitor in various environments:

   ◆ Section 7.5.1, "Monitor Agent Server Console on a Windows Server," on page 174
   ◆ Section 7.5.2, "Monitor Web Consoles in Your Web Browser," on page 175

7.5.1 Monitor Agent Server Console on a Windows Server

To start the Monitor Agent on a Windows server and display the Monitor Agent server console, click *Start > All Programs > GroupWise Monitor > GroupWise Monitor*. The Monitor Agent server console appears.

Figure 7-5   *Monitor Agent Console*

At the Monitor Agent server console, you can perform many activities, for example:

  ◆ Use items on the *Configuration* menu to configure the Monitor Agent as needed.

  ◆ Use items on the *View* menu to choose how much and what kind of agent status information to display.

  ◆ Create agent groups in order to monitor related agents together.

  ◆ Use items on the *Reports* menu to check the status of links throughout your GroupWise system and to organize status information into a format that can be e-mailed or printed.

  ◆ Use items on the *Actions* menu to control agent polling.

For more information about using the Monitor Agent server console, see "Monitor" in the *GroupWise 8 Administration Guide*.

7.5.2   Monitor Web Consoles in Your Web Browser

Monitor has two different Web consoles. The Monitor Web console uses the capabilities of your Web server to provide access from outside your firewall. The Monitor Agent Web console is provided by the Monitor Agent itself and provides additional functionality beyond that which is available from outside your firewall.

  ◆ "Monitor Web Console" on page 175
  ◆ "Monitor Agent Web Console" on page 176

Monitor Web Console

To display agent status information in your Web browser from outside your firewall, enter the Monitor Web console URL in your Web browser:

```
https://network_address/gwmon/gwmonitor
```

where *network_address* represents the IP address or DNS hostname of the server where your Web server runs. The Monitor Web console appears.

Figure 7-6 *Monitor Web Console*
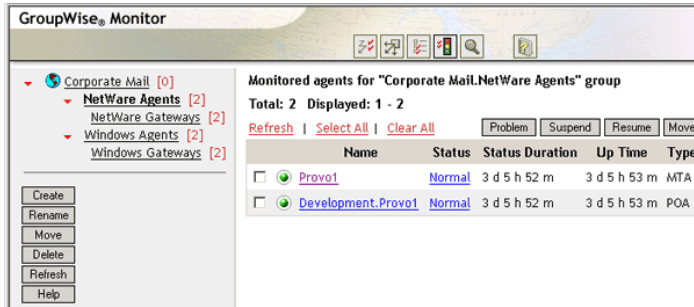
You can use this same URL to view the same agent status information in various browsers and mobile devices.

You can perform many of the same monitoring activities at the Monitor Web console as you can at the Monitor Agent server console. Refer to the online help in the Monitor Web console for additional information about each Monitor Web console page.

For more information about using the Monitor Web console, see "Monitor" in the *GroupWise 8 Administration Guide*.

Monitor Agent Web Console

To display agent status information in your Web browser from inside your firewall, enter the Monitor Agent Web console URL in your Web browser:

```
http://network_address:8200
```

Figure 7-7 *Monitor Agent Web Console*
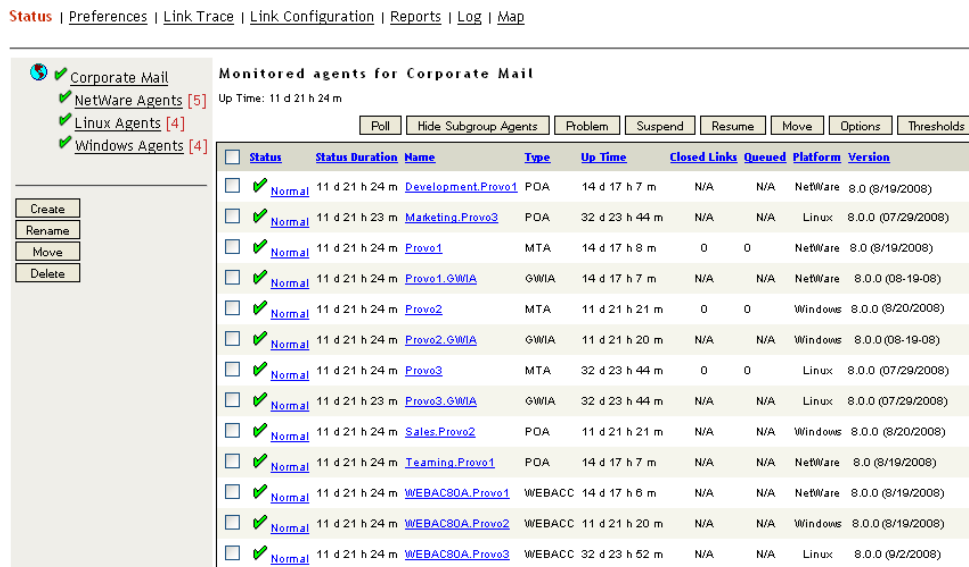
For instructions on protecting the Monitor Agent Web console with a password, see "Configuring Authentication and Intruder Lockout for the Monitor Web Console" in "Monitor" in the *GroupWise 8 Administration Guide*.

7.6 GroupWise Monitor Installation Summary Sheets

7.6.1 GroupWise Monitor Agent Installation Summary Sheet

Installation Program Field	Value for Your GroupWise System	Explanation
Agent Software Platform: ◆ Linux ◆ Windows		Section 7.3.1, "Deciding Where to Install the GroupWise Monitor Components," on page 163
Components: ◆ GroupWise Monitor Agent		Section 7.1, "GroupWise Monitor Overview," on page 159
Server Information: ◆ Installation path ◆ Network address 　IP address 　DNS hostname 　TCP port		Section 7.3.1, "Deciding Where to Install the GroupWise Monitor Components," on page 163 "Monitor Agent Network Address" on page 165
System Options: ◆ GroupWise ◆ Novell Messenger		"Systems to Monitor" on page 165
Domain Directory:		"Domain Directory Path" on page 165
Default Language: Windows only ◆ English ◆ French ◆ German ◆ Brazilian Portuguese ◆ Spanish		"Windows Installation Option: Default Monitor Agent Language" on page 166

Installation Program Field	Value for Your GroupWise System	Explanation

LDAP Authentication: Linux only
 	
  ◆ LDAP Server IP Address
  ◆ Port
  ◆ Username
  ◆ Password
  ◆ Use SSL Connection
    ◆ Yes
      Path to SSL certificate file
    ◆ No
		"Linux Installation Option: LDAP Information" on page 166

7.6.2 GroupWise Monitor Application Installation Summary Sheet

Installation Program Field	Value for Your GroupWise System	Explanation
Components: ◆ GroupWise Monitor Application		Section 7.1, "GroupWise Monitor Overview," on page 159
Agent Information:		"Monitor Agent Network Address" on page 165

Installation Program Field	Value for Your GroupWise System	Explanation

Web Server Information:
 	
Windows
 	
   ◆ Apache Web Server for NetWare
 	
   ◆ Path to the Web server's root directory
 	
Windows
 	
   ◆ Microsoft Internet Information Server (IIS) for Windows
 	
   ◆ Path to the Web server's root directory
 	
   ◆ Web site
 	
Linux
 	
   ◆ Apache path
 	
   `/etc/apache2/conf.d`
 	
   ◆ Tomcat path
 	
   `/srv/www/tomcat5/base/webapps`
		Section 7.3.1, "Deciding Where to Install the GroupWise Monitor Components," on page 163

Installation Program Field	Value for Your GroupWise System	Explanation

Default Language:
 	
Windows only
 	
   ◆ Arabic
   ◆ Brazilian Portuguese
   ◆ Chinese Simplified
   ◆ Chinese Traditional
   ◆ Czech
   ◆ Danish
   ◆ Dutch
   ◆ English
   ◆ Finnish
   ◆ French
   ◆ German
   ◆ Hebrew
   ◆ Hungarian
   ◆ Italian
   ◆ Japanese
   ◆ Korean
   ◆ Norwegian
   ◆ Polish
   ◆ Russian
   ◆ Spanish
   ◆ Swedish
		"Default Monitor Web Console Language" on page 167

Monitor Application Objects:
 	
   ◆ Tree
   ◆ Context
		"eDirectory Objects and Configuration File" on page 167

8 Installing GroupWise Agents

Novell GroupWise agents are first installed and started as part of installing a basic GroupWise system, as described in Chapter 3, "Installing a Basic GroupWise System," on page 25. The following sections help you install additional agents as you create new domains and post offices in your growing GroupWise system.

- Section 8.1, "GroupWise Agent Overview," on page 181
- Section 8.2, "Agent System Requirements," on page 183
- Section 8.3, "Planning the GroupWise Agents," on page 184
- Section 8.4, "Setting Up the GroupWise Agents," on page 190
- Section 8.5, "What's Next," on page 225
- Section 8.6, "GroupWise Agent Installation Summary Sheet," on page 225

IMPORTANT: If you plan to install the GroupWise agents in a clustered server environment, see the *GroupWise 8 Interoperability Guide* before you install the agents.

8.1 GroupWise Agent Overview

Each time you create a new post office, you must set up at least one Post Office Agent (POA) for it. Some of the POA's tasks in the post office include:

- Connecting GroupWise clients to mailboxes through network connections (TCP/IP, IMAP, SOAP)
- Sending messages to other users and delivering incoming messages into mailboxes
- Indexing messages and documents to support the Find feature in the GroupWise clients
- Managing disk space usage in the post office and controlling the size of messages that users are allowed to send and receive

Each time you create a new domain, you must set up a Message Transfer Agent (MTA) for it. Some of the MTA's tasks in the domain include:

- Routing user messages between post offices and domains
- Routing administration messages throughout the GroupWise system so that databases are kept in sync
- Synchronizing GroupWise user information with Novell eDirectory user information

The POA requires direct access to the post office directory so that it can write to the post office database. The MTA requires direct access to the domain directory so that it can write to the domain database. In addition, the POA and the MTA must be able to communicate with each other.

8.1.1 Local Access to Databases

The preferred way to fulfil this requirement is to install each agent on the same server with its directory. Running an agent locally on the same server where its directory and database are located simplifies network connections, because no remote login is required. In addition, it reduces network traffic and protects database integrity. The following diagram illustrates direct access:

Figure 8-1 *Direct Access between Agents and Directories*
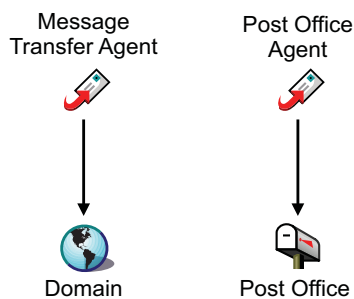
8.1.2 Remote Access to Databases

If necessary, you can install the agent on a different server from its directory if you are using NetWare or Windows. This requires the agent to have a direct link (mapped drive or UNC path) to its directory on the remote server in order to function. The following diagram illustrates the direct links:

Figure 8-2 *Direct Links between Agents and Directories*
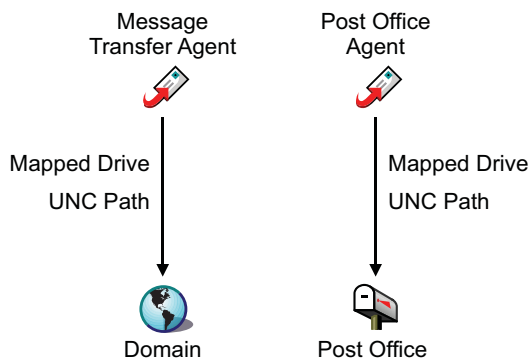
IMPORTANT: On Linux, file system mounts between Linux servers to not provide the necessary file locking mechanisms for the GroupWise Linux agents to access their databases on remote Linux servers.

8.1.3 Links between the MTA and the POA

To route user and administration messages to the post office, the MTA requires a TCP/IP link to the POA for the post office, or alternatively, a direct link (mapped drive or UNC path for NetWare or Windows) to the post office directory. The following diagram illustrates the alternatives:

Figure 8-3 *MTA Link Alternatives*
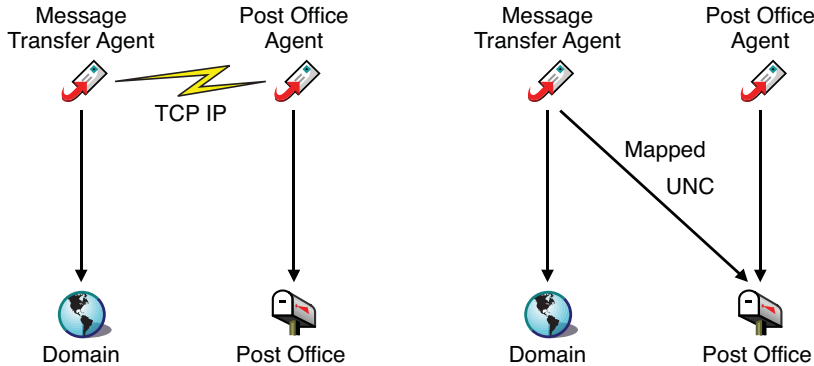
IMPORTANT: On Linux, file system mounts between Linux servers to not provide the necessary file locking mechanisms for the GroupWise Linux agents to access their databases on remote Linux servers.

8.2 Agent System Requirements

❑ x86-32 processor or x86-64 processor

On a 64-bit processor, GroupWise still runs as a 32-bit application.

❑ Any of the following server operating systems for the POA and the MTA:

- Novell Open Enterprise Server (OES) 2 (NetWare or Linux version) or OES 11, plus the latest Support Pack
- NetWare 6.5, plus the latest Support Pack
- SUSE Linux Enterprise Server (SLES) 10 or SLES 11, plus the latest Support Pack

The X Window System and Open Motif are required by the GUI GroupWise agent server consoles. By default, the agents run as daemons without user interfaces.

- Windows Server 2003, Windows Server 2003 R2, Windows Server 2008, or Windows Server 2008 R2, plus the latest Service Pack

❑ Adequate server memory as required by the operating system

❑ Any of the following environments for running the GroupWise Installation program:

- Windows XP, Windows Vista, or Windows 7, plus the latest Service Pack, plus the Novell Client
- Windows Server 2003, Windows Server 2003 R2, Windows Server 2008, or Windows Server 2008 R2, plus the latest Service Pack, plus the Novell Client
- Novell Open Enterprise Server (OES) 2 (Linux version) or OES 11, plus the latest Support Pack

- ◆ SUSE Linux Enterprise Server (SLES) 10 or SLES 11, plus the latest Support Pack

  The X Window System is required by the GUI GroupWise Installation program that steps you through the process of creating a new GroupWise system. A text-based Installation program is also available.

- ❒ Approximately 25 MB for the agent software (varies by platform)

The amount of memory actually used by the POA depends on the number of active users, as illustrated by the table below:

Table 8-1   *Memory Usage Examples*

Concurrent Users	Actual Memory Usage at Peak Time
100 active users (100-250 users in post office)	80 MB
250 active users (250-500 users in post office)	160 MB
500 active users (500-1000 users in post office)	250 MB
1000 active users (1000-2500 users in post office)	500 MB

The POA typically performs best with abundant cache memory available. On the server where it runs, at least 2 GB of memory is recommended.

8.3   Planning the GroupWise Agents

Use the "GroupWise Agent Installation Summary Sheet" on page 225 to record your decisions about how to install the GroupWise agents. The topics in this section present the required information in a convenient planning sequence. The Installation Summary Sheet organizes the information in the order in which you need it during installation.

For additional assistance in planning your GroupWise installation, see GroupWise Best Practices (http://wiki.novell.com/index.php/GroupWise) and GroupWise 8 Good and Bad Habits (http://wiki.novell.com/index.php/GroupWise_8_Good_and_Bad_Habits).

IMPORTANT: If you plan to install the GroupWise agents in a clustered server environment, refer to the *GroupWise 8 Interoperability Guide* as you plan your agent installation.

8.3.1 Selecting the Agent Platform

The MTA and POA are available as NetWare NLM programs, Linux executables, and Windows executables.

In general, GroupWise is most efficient if you match the agent platform with the network operating system where the post office and domain are located. For example, if a domain and post office are located on a NetWare server, then you would install the NetWare agents for them. However, this is not required.

Those with mixed networks might wonder what platform combinations are possible. For more information, see the following sections in the *GroupWise 8 Administration Guide*:

◆ "Cross-Platform Issues in the Post Office" in "Post Office Agent"

◆ "Cross-Platform Issues between Domains and Post Offices" in "Message Transfer Agent"

GROUPWISE AGENT INSTALLATION SUMMARY SHEET

Under *Agent Software Platform*, mark whether you plan to install the agents on NetWare, Linux, or Windows. Review Section 8.2, "Agent System Requirements," on page 183 to ensure that the specific server you have selected meets the listed requirements.

8.3.2 Selecting the Agent Location

Record which GroupWise agents you plan to run on the selected server (POA, MTA, or both) and whether you want to install the agents locally or remotely in relation to their directories and databases, as described in Section 8.1, "GroupWise Agent Overview," on page 181.

GROUPWISE AGENT INSTALLATION SUMMARY SHEET

Under *Agents and Locations*, mark the agents to install and their locations relative to the directories and databases they need to access.

If the NetWare agents need to access their directories and databases on remote NetWare servers, you must add configuration information to the agent startup files to provide the needed access. Use the /dn switch to specify the distinguished name of the agent object that was created along with the Domain or Post Office object. The remote servers must be in the same eDirectory tree as the server where the agents are running.

GROUPWISE AGENT INSTALLATION SUMMARY SHEET

Under *Agents and Locations*, for the NetWare agents, record the startup switches and settings you need to add to the agent startup files after installation if you are installing the agents on a different NetWare server from where their directories and databases are located.

8.3.3 Selecting the Agent Installation Directory

The agent installation directory depends on the platform where you are installing the agents.

Consider these platform-specific guidelines:

NetWare:	When installing the NetWare agents, we recommend you use the `sys:\system` directory on the NetWare server. This simplifies the use of startup files and ensures that the NLM programs are in the server's search path. If you use a different directory, you must add that directory to the server's search path.
Linux:	The Linux agents are automatically installed to `/opt/novell/groupwise/agents`.
Windows:	The default installation directory is `c:\Program Files\Novell\GroupWise Server\Agents`. However, you can install the agents to any directory you want.

GROUPWISE AGENT INSTALLATION SUMMARY SHEET

Under *Installation Path*, record the directory where you want to install the GroupWise agent software.

Both the MTA and the POA are installed to the specified directory.

8.3.4 Gathering Domain and Post Office Information

Record the following information about the domain and post office for which you are installing and setting up the GroupWise agents:

GROUPWISE AGENT INSTALLATION SUMMARY SHEET

Under *Domain Information*, record the domain name and path to the domain directory for the new domain.

Under *Post Office Information*, record the post office name and path to the post office directory for the new post office.

The domain and post office must exist before you install the agents for them. If necessary, create the domain and post office that you are installing the agents for now. See following sections of the *GroupWise 8 Administration Guide* for instructions:

- "Creating a New Domain"
- "Post Offices"

8.3.5 Deciding Which Languages to Install

If you have administrators with various language preferences, you can install and run the GroupWise agents in multiple languages. You should also install all languages used by GroupWise client users, so that message status information returned from the POA to users' mailboxes matches the language in which each user is running the client.

NOTE: On Linux, all available languages are included in the RPMs, so all languages are always installed.

GROUPWISE AGENT INSTALLATION SUMMARY SHEET

Under *Agent Language Selection*, list the languages you want to install the agents for.

Under *Client Language Selection*, list the client languages that you want the agents to be able to support.

By default, the agents start in the language selected for the domain. If that language has not been installed, the agents start in the language used by the operating system. If that language has not been installed, the agents start in English.

For more information, see "Multilingual GroupWise Systems" in the *GroupWise 8 Administration Guide*.

8.3.6 NetWare Installation Options: Automatic Startup, Protected Mode, and Clustering

When you install the NetWare GroupWise agents, the following options specific to NetWare are available in the Installation program:

- "Automatic Startup" on page 187
- "Protected Mode" on page 187
- "Novell Cluster Services" on page 187

Automatic Startup

You can have the Installation program add a reference to the `grpwise.ncf` file in the NetWare server's `autoexec.ncf` file so that the GroupWise agents are automatically loaded whenever the server is started.

GROUPWISE AGENT INSTALLATION SUMMARY SHEET

Under *Agent Options*, mark whether or not you want to configure the NetWare server to start the GroupWise agents automatically.

Protected Mode

You can have the Installation program configure the NetWare agents to run in Protected Mode, which starts them in their own protected address space on the NetWare server.

GROUPWISE AGENT INSTALLATION SUMMARY SHEET

Under *Agent Options*, mark whether or not you want to configure the NetWare server to start the GroupWise agents in Protected Mode.

Novell Cluster Services

Novell Cluster Services is a server clustering system that ensures high availability and manageability of critical network resources including volumes (where GroupWise domains and post offices reside) and applications (such as the GroupWise agents). Novell Cluster Services supports failover, failback, and migration of individually managed cluster resources.

The NetWare GroupWise agents can be configured to take advantage of the fault-tolerant environment provided by Novell Cluster Services if the following requirements are met:

- The domains and post offices to be serviced by the NetWare agents have already been created on shared NSS volumes in the cluster.
- The NetWare agents are being installed to a server that is part of the same cluster.

When the agents are configured for clustering, their startup files are configured with shared volume names rather than specific server names. In addition, the POA is configured to more effectively reestablish logins with GroupWise clients when a failover or migration situation arises.

GROUPWISE AGENT INSTALLATION SUMMARY SHEET

Under *Agent Options*, mark whether or not you want to configure the NetWare agents for clustering. If you do, follow the installation instructions in "Setting Up a Domain and Post Office in a NetWare Cluster" in "Novell Cluster Services on NetWare" in the *GroupWise 8 Interoperability Guide*, rather than the installation instructions in this guide.

8.3.7 Linux Installation Options: Automatic Startup and Clustering

When you install the Linux GroupWise agents, the following options specific to Linux are available in the Installation program:

- "Automatic Startup" on page 188
- "Clustering on Linux" on page 188

Automatic Startup

The Linux GroupWise agent are Run Control compliant. You can have the Installation program create symbolic links to the grpwise script in the rc3.d and rc5.d directories so that the agents load on restart into run level 3 or 5, depending on the configuration of your Linux system.

GROUPWISE AGENT INSTALLATION SUMMARY SHEET

Under *Agent Options*, mark whether or not you want to configure the Linux server to start the GroupWise agents automatically.

Clustering on Linux

On Linux, you can install the GroupWise agents on Novell Cluster Services. The Linux GroupWise Installation program provides a *Configure GroupWise for Clustering* option that simplifies the process of installing the Linux GroupWise agents on multiple nodes in the cluster.

GROUPWISE AGENT INSTALLATION SUMMARY SHEET

Under *Agent Options*, mark whether you want to configure the Linux GroupWise agents for clustering using Novell Cluster Services. If you do, follow the installation instructions provided in "Setting Up a Domain and a Post Office in a Linux Cluster" in Novell Cluster Services on Linux in the *GroupWise 8 Interoperability Guide*, rather than the installation instructions in this guide.

8.3.8 Windows Installation Options: SNMP Traps and Service vs. Application

When you install the Windows agents, you have choices about how the agents interact with the Windows operating system.

- "SNMP Traps" on page 189
- "Service vs. Application" on page 189

SNMP Traps

If you want to use an SNMP manager program, such as the Management and Monitoring Services component of Novell ZENworks Server Management, to monitor the agents, you must install some SNMP components along with the Windows agent software.

GROUPWISE AGENT INSTALLATION SUMMARY SHEET

Under *Agent Options*, mark *Install and Configure SNMP for GroupWise Agents* if you want to use an SNMP manager program.

If this option is dimmed during installation, the SNMP service has not been enabled on the Windows server where you are installing the agents. If you want to monitor the agents from an SNMP management program, the SNMP service must be enabled so you can select this option. For instructions, see the following sections in the *GroupWise 8 Administration Guide*:

◆ "Setting Up SNMP Services for the POA"
◆ "Setting Up SNMP Services for the MTA"

NOTE: The NetWare and Linux agents rely on operating system components for SNMP functionality and do not require this installation option.

Service vs. Application

When you run the GroupWise Windows agents as services, they can start automatically and run without a user interface.

GROUPWISE AGENT INSTALLATION SUMMARY SHEET

Under *Windows Service Information*, mark *Install as Windows Services* if you want to run the agents as services.

When you run the Windows agents as services, they must run under a specific Windows user account.

When domains and post offices are located on the same server where you are installing the agents, the agents can run under the local system account. You can also display the agent server consoles when the agent software, directories, and databases are local.

When domains and post offices are located on a remote server, you must specify a user with rights to access the domain and post office directories.

Remote Windows Server:	If the Windows agents need to log in to a another Windows server, provide a Windows username and password.
Remote NetWare Server:	If the Windows agents need to log in to a NetWare server, provide an existing eDirectory username and password, or create a new account for the agents, as described in "Creating a NetWare Account for Agent Access (Optional)" on page 193.

GROUPWISE AGENT INSTALLATION SUMMARY SHEET

Under *Windows Service Information*, record the account the agents will run under, and if necessary, the password for the account.

As with all Windows services, the Windows agents can be started automatically or manually as services each time the Windows server restarts.

GROUPWISE AGENT INSTALLATION SUMMARY SHEET

Under *Windows Service Information*, mark how you want the Windows agents to start each time the server is restarted.

NOTE: On Windows Server 2008, the Windows agents running as services cannot interact with the desktop. They must run as background processes.

8.4 Setting Up the GroupWise Agents

After creating a new domain or post office, you need to configure the Agent object (MTA or POA) that was automatically created with it, then follow the setup instructions for the platform where you are installing the GroupWise agents:

- Section 8.4.1, "Configuring New Agent Objects in eDirectory," on page 190
- Section 8.4.2, "NetWare: Setting Up the GroupWise Agents," on page 191
- Section 8.4.3, "Linux: Setting Up the GroupWise Agents," on page 198
- Section 8.4.4, "Windows: Setting Up the GroupWise Agents," on page 218

8.4.1 Configuring New Agent Objects in eDirectory

When you create new post offices and domains, Agent objects are automatically created for them. Most agent configuration can be done after installation, but a few settings should be established before you install the agent software.

1 In ConsoleOne, browse to and expand the eDirectory container where the new post office or domain is located to display its contents.

2 Select the Post Office object or Domain object to display its contents.

3 Right-click the Agent object, then click *Properties* to display the agent Identification page.

4 In the *Description* field, type a brief description of the agent for display at the agent server console.

5 In the *Platform* field, select *NetWare*, *Linux*, or *Windows*.

6 Click *OK* to save the new Agent object properties.

7 Repeat these steps for each new post office and domain for which you are installing agents.

8 Continue with the installation instructions for the platform where you are installing the GroupWise agents.

- Section 8.4.2, "NetWare: Setting Up the GroupWise Agents," on page 191

8.4.2   NetWare: Setting Up the GroupWise Agents

Complete the following tasks to set up the NetWare agents. These tasks are designed to help you get the POA and MTA up and running as quickly as possible.

IMPORTANT: If you plan to install the GroupWise agents in a clustered server environment, see the *GroupWise 8 Interoperability Guide* before you install the agents.

Refer to the following additional tasks as you maintain all the GroupWise agents on NetWare:

Preparing the NetWare Server for the Agents

Make sure the NetWare server where you plan to install the GroupWise agents has been properly prepared to run the agents:

Obtaining a Static IP Address for the NetWare Server

The NetWare server where the GroupWise agents run should have a static IP address. DHCP should not be used to dynamically assign an IP address for it. Make sure the server where you plan to install the agents has a static IP address.

Setting Recommended NetWare Server Parameters for the NetWare POA

Some default settings on the NetWare server where you plan to run the NetWare POA might be inadequate for configurations of more than 100 concurrent client/server user connections. If your anticipated post office size indicates a need for more than 100 concurrent client/server connections, check the server parameters on the NetWare server to make sure they are adequate for the anticipated number of GroupWise client connections. For example, in a medium-size post office of 500 users, use the following settings:

Table 8-2 *NetWare Server Parameters for Best Performance*

Parameter	Setting
Maximum Packet Receive Buffers	2500
Minimum Packet Receive Buffers	1000
Maximum Concurrent Disk Cache Writes	200
TCP Minshall Algorithm	On
TCP Nagle Algorithm	On

The Document Conversion Agent, which assists the POA with indexing by converting some document types to HTML for indexing, runs in a protected address space, so that if a particular file fails the HTML conversion process, the stability of the POA is not affected. Use the following NetWare server parameters to configure the protected address space:

Table 8-3 *NetWare Server Parameters for the Document Conversion Agent Protected Address Space*

Parameter	Setting
Restart Server on Address Space Cleanup Failure	Off
Memory Protection Abend after Restart Count	Off
Memory Protection Restart Count	10
Memory Protection Fault Cleanup	On

Depending on the stability of the Document Conversion Agent as it converts documents to HTML on your NetWare server, you might need to increase the Memory Protection Restart Count setting to improve stability.

Setting Recommended NSS Parameters for the NetWare POA

If you run the NetWare POA on NetWare 6.5 Novell Storage Services (NSS) volumes, you can significantly improve GroupWise performance by using the following parameters and settings on the `nss` command in the `autoexec.ncf` file:

```
/NameCacheSize=20000
/OpenFileHashShift=15
/ClosedFileCacheSize=50000
/CacheBalance=60
```

The best `/ClosedFileCacheSize` setting for a server depends on many things, such as the amount of memory on the server, the load on the POA, and the number of other programs running on the server. For example, the 50000 setting can work well for a server that has 650 MB of memory. Experiment with various settings in order to optimize performance.

The following TID, although originally written for GroupWise 5.*x* and NetWare 5.*x*, applies to GroupWise 8 and NetWare 6.5 as well:

- TID 10065215: Resolving GroupWise Performance Issues with NSS Volumes in the Novell Support Knowledgebase (http://www.novell.com/support)

Setting Recommended NetWare Server Parameters for the NetWare MTA

The default Maximum Packet Receive Buffers setting on a NetWare server is inadequate for the NetWare MTA in configurations that include numerous TCP/IP and remote file connections. Set Maximum Packet Receive Buffers to at least 2500 for the NetWare MTA in such configurations.

Creating a NetWare Account for Agent Access (Optional)

When the GroupWise agents run on a different NetWare server from where their directories and databases are located, and they are not set up to authenticate through eDirectory (using the /dn startup switch), the agents must use a specific eDirectory username and password to log in to that server.

To create a user for the agents to log in as:

1 In ConsoleOne, create a new user (such as GWAgents).

2 Provide a password for that user (such as GWise).

3 Grant that user the following rights to all domain, post office, and document storage directories:

- ◆ Read or execute files
- ◆ Write to files
- ◆ Create files or directories
- ◆ Erase files or directories
- ◆ Modify files (rename or change attributes)
- ◆ File scan

4 After you install the agent software, add the /user and /password startup switches to the agent startup files so that the agents can log in to the remote server as the user you have created.

Adding the NetWare Agent Installation Directory to the Server Search Path (Optional)

If you have selected a directory other than `sys:\system` to install the agents to, add the agent installation directory to the server search path by adding a search command to the `autoexec.ncf` file.

Installing the NetWare Agent Software

After you have prepared the NetWare server to run the GroupWise agents, you are ready to install them.

At a Windows machine that meets the administrator machine requirements listed in Section 2.1, "GroupWise Administration Requirements," on page 17:

1 Map a drive to the NetWare server where you want to install the agents.

2 Make sure you have sufficient rights to install software in the desired directory.

3 Make sure that no other GroupWise agents are running on the server where you want to install the agents.

4 Log in to eDirectory with Admin-equivalent rights to the eDirectory tree where you want the Installation program to create the Agent objects.

5 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program.

or

Run `setup.exe` from the root of the downloaded *GroupWise 8* software image.

or

If you have already copied the agent software to a software distribution directory, run `setup.exe` from the root of the software distribution directory to start the GroupWise Installation program.

6 Select the language in which you want to run the GroupWise Installation program, then click *OK*.

NOTE: All available languages are included on the *GroupWise 8* DVD and the multilanguage version of the downloaded *GroupWise 8* software image, but you can select which languages you want to install.

The main GroupWise System Installation page appears.

7 Click *Install GroupWise System*, then click *Yes* to accept the License Agreement and display the Installation Type page.

When you install the agents, you are performing a Standard installation. Other installation options on this page are described in "Setting Up Predefined Installations" on page 55.

8 Click *Next* to accept the default of *Standard*.

9 Select *Install Individual Components*, then deselect *GroupWise Administration*.

10 Follow the prompts to provide NetWare Agent information from your Basic GroupWise System Summary Sheet.

Installation Path
Agent Installation Options
Agent Language Selection
Client Language Selection
Domain Information

11 On the Summary and Modification page:

11a Review the installation information you have provided.

11b If you need to change information, select the information to change, then click *Edit Setting*.

11c Specify the desired information, then click *OK*.

12 Click *Install* to start the agent installation.

Status messages keep you informed about the installation progress.

13 Click *Finish*, when the installation is complete.

If you want to start the agents later or if the Installation program fails to start them successfully, see .

14 If necessary, modify the agent startup files as described in , then manually start the NetWare agents by running `grpwise.ncf`.

15 To monitor an agent from your Web browser, view the agent Web console by supplying the IP address and port number of the agent. For example:

```
http://172.16.5.18:1677
http://172.16.5.18:7100
http://172.16.5.18:7180
http://172.16.5.18:7181
```

When viewing the agent Web console, you can specify the POA client/server port, the MTA message transfer port, or the default HTTP port that is established during installation. The POA client/server port and the MTA message transfer port are automatically redirected to their respective HTTP ports.

Editing the NetWare Agent Startup Files

The Installation program creates a customized agent startup file for each domain and post office location. The first 8 characters of the post office and domain names became the names of the agent startup files, along with an agent-specific extension. For example, if the post office name is acctpo, then the POA startup file is named `acctpo.poa`. The Installation program also customizes each startup file with the correct /home switch setting, pointing to the domain or post office directory.

Each startup file also provides a comprehensive list of startup switches, with all but the /home switch commented out. You can use any ASCII text editor to set the startup switches. The agent startup files are located in the agent installation directory.

When the MTA is not on the same server as the domain directory, you need to edit the MTA startup file to include the MTA's eDirectory distinguished name. When the POA is not on the same server as the post office directory, you need to edit the POA startup file to include the POA's eDirectory distinguished name.

The /dn-*distinguished_object_name* startup switch is located in Section 1 of the startup file. Delete the semicolon (;) at the beginning of the line and replace the *distinguished_object_name* variable with the distinguished name of the MTA or POA. For example, if the MTA is for a domain named Provo that is located in a container named Novell, you would enter:

`/dn-mta.provo.novell`

After modifying the startup files, use the `grpwise.ncf` file to start the NetWare agents from the NetWare server console.

If you want to learn more about running the NetWare agents, continue with "Starting the NetWare GroupWise Agents" on page 197. If you want to customize the configuration of the NetWare agents or expand your GroupWise system, skip to Section 8.5, "What's Next," on page 225.

Starting the NetWare GroupWise Agents

You might have one or more GroupWise agents installed on each NetWare server in your GroupWise system. You can start the GroupWise agents on NetWare in several ways:

- "Manually with a Load Command" on page 197
- "Manually with an NCF File" on page 197
- "Automatically in the Server's Autoexec.ncf File" on page 198

If you encounter any problems starting the GroupWise agents, see "Strategies for Agent Problems" in *GroupWise 8 Troubleshooting 2: Solutions to Common Problems* for assistance.

Manually with a Load Command

You can use the NetWare `load` command to start the NetWare GroupWise agents at the NetWare server console or a remote console:

POA:	`load gwpoa.nlm @ startup_filename.poa`
MTA:	`load gwmta.nlm @ startup_filename.mta`
Internet Agent:	`load gwia.nlm @gwia.cfg`
WebAccess:	`load gwinter @startup_filename.waa`

The startup file for the POA is named after the post office. The startup file for the MTA is named after the domain. The startup file for the Internet Agent is always `gwia.cfg`. The WebAccess Agent startup file is named after the WebAccess Agent object in eDirectory (typically `webacc80a.waa`).

At the NetWare server console or remote console, you can use the agent server consoles described in the *GroupWise 8 Administration Guide*:

- "Using the POA Server Console"
- "Using the MTA Server Console"
- "Using the Internet Agent Server Console"
- "Using the WebAccess Agent Server Console"

Manually with an NCF File

For your convenience, the Installation program creates NCF files for starting the NetWare GroupWise agents:

POA and/or MTA:	`grpwise`
Internet Agent:	`gwia`
WebAccess:	`strtweb`

During installation, the `grpwise.ncf` file is configured with one or more POA and/or MTA `load` commands depending on the domains and/or post offices you listed during installation.

Automatically in the Server's Autoexec.ncf File

When the GroupWise agents are running smoothly, you should modify the main NetWare configuration file (`autoexec.ncf`) to load the NetWare GroupWise agents automatically whenever you restart the server. You can add either the `load` commands or the NCF commands to the `autoexec.ncf` file.

When you are not at the NetWare server console, you can monitor the GroupWise agents from their Web consoles described in the *GroupWise 8 Administration Guide*:

- "Using the POA Web Console"
- "Using the MTA Web Console"
- "Using the Internet Agent Web Console"
- "Using the WebAccess Agent Web Console"

Stopping the NetWare GroupWise Agents

At the NetWare server console, use *Exit (F7)*. If a GroupWise agent does not respond to *Exit (F7)*, you can use the `unload` command to unload the agent NLM. For WebAccess, you can use the `stopweb` command.

Uninstalling the NetWare GroupWise Agents

If you move the GroupWise agents to a different server, you can uninstall the agent software from the old location to reclaim disk space.

POA and MTA:	Stop the POA and the MTA, then run the GroupWise Installation program (`setup.exe`). On the Install Type page, select *Uninstall*, then follow the prompts.
Internet Agent:	Stop the Internet Agent, then run the GroupWise Installation program (`setup.exe`). On the Install Type page, select *Uninstall*, then follow the prompts.
WebAccess:	Stop the WebAccess Agent. Delete the WebAccess Agent software files listed in "NetWare Installation Directory" in "Directory Structure Diagrams" in *GroupWise 8 Troubleshooting 3: Message Flow and Directory Structure*. If you want to delete the WebAccess Application from your Apache Web server, locate the `WebAccessUninstall.ini` file under the Tomcat root directory (for example, under `\tomcat\5`). It lists all files that the GroupWise Installation program installed to your Web server. Delete the listed files to uninstall the WebAccess Application from your Web server.

IMPORTANT: If you added `load` commands to the `autoexec.ncf` file to automatically start the agents when the NetWare server starts, edit the `autoexec.ncf` file and remove the agent `load` commands.

8.4.3 Linux: Setting Up the GroupWise Agents

Complete the following tasks to set up the Linux agents. These tasks are designed to help you get the Linux agents up and running as quickly as possible.

IMPORTANT: If you plan to install the GroupWise agents in a clustered server environment, see the *GroupWise 8 Interoperability Guide* before you install the agents.

Refer to the following additional tasks as you maintain all the GroupWise agents on Linux:

If you are new to Linux, you might want to review Appendix A: Useful Linux Commands for Administering a GroupWise System in the *GroupWise 8 Administration Guide* before you install the GroupWise agents on Linux.

Preparing the Linux Server for the Agents

Make sure the Linux server where you plan to install the GroupWise agents has been properly prepared to run the agents:

Obtaining a Static IP Address for the Linux Server

The Linux server where the GroupWise agents run should have a static IP address. DHCP should not be used to dynamically assign an IP address for it. Make sure the server where you plan to install the agents has a static IP address.

Increasing the Number of Open Files

On a server where you anticipate heavy GroupWise traffic, you might need to increase the maximum number of files that Linux allows to be open at the same time.

1 Edit the `/etc/security/limits.conf` file.

2 Add the following lines at the bottom of the file:

```
*      soft    nofile          8192
*      hard    nofile          65536
```

3 Save the file and exit the text editor.

Installing the GroupWise Agents on Linux

1 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program.

or

Run `install` from the root of the downloaded *GroupWise 8* software image.

or

If you have already copied the agent software to a software distribution directory, run `./install` from the root of the software distribution directory to start the GroupWise Installation program.

The X Window System is required for running the GUI GroupWise Installation program. If you are not using the X Window System, you can install GroupWise components individually, as described in "Installing the GroupWise Agents Using the Text-Based Installation Program" on page 201.

2 Select the language in which you want to run the GroupWise Installation program, then click *OK*.

NOTE: On Linux, all available languages are included in the same RPM, so all languages are always installed.

The main GroupWise System Installation page appears.
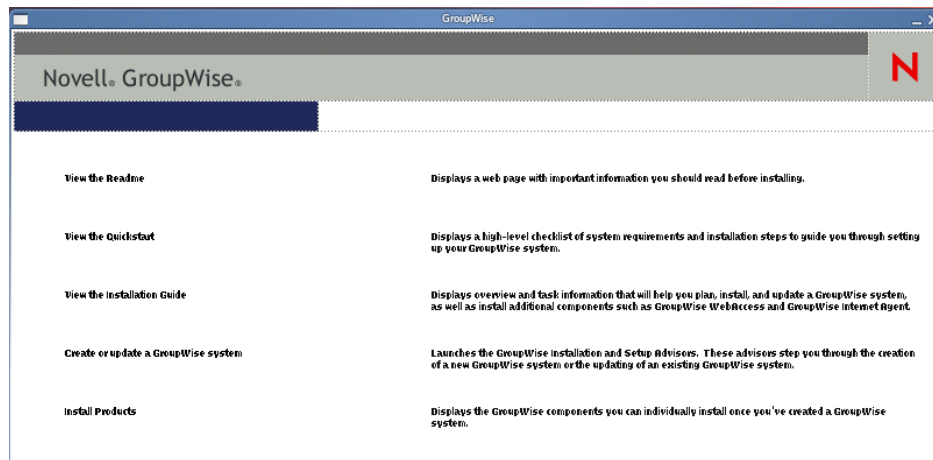
3 Click *Install Products > GroupWise Agents > Install Agents*.

4 When the installation is complete, click *OK*.

The GroupWise agent software is installed to `/opt/novell/groupwise/agents`.

5 Click *Configure GroupWise Agents*.

The agent installation and configuration steps are separate so that you can install updated agent software without repeating the agent configuration steps.
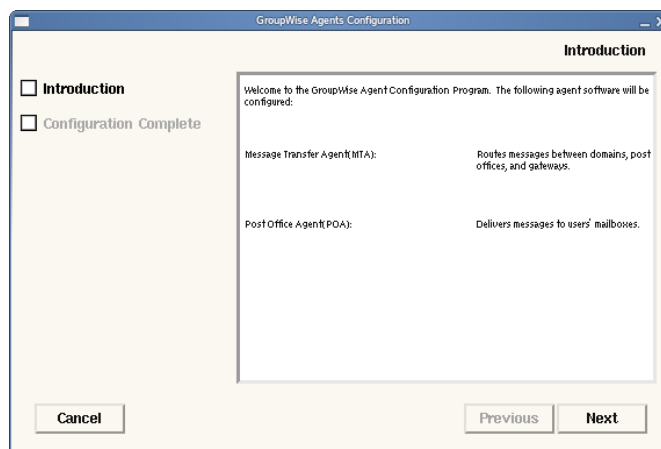
6 Follow the prompts to provide Linux Agent information from your GroupWise Agent Installation Summary Sheet.

Domain Information
Post Office Information

On the Configuration Complete page, *Launch GroupWise Agents on System Startup* is selected by default.

IMPORTANT: If you want to configure the agents for high availability, as described in "Enabling the Groupwise High Availability Service for the Linux GroupWise Agents" on page 209, they must be configured to start automatically on system startup.

---

7 If you do not want the agents to start automatically when the server restarts, deselect *Launch GroupWise Agents on System Startup*.

8 Click *Exit* to complete the configuration.

9 Skip to "Starting the Linux Agents with a User Interface" on page 202 or "Starting the Linux GroupWise Agents as Daemons" on page 204 depending on whether or not you want a user interface on the Linux server where the agents run.

Installing the GroupWise Agents Using the Text-Based Installation Program

If you want to install any of the GroupWise agents on a server where the X Window System is not running, you can use the text-based GroupWise Installation program. The server must have `openmotif-libs` installed. You must still use ConsoleOne to create the associated domain or post office before you can install and configure the agent software.

1 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program.

or

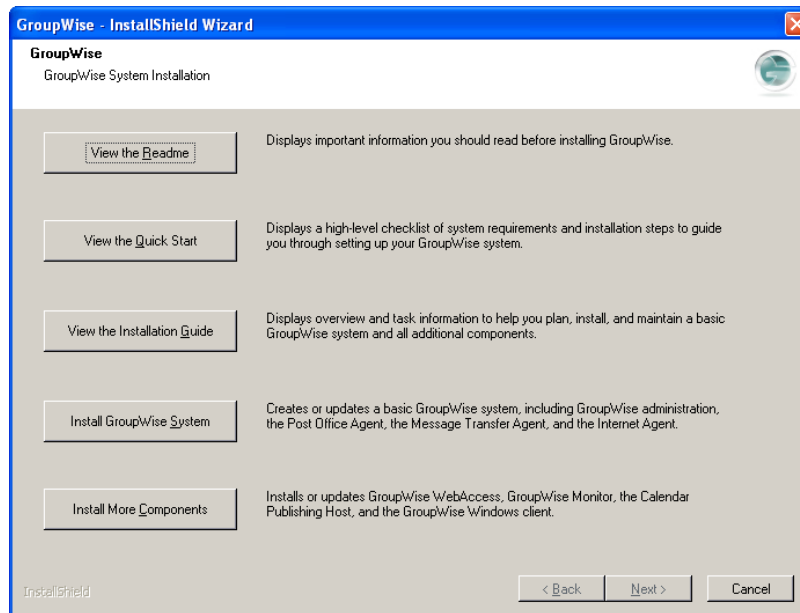Run `install` from the root of the downloaded *GroupWise 8* software image.

or

If you have already copied the software to a software distribution directory, run `./install` from the root of the software distribution directory to start the GroupWise Installation program.

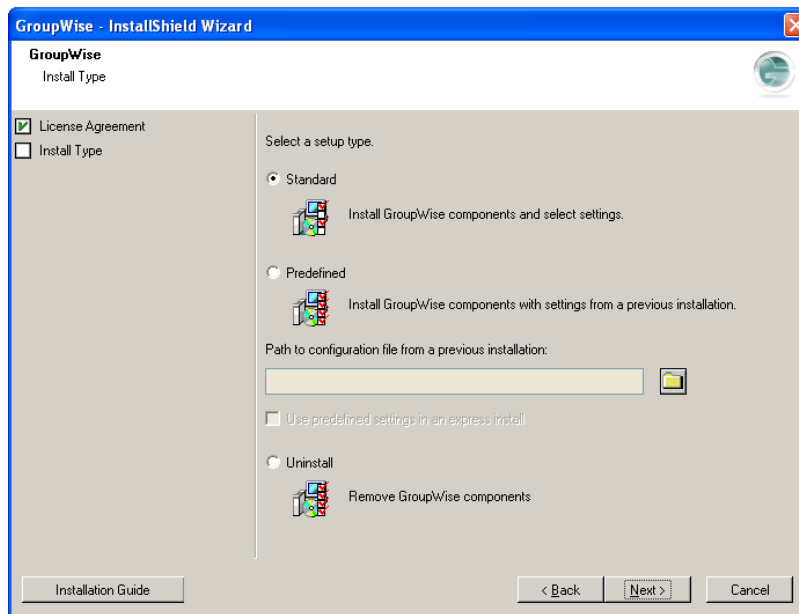If you need to perform the installation from a remote location, you can use `ssh` to access the remote Linux server. Copy the `linux` subdirectory of the *GroupWise 8* DVD or the downloaded *GroupWise 8* software image to the server where you want to install the agent software, then run the text-based GroupWise Installation program to install the agents on the Linux server.

2 Enter the number of the language you want to use for the installation.

NOTE: On Linux, all available languages are included in the same RPM, so all languages are always installed.

---

3 Enter `y` if you want to configure the GroupWise agents for clustering.

or

Enter `n` if you are not installing the GroupWise agents in a cluster.

4 Enter the number of the language you want to use for reading the License Agreement.

5 Press any key to scroll through the License Agreement, then enter `y` to accept the License Agreement.

6 In the list of agents, enter the number for the GroupWise agent component that you want to install.

```
1. GroupWise Agents
2. GroupWise WebAccess
3. GroupWise Monitor
4. GroupWise Internet Agent
5. GroupWise Calendar Publishing Host
6. GroupWise Client
7. View the Readme
0.1 Exit
```

7 In the list of actions, enter 1 to install the agent software

```
1. Install GroupWise Agents
2. Configure GroupWise Agents
0. Return
```

A status bar indicates progress.

8 When the installation is complete, enter y to configure the agent component.

9 Follow the prompts to provide the configuration information, then press any key to exit.

In the text-based Installation program, you can press Ctrl+C to return to the previous menu.

10 To install additional agents, start the text-based Installation program again.0

11 When you have installed the agents that you want to run on the text-only server, skip to .

NOTE: The text-based GroupWise Installation program does not run on all Windows versions of ssh. An open source product named PuTTY that can be downloaded from the Internet free of charge is compatible with the text-based GroupWise Installation program. There are several Web sites where PuTTY is available for download.

Starting the Linux Agents with a User Interface

1 In a terminal window, become root by entering su - and the root password.

2 Change to the GroupWise agent bin directory.

```
cd /opt/novell/groupwise/agents/bin
```

3 Enter one of the following commands to start the MTA:

Syntax:

```
./gwmta --show --home domain_directory &
./gwmta --show @domain.mta &
```

Example:

```
./gwmta --show --home /gwsystem/domlnx &
./gwmta --show @provo.mta &
```

The --show startup switch starts the MTA with a server console interface similar to that provided for the NetWare and Windows MTA. This user interface requires that the X Window System and Open Motif be running on the Linux server.

The --home startup switch specifies the domain directory and is required to start the MTA.

The @*domain*.mta startup switch specifies the MTA startup file, which contains the --home startup switch. The MTA startup file is named after the domain that the MTA services. The Installation program created the MTA startup file in the /opt/novell/groupwise/agents/share directory. Because the Installation program prompted you for the domain directory, it set the --home switch for you in the startup file.

The ampersand (&) causes the MTA to run in the background, so that the terminal window you started it in is again available for use.

To remind yourself of these commands when you are at your Linux server, view the gwmta man page.
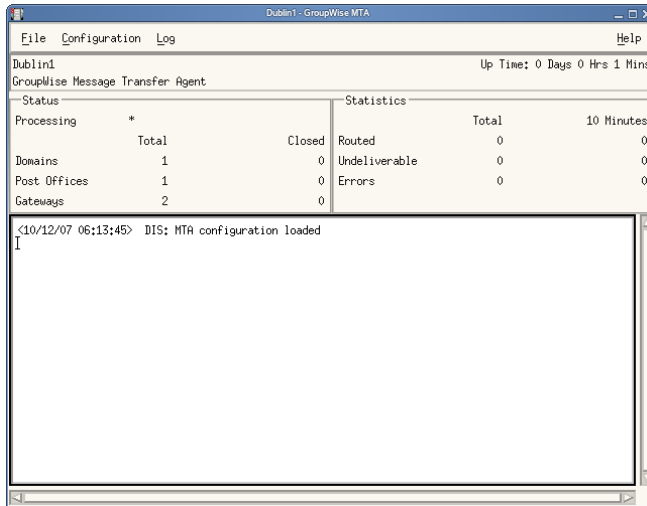
The status messages displayed on the MTA server console are also written to the MTA log file (*mmdd*mta.*nnn*) in the /var/log/novell/groupwise/*domain*.mta directory. The log file name includes the month and day when it was created, along with an incrementing extension to accommodate multiple log files on the same day.

In ConsoleOne, you can see that the MTA has updated the domain database because the *Version* field on the Identification page of the Domain object shows 8 when the database update is complete.

4 Wait until the domain database has been updated before you start the POA.

5 Use the following command to start the POA:

Syntax:

```
./gwpoa --show --home post_office_directory &
./gwpoa --show @post_office.poa &
```

Example:

```
./gwpoa --show --home /gwsystem/polnx &
./gwpoa --show @research.poa &
```

The --home startup switch specifies the post office directory and is required to start the POA.

The *@post_office*.poa startup switch specifies the POA startup file, which contains the --home startup switch. The POA startup file is named after the post office that the POA services. The Installation program created the POA startup file in the /opt/novell/groupwise/agents/share directory. Because the Installation program prompted you for the post office directory, it set the --home switch for you in the startup file.

To remind yourself of these commands when you are at your Linux server, view the gwpoa man page.
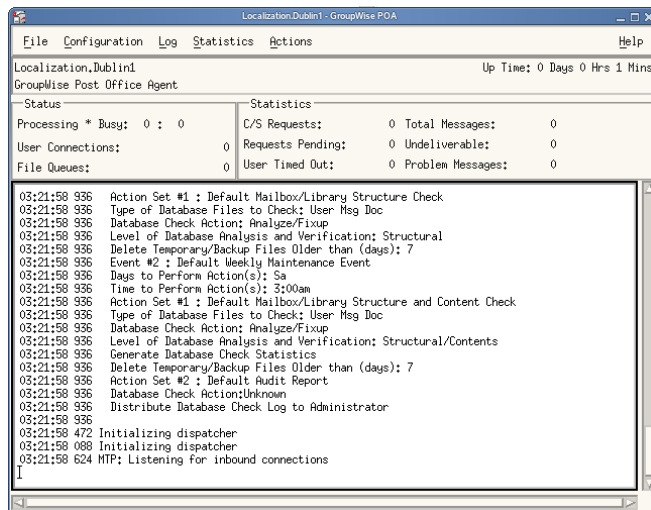
The status messages displayed on the POA server console are also written to the POA log file (*mmdd*poa.*nnn*) in the `/var/log/novell/groupwise/`*post_office*`.poa` directory. The log file name includes the month and day when it was created, along with an incrementing extension to accommodate multiple log files on the same day.

In ConsoleOne, you can see that the POA has updated the post office database because the Version field on the Identification page of the Post Office object shows 8 when the database update is complete.

If you encounter any problems starting the GroupWise agents, see "Strategies for Agent Problems" in *GroupWise 8 Troubleshooting 2: Solutions to Common Problems* for assistance.

After the post office database has been updated, users can connect to the post office using either the Windows client or the Mac/Linux client.

When you start the Linux agents with a user interface, you can use the agent server consoles described in the following sections in the *GroupWise 8 Administration Guide*.

- ◆ "Using the POA Server Console"
- ◆ "Using the MTA Server Console"

Starting the Linux GroupWise Agents as Daemons

All of the Linux GroupWise agents except the Monitor Agent can be started by using the `grpwise` script. The Monitor Agent uses its own customized `grpwise-ma` script that works essentially the same way.

1 Make sure you are logged in as `root`.

2 Change to the `/etc/init.d` directory.

3 To start all of the Linux GroupWise agents that are installed on the server, enter the following command:

```
./grpwise start
```

4 To confirm that the agents have started, enter the following command:

```
./grpwise status
```

Agent status is displayed in terms of the names of the domain and post office associated with each agent. It lists the agent locations in the following format:

POA:	*post_office.domain*
MTA:	*domain*
Internet Agent:	*gwia.domain*
WebAccess:	*webac80a.domain*
Document Viewer Agent:	gwdva.*hostname*

When using the grpwise script, you refer to the agents by the location names displayed when you list agent status, not by the names of the agent executables.

5 Use the following set of commands as needed to start the agents as daemons and verify their status:

./grpwise start	Starts the GroupWise agents that are installed on the server
./grpwise start *agent_location_name*	Starts the specified agent
./grpwise status	Displays the status of the GroupWise agents that are installed on the server
./grpwise status *agent_location_name*	Displays the status of the specified agent
./grpwise print	Lists the contents of the gwha.conf file

IMPORTANT: For convenience in typing the command, the *agent_location_name* is not case sensitive.

The GroupWise agents are Run Control compliant. During installation, a symbolic link is created from /etc/init.d/grpwise to /usr/sbin/rcgrpwise. Typically, /usr/sbin is already on your path, so you can run rcgrpwise from any directory, rather than changing to /etc/init.d in order to run the grpwise script. A /usr/sbin/grpwise-ma link is also created for the Monitor Agent.

To remind yourself of these commands when you are at your Linux server, view the grpwise man page.

When you use the grpwise script to start the GroupWise agents as daemons, they run without a user interface.

If Novell Messenger agents are installed on the same server, the grpwise script also starts them.

Monitoring the Linux GroupWise Agents from Your Web Browser

To monitor any GroupWise agent from your Web browser, view the agent Web console by supplying the IP address or DNS hostname and the port number of the agent. The following table lists the default port numbers:

Table 8-4   *GroupWise Agent Web Console URLs*

POA: http://*server_network_address*:7181

MTA: http://*server_network_address*:7180

Internet Agent: http://*server_network_address*:9850

WebAccess: http://*server_network_address*:7211

Monitor: http://*server_network_address*:8200

Figure 8-4   *Linux POA Web Console*

For more information about the agent Web consoles, including instructions on protecting the agent Web consoles with passwords, see the following sections in the *GroupWise 8 Administration Guide*.

- ◆ "Using the POA Web Console"
- ◆ "Using the MTA Web Console"
- ◆ "Using the Internet Agent Web Console"
- ◆ "Using the WebAccess Agent Web Console"
- ◆ "Using the Monitor Web Console"

Starting the Linux GroupWise Agents on System Startup

If you selected *Launch GroupWise Agents on System Startup* in the Installation program, the Installation program configured your system so that the agents start automatically each time you restart your server. The Agent Installation programs always creates a grpwise startup script in /etc/init.d for starting the agents, as described in "Starting the Linux GroupWise Agents as Daemons" on page 204. To enable automatic startup, the Agent Installation programs also create symbolic links named S*nn*grpwise in the rc3.d and rc5.d directories so that the agents load on restart into level 3 or 5, depending on the configuration of your Linux system. The value of *nn* is determined by the chkconfig command during installation so that the GroupWise agents are started in the proper sequence with other processes running on the server.

When the grpwise script runs and starts the GroupWise agents, the agents read the agent startup files in /opt/novell/groupwise/agents/share to check for configuration information provided by startup switches. Because the --show switch cannot be used in the startup files, the agents do not run

with server console interfaces when started automatically when the server restarts, unless you modify the `gwha.conf` file as described in

Running the Linux GroupWise Agents As a Non-root User

For security reasons, it is preferable that the GroupWise agents not run with `root` user privileges. For example, if an intruder manages to assume the identity of a GroupWise agent, the intruder gains all the privileges of the commandeered process. If the process is running with `root` user privileges, then the intruder has `root` access to your system. If the process is running as a user with minimal privileges, then the intruder has only restricted access to your system. Therefore, your system is more secure if the GroupWise agents do not run as `root`.

The `root` user still needs to start the agents, because the agents do need to access some `root`-only resources on startup. However, you can configure the agents to switch to a different user after they start. After the agents are running as the non-`root` user, they need adequate access to the locations where each domain, post office, library, and software distribution directory is located.

- ◆
- ◆
- ◆

NOTE: You can configure the POA, the MTA, and the Internet Agent to run as a non-`root` user. The WebAccess Agent, with its accompanying Viewer Agent, must still run as `root`. Unlike the other agents, the Monitor Agent can be started as a non-`root` user by default, so no setup is required for it to run as a non-`root` user.

Setting Up Typical Non-root Access

To configure the GroupWise agents to switch users after startup:

1 Make sure you are logged in as `root`.

2 Select a Linux user for the agents to run as and make sure that the user is listed in the `/etc/passwd` file.

You might want to create a new user specifically for this purpose, perhaps named `gwagents`.

3 Change to the `groupwise` directory under `/etc`:

```
cd /etc/opt/novell/groupwise
```

4 Create a new `agents` directory, then change to that directory:

```
mkdir agents
cd agents
```

5 Create a file named `uid.conf`.

6 Type the selected username in the file, for example:

```
gwagents
```

7 Stop and then start the agents.

While starting as `root`, the agents automatically change the ownership of the domain and post office directory structures from `root` to the user you specified in the `uid.conf` file. Then they switch users and run as the user you specified, rather than as `root`.

If you list the agent processes, you can observe that they are no longer running as `root`.

```
ps -eaf | grep gw
```

If the post office and domain are located on different servers, you must complete the above steps on each server.

IMPORTANT: All agents running on the same server must run as the same user.

If you later want to change the user that the agents are running as, follow the instructions in "Changing the Non-root User" on page 209.

Setting Up Non-root Access on an NSS Volume on Novell Open Enterprise Server Linux

When your domains, post offices, libraries, and software distribution directories are located on a Novell Open Enterprise Server (OES) Linux NSS volume, you must set up an eDirectory user for the agents to run as and you must Linux-enable that user. On OES Linux, you can use Novell iManager to accomplish these tasks.

To configure the agents to switch users after startup and provide access to an NSS volume:

1 Select or create an eDirectory user for the agents to run as.

You might want to create a new user specifically for this purpose, perhaps named `gwagents`. The username must not match any local usernames on the Linux server.

    1a From the Open Enterprise Server Welcome page in your Web browser, expand *Network Management*, then click *iManager 2.5.x*.

    1b In the *iManager Links* box, click *Open Novell iManager 2.5*.

    1c To log in to iManager, specify a username, a password, and a tree.

    1d In the left pane, expand *Users*, then click *Create User*.

    1e Provide the required information, then click *OK*.

        The user does not need a password

2 Linux-enable the user you just created.

    2a In the left pane, expand *Linux User Management*, then click *Enable User for Linux*.

    2b Browse to and select the user you just created, then click *OK*.

    2c Select the primary group for the user to belong to (for example, admingroup).

    2d Change `/bin/bash` to `/bin/false` because the user does not need a shell.

    2e Click *OK* to Linux-enable the user.

3 In a terminal window, change to the `groupwise` directory under `/etc`:

```
cd /etc/opt/novell/groupwise
```

4 Create a new `agents` directory, then change to that directory.

```
mkdir agents
cd agents
```

5 Create a file named `uid.conf`

6 Type the selected username in the file, for example:

gwagents

7 Use the following command to grant the user the required rights to the directories that the agents need to access on the local server:

```
rights -f /directory -r rwcemf trustee user.context.tree
```

The POA needs access to the post office directory. The MTA and the Internet Agent need access to the domain directory.

8 Stop and then start the agents.

While starting as `root`, the agents automatically change the ownership of the domain and post office directory structures from `root` to the user you specified in the `uid.conf` file. Then they switch users and run as the user you specified, rather than as `root`.

If you list the agent processes, you can observe that they are no longer running as `root`.

```
ps -eaf | grep gw
```

If the post office and domain are located on different servers, you must complete the above steps on each server.

IMPORTANT: All agents running on the same server must run as the same user.

If you later want to change the user that the agents are running as, follow the instructions in .

Changing the Non-root User

To prevent an agent from running as a different user than the one for which it was originally configured, the GroupWise agents create a `uid.run` file in the domain or post office directory that they service. The Internet agent creates the `uid.run` file in its gateway directory (typically *domain*/wpgate/gwia).

If , for any reason, the user specified in the `uid.run` file does not match the user specified in the `uid.conf` file, the agent displays the following message:

```
Error: Running the agent with conflicting effective users
```

This could happen if the user specified in the `uid.conf` file is manually edited, or if the `uid.conf` file is deleted, thus changing or removing the information about the user that the agent should run as. If this message appears, verify that the `uid.conf` file specifies the desired user, then delete the `uid.run` file.

After displaying the message, the agent does not start, because it no longer has appropriate permissions in the domain or post office directory that it needs to service. By deleting the `uid.run` file, you enable the agent to reset the permissions in the domain or post office directory to appropriate user and then start successfully.

After configuring an agent to run as a specific non-`root` user:

- If you want the agent to run as a different non-`root` user, modify the `uid.conf` file in the `/etc/opt/novell/groupwise/agents` directory to specify the desired non-`root` user, then delete the `uid.run` file from the directory serviced by the agent.

- If you want the agent to run as `root`, delete the `uid.conf` file from the `/etc/opt/novell/groupwise/agents` directory and delete the `uid.run` file from the directory serviced by the agent.

Enabling the Groupwise High Availability Service for the Linux GroupWise Agents

The GroupWise High Availability service (`gwha`) makes sure that if the MTA, the POA, the Internet Agent, or the WebAccess Agent with its accompanying Document Viewer Agent goes down for any reason, it starts again automatically. On NetWare, this capability is provided by using a restartable

protected address space. On Windows, Microsoft Clustering Services automatically restarts a service that is not responding. However, on Linux, some clustering environments do not include this capability, so it is built into the Linux GroupWise agents.

The GroupWise High Availability service is installed automatically, starts when your server boots, and makes sure that any GroupWise agents installed on the server are running. However, the GroupWise High Availability service does not start the GroupWise agents initially. For more information, see "Starting the Linux GroupWise Agents on System Startup" on page 206.

The GroupWise High Availability service relies on the Monitor Agent to detect when a GroupWise agent is no longer running. The Monitor Agent notifies the Groupwise High Availability service of any problem, then the High Availability service immediately issues the command to start the problem agent. The Groupwise High Availability service runs as `root`, as configured in the `/etc/xinetd.d/gwha` file.

A single Monitor Agent can service multiple instances of the Groupwise High Availability service on multiple servers, as long as all instances use the same username and password to communicate with the Monitor Agent.

- "Configuring the GroupWise High Availability Service in the gwha file" on page 210
- "Configuring the Groupwise High Availability Service in the gwha.conf File" on page 210
- "Creating a GroupWise High Availability Service User" on page 213
- "Configuring the Monitor Agent to Communicate with the Groupwise High Availability Service" on page 214

Configuring the GroupWise High Availability Service in the gwha file

The basic configuration for the GroupWise High Availability service is contained in the `/etc/xinetd.d/gwha` file:

```
socket_type = stream
user = root
server = /opt/novell/groupwise/agents/bin/gwha
wait = no
instances = 1
protocol = tcp
type = UNLISTED
port = 8400
disable = yes
```

The only option you can change in this file is the port number. By default, the GroupWise High Availability service listens on port 8400. If that port number is already in use on the server where you are setting up the GroupWise High Availability service, you can change the port number in the `gwha` file. The GroupWise High Availability service must use the same port number on all servers where you want it to restart the GroupWise agents.

Do not change any other options in this file.

Configuring the Groupwise High Availability Service in the gwha.conf File

The Groupwise High Availability service is controlled by a configuration file (`gwha.conf`) located in the `/etc/opt/novell/groupwise` directory. The configuration file provides a section for configuring SSL for communication between the Groupwise High Availability service and the Monitor Agent, followed by sections for each agent installed on the server, as shown below. The headings for the sections match the agent locations listed in "Starting the Linux GroupWise Agents as Daemons" on page 204.

```
[gwha]
ssl       = no
key       =
cert      =
password  =

[domain_name]
server    = /opt/novell/groupwise/agents/bin/gwmta
command   = /etc/init.d/grpwise
startup   = domain_name.mta
delay     = 2
wait      = 10

[post_office_name.domain_name]
server    = /opt/novell/groupwise/agents/bin/gwpoa
command   = /etc/init.d/grpwise
startup   = post_office_name.poa
delay     = 2
wait      = 10

[gwia.domain_name]
server    = /opt/novell/groupwise/agents/bin/gwia
command   = /etc/init.d/grpwise
startup   = gwia.cfg
delay     = 2
wait      = 10

[webac80a.domain]
server    = /opt/novell/groupwise/agents/bin/gwinter
command   = /etc/init.d/grpwise
startup   = webac80a.waa
delay     = 2
wait      = 10

[gwdva.server_name]
server    = /opt/novell/groupwise/agents/bin/gwdva
command   = /etc/init.d/grpwise
startup   = gwdva.dva
delay     = 2
wait      = 10
```

To set up the Groupwise High Availability service:

1 In a terminal window, become root by entering su - and the root password.

2 Before starting to configure the Groupwise High Availability service, test the agents by starting and stopping them manually with a user interface so that their agent server consoles display:

    2a Change to the root directory of the Linux server.

    2b Start the GroupWise agents manually, including providing the full path to the executable and including the --show switch, to make sure that they are set up and configured correctly.

```
/opt/novell/groupwise/agents/bin/gwpoa --show @post.poa
/opt/novell/groupwise/agents/bin/gwmta --show @dom.mta
/opt/novell/groupwise/agents/bin/gwia --show @gwia.cfg
/opt/novell/groupwise/agents/bin/gwinter --show @webac80a.waa
```

    2c After verifying that the agents start correctly, stop the agents.

3 If you use SSL, you need to modify the Groupwise High Availability service configuration file (gwha.conf):

    3a Change to the /etc/opt/novell/groupwise directory.

    3b Edit the gwha.conf file in a text editor.

    3c Under the [gwha] section, fill in the fields as follows:

```
[gwha]
ssl     = yes
key     = filename.key
cert    = filename.crt
password = password
```

NetWare:	Filenames can consist of up to 8 characters, with extensions of up to 3 characters.
Linux:	Use only lowercase characters.
Windows:	No limitations

3d Save the file, then exit the text editor.

4 If you changed the port number for the GroupWise High Availability service, as described in "Configuring the GroupWise High Availability Service in the gwha file" on page 210, add the following line to the [gwha] section:

```
port = port_number
```

Replace *port_number* with the new port number you specified in the `gwha` file.

5 If you want to control how the script manages starting and stopping the agents, modify the `delay =` and `wait =` settings in the Groupwise High Availability service configuration file (`gwha.conf`).

The `delay =` setting controls the length of time between when the script issues the command to start an agent and when the script displays a message indicating that the agent has started. The default delay time is 2 seconds. Under certain circumstances, an agent could encounter a problem and fail to start after 2 seconds. In this case, you would receive the success message but the agent would not be running. You need to increase the `delay =` setting to accommodate the length of time it typically takes for the agent to start successfully on your system.

The `wait =` setting controls the length of time between when the script issues the command to stop an agent and when the script kills the agent if the agent has not yet stopped. The default wait time is 10 seconds. Under certain circumstances, an agent could take longer than 10 seconds to perform a normal shutdown, and killing the agent under those circumstances would not be appropriate. You need to increase the `wait =` setting to accommodate the length of time it usually takes for the agent to shut down. A message notifies you if the script kills an agent because its shutdown exceeds the `wait =` setting.

The default settings are usually appropriate, so you do not need to change them unless you frequently encounter problems with starting or stopping an agent with the script.

5a Change to the `/etc/opt/novell/groupwise` directory.

5b Edit the `gwha.conf` file in a text editor

Each agent has its own section in the file, for example:

```
[Waltham2]
server = /opt/novell/groupwise/agents/bin/gwmta
command = /etc/init.d/grpwise
startup = waltham2.mta
delay = 2
wait = 10
```

5c Change the `delay =` and `wait =` settings as needed.

5d Save the file, then exit the text editor.

6 If you want the script to start the agents with a user interface on the Linux server, add the `show =` setting in the Groupwise High Availability service configuration file (`gwha.conf`). This is equivalent to using the --show startup switch on the command line when starting the agent.

    6a Change to the `/etc/opt/novell/groupwise` directory.

    6b Edit the `gwha.conf` file in a text editor

       Each agent has its own section in the file, for example:

```
[Waltham2]
server = /opt/novell/groupwise/agents/bin/gwmta
command = /etc/init.d/grpwise
startup = waltham2.mta
delay = 2
wait = 10
```

    6c Add `show = yes` to the section for each agent that you want to start with a user interface.

       If you need to eliminate the user interface, use `show = no` or delete the `show =` line from the file.

    6d Save the file, then exit the text editor.

7 Enable the Groupwise High Availability service:

    7a In YaST, click *Network Services > Network Services (inetd)*.

    7b If necessary, select *Enable* to activate the list of services.

    7c Scroll down to the `gwha` line, select it, then click *Toggle Status (On or Off)* to change the status to On.

    7d Click *Finish*.

8 Start the agents.

    8a Change to the `/etc/init.d` directory.

    8b Enter the following command to start the GroupWise agents that are installed on the server:

       `./grpwise start`

    8c Use the following command to verify agent status:

       `./grpwise status`

       For more information about using the `grpwise` script, see

9 Continue with Creating a GroupWise High Availability Service User.

Creating a GroupWise High Availability Service User

The GroupWise High Availability service needs a login user on each server where GroupWise agents need to be restarted.

1 Create a new user and associated password on the local Linux server to represent the GroupWise High Availability service.

You might name it `gwha`.

IMPORTANT: Use a local user account for use only by the GroupWise High Availability service. Do not use a Novell Linux-enabled user.

---

2 Create the same user on each Linux server where you want the GroupWise High Availability service to restart the GroupWise agents.

3 Continue with Configuring the Monitor Agent to Communicate with the Groupwise High Availability Service.

Configuring the Monitor Agent to Communicate with the Groupwise High Availability Service

After you have the Groupwise High Availability service set up and working correctly, you need to configure the Monitor Agent to communicate with it and test it to make sure that you can rely on it in the future. Although you need a GroupWise High Availability service running on each server where there are GroupWise agents, you need only one Monitor Agent to monitor all agents in your GroupWise system.

1 Start the Monitor Agent with the --hauser and --hapassword startup switches.

If you use the grpwise-ma script to start the Monitor Agent, as described in "Starting the Linux Monitor Agent as a Daemon" on page 173, you can edit it to include the switches:

1a Change to the /etc/init.d directory, then edit the grpwise-ma script.

1b Locate the following line:

```
#MA_OPTIONS="--hauser username --hapassword password
             --hapoll 120"
```

1c Remove the pound sign (#) from the beginning of the line.

1d Replace *username* and *password* with the username and password you established in Step 1 in "Creating a GroupWise High Availability Service User" on page 213.

```
MA_OPTIONS="--hauser gwha --hapassword gwagents --hapoll 120"
```

The Monitor Agent uses the --hauser and --hapassword switches to communicate with the Groupwise High Availability service on port 8400, as configured in the /etc/xinetd.d/gwha file.

The --hapoll switch specifies that the Monitor Agent should check the status of GroupWise agents every 120 seconds. You can use the MA_OPTIONS variable to add any Monitor Agent startup switches to the grpwise-ma script as needed. For information about Monitor Agent startup switches, see "Using Monitor Agent Startup Switches" in "Monitor" in the *GroupWise 8 Administration Guide*.

1e Save the file, then exit the text editor.

1f Start the Monitor Agent.

2 Stop one of the agents.

3 Check the status of the agent you stopped to make sure it is stopped.

4 Wait for the next Monitor Agent polling cycle.

You can check and, if necessary, change the Monitor Agent polling cycle in the Monitor Agent Web console. Click *Preferences*, then scroll down to the HTTP Settings section.

5 After the polling cycle has passed, check the status of the agent again.

The agent that you stopped should now be running again.

Stopping the Linux GroupWise Agents

How you stop the Linux GroupWise Agents depends on how you started them.

From the Agent Console User Interface

When you use the --show startup switch to start the GroupWise agents, you can stop them from the agent server console interface.

1 Click *File > Exit > Yes*.

Because the WebAccess Agent does not have the same type of agent server console as the other Linux agents, you can stop it by closing the terminal window in which it is running.

Using the grpwise Script

When you start the GroupWise agents with the `grpwise` script, you can also use the script to stop them. The same applies for the Monitor Agent and its `grpwise-ma` script.

1 Make sure you are logged in as `root`.

2 Change to the `/etc/init.d` directory.

3 To stop all of the GroupWise agents installed on the server, enter the following command:

```
./grpwise stop
```

4 To confirm that the agents have stopped, enter the following command:

```
./grpwise status
```

Agent status is displayed in terms of the names of the domain and post office associated with each agent. It lists the agent locations in the following format:

POA:	*post_office.domain*
MTA:	*domain*
Internet Agent:	*gwia.domain*
WebAccess:	*webac80a.domain*
Document Viewer Agent	*gwdva.hostname*

5 Use the following set of commands as needed to stop the agents as daemons and verify their status:

`./grpwise stop`	Stops the GroupWise agents that are installed on the server
`./grpwise stop` *`agent_location_name`*	Stops the specified agent
`./grpwise status`	Displays the status of the GroupWise agents that are installed on the server
`./` `grpwise status` *`agent_location_name`*	Displays the status of the specified agent

IMPORTANT: For convenience in typing the command, the *agent_location_name* is not case sensitive.

NOTE: The GroupWise agents are Run Control compliant. During installation, a symbolic link is created from /etc/init.d/grpwise to /usr/sbin/rcgrpwise. Typically, /usr/sbin is already on your path, so you can run rcgrpwise from any directory, rather than changing to /etc/init.d in order to run the grpwise script. A /usr/sbin/grpwise-ma link is also created.

Manually as Daemons

When you start the GroupWise agents manually on the command line (without using the grpwise script), use the standard Linux kill command to stop them.

1 Make sure you are logged in as root.

2 Determine the process IDs (PIDs) of the agent to kill:

POA:	`ps -eaf	grep gwpoa`
MTA:	`ps -eaf	grep gwmta`
Internet Agent:	`ps -eaf	grep gwia`
WebAccess:	`ps -eaf	grep gwinter`
Monitor:	`ps -eaf	grep gwmon`

All of the PIDs for the specified agent are listed.

3 Kill the first process listed for each agent:

Syntax:

```
kill PID
```

Example:

```
kill 1483
kill 1892
```

It might take a few seconds for all agent processes to terminate.

4 Repeat the ps commands to verify that the agents have stopped.

You can also restart the MTA and the Internet Agent without stopping them first using the following command:

Syntax:

```
kill -HUP PID
```

Example:

```
kill -HUP 1483
```

The -HUP (hang up) option is equivalent to using *Restart* in the MTA and Internet Agent server console or Web console. Because the other agents do not have a Restart feature in their consoles, the -HUP option cannot be used to restart them.

Uninstalling the Linux GroupWise Agents

If you move the GroupWise agents to a different server, the GroupWise agent software can be uninstalled just like any other software on Linux. To determine what GroupWise software is currently installed on the Linux server, use the following command:

```
rpm -qa | grep groupwise
```

This lists all of the GroupWise RPM packages on the server. The POA and the MTA are together in the same RPM. WebAccess and Monitor have two RPMs each, one for the agent software and one for the application software. The following list provides the list of all GroupWise agent and administration RPMs that you might need to uninstall from a server:

POA and MTA:	`novell-groupwise-agents-version-date`
Internet Agent:	`novell-groupwise-gwia-version-date`
WebAccess:	`novell-groupwise-gwinter-version-date`
	`novell-groupwise-webaccess-version-date`
Monitor:	`novell-groupwise-gwmon-version-date`
	`novell-groupwise-monitor-version-date`
Calendar Publishing Host	`novell-groupwise-calhost-version-date`
Groupwise High Availability Service	`novell-groupwise-gwha-version-date`
GroupWise Administrator	`novell-groupwise-admin-version-date`
GroupWise Check	`novell-groupwise-gwcheck-version-date`
GroupWise Database Copy	`novell-groupwise-dbcopy-version-date`

Use the following command to uninstall a GroupWise RPM package:

```
rpm -e novell-groupwise-package
```

Uninstalling the RPMs does not uninstall files created after installation by the GroupWise programs. To see what GroupWise files are created in locations other than under `/opt/novell/groupwise` and its subdirectories, see the Linux sections of "Agent Installation Directories" in the *GroupWise 8 Troubleshooting 3: Message Flow and Directory Structure*:

- POA and MTA: "Linux Installation Directory"
- Internet Agent: "Linux Installation Directory"

- WebAccess: "Linux Installation Directory"
- Monitor: "Linux Installation Directory"

8.4.4 Windows: Setting Up the GroupWise Agents

Complete the following tasks to set up the Windows agents. These tasks are designed to help you get the Windows POA and MTA up and running as quickly as possible:

- "Preparing the Windows Server for the Windows Agents" on page 218
- "Installing the Windows Agent Software" on page 219

IMPORTANT: If you plan to install the GroupWise agents in a clustered server environment, see the *GroupWise 8 Interoperability Guide* before you install the agents.

Refer to the following additional tasks as you maintain all the GroupWise agents on Windows:

- "Starting the Windows GroupWise Agents" on page 222
- "Stopping the Windows GroupWise Agents" on page 224
- "Uninstalling the Windows GroupWise Agents" on page 224

Preparing the Windows Server for the Windows Agents

Make sure the Windows server where you plan to install the GroupWise Windows POA and MTA has been properly prepared to run the agents:

- "Obtaining a Static IP Address" on page 218
- "Mapping Drives to Post Offices and Domains" on page 218
- "Creating a Windows User Account for Remote Access (Optional)" on page 219
- "Enabling SNMP (Optional)" on page 219

Obtaining a Static IP Address

The Windows server where the GroupWise Windows agents run should have a static IP address. DHCP should not be used to dynamically assign an IP address for it. Make sure the server where you plan to install the Windows agents has a static IP address.

Mapping Drives to Post Offices and Domains

The Windows POA requires direct access to the post office directory so that it can write to the post office database. The Windows MTA requires direct access to the domain directory so that it can write to the domain database. If the agents are not installed on the same server where their directories are located, make sure the server has drives mapped to all locations where the agents need access. If you are running the Windows POA for a post office located on a NetWare server, you might need to increase Maximum File Locks Per Connection from its default setting on the Windows server.

After installation, the agents can access their directories using either mapped drives or UNC paths. However, mapped drives are required during installation so that the agent startup files can be set up properly.

Creating a Windows User Account for Remote Access (Optional)

If you specified a new Windows username and password, create the new Windows user account so it is ready when you start the agents for the first time.

1 In the Windows Control Panel, double-click *Users and Passwords* to add a new user.

2 Grant the user Full Control rights in the domain and post office directories.

Enabling SNMP (Optional)

If you want to monitor the GroupWise Windows agents from an SNMP manager program, such as the Management and Monitoring Services component of Novell ZENworks Server Management, SNMP must be enabled on the Windows server where the agents are installed. If it is not already enabled, you should enable it before you run the Installation program.

1 In the Windows Control Panel, double-click *Add/Remove Programs*.

2 Click *Add/Remove Windows Components*.

3 Select *Management and Monitoring Tools*, click *Details*, select *Simple Network Management Protocol*, then click *OK*

4 Follow the prompts to finish the installation.

Installing the Windows Agent Software

After you have prepared the Windows server to run the GroupWise Windows POA and MTA, you are ready to install them.

At a Windows server that meets the requirements listed in Section 2.1, "GroupWise Administration Requirements," on page 17:

1 Make sure you have mapped drives to all domain and post office directories for which you are installing agents.

2 Make sure that no other GroupWise agents are running on the server where you want to install the agents.

3 Make sure that you have access to the directory where you want to install the Internet agents.

4 Log in to eDirectory with Admin-equivalent rights to the eDirectory tree where you want the Installation program to create the Agent objects.

5 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program.

or

Run setup.exe from the root of the downloaded *GroupWise 8* software image.

or

If you have already copied the agent software to a software distribution directory, run setup.exe from the root of the software distribution directory to start the GroupWise Installation program.

6 Select the language in which you want to run the GroupWise Installation program, then click *OK*.

NOTE: All available languages are included on the *GroupWise 8* DVD and the multilanguage version of the downloaded *GroupWise 8* software image, but you can select which languages you want to install.

The main GroupWise System Installation page appears.

7 Click *Install GroupWise System*, then click *Yes* to accept the License Agreement and display the Installation Type page.

When you install the agents, you are performing a Standard installation. Other installation options on this page are described in "Setting Up Predefined Installations" on page 55.

8 Click *Next* to accept the default of *Standard*.

9 Select *Install Individual Components*, then deselect *GroupWise Administration*.

10 Follow the prompts to provide the Windows agent information from your GroupWise Agent Installation Summary Sheet.

Installation Path
Agent Installation Options
Agent Language Selection
Client Language Selection
Domain Information
Post Office Information
Installation Options
Windows Service Information

11 On the Summary and Modification page:

  11a Review the installation information you have provided.

  11b If you need to change information, select the information to change, then click *Edit Setting*.

  11c Specify the desired information, then click *OK*.

12 Click *Install* to start the agent installation.

  Status messages keep you informed about the installation progress.

13 Click *Finish*, when the installation is complete.

  If you want to start the agents later or if the Installation program fails to start them successfully, see "Starting the Windows GroupWise Agents" on page 222.

14 To monitor an agent from your Web browser, view the agent Web console by supplying the IP address and port number of the agent. For example:

```
http://172.16.5.18:1677
http://172.16.5.18:7100
http://172.16.5.18:7180
http://172.16.5.18:7181
```

When viewing the agent Web console, you can specify the POA client/server port, the MTA message transfer port, or the HTTP port established during installation.

15 If you want to learn more about running the Windows agents, continue with "Starting the Windows GroupWise Agents" on page 222 and "Stopping the Windows GroupWise Agents" on page 224.

or

If you want to customize the configuration of the Windows agents or expand your GroupWise system, skip to Section 8.5, "What's Next," on page 225.

Starting the Windows GroupWise Agents

You might have one or more GroupWise agents installed on each Windows server in your GroupWise system. You can start the GroupWise agents on Windows in several ways:

- ◆ "Manually As Applications" on page 222
- ◆ "Automatically When the Windows Server Starts" on page 222
- ◆ "Manually or Automatically as Services" on page 223

If you encounter any problems starting the GroupWise agents, see "Strategies for Agent Problems" in *GroupWise 8 Troubleshooting 2: Solutions to Common Problems* for assistance.

Manually As Applications

On the Windows desktop, click *Start > All Programs*, select the GroupWise agent, then start the GroupWise agent.

You can also use desktop shortcuts to start the GroupWise agents. The GroupWise Installation program automatically creates desktop shortcuts for the POA, the MTA, and the Internet Agent. You can easily create desktop shortcuts for WebAccess and Monitor by linking to the following target files:

WebAccess: `c:\Program Files\Novell\GroupWise Server\WebAccess\strtweb.bat`

Monitor: `c:\Program Files\Novell\GroupWise Server\Monitor\gwmon.exe`

When you start the GroupWise agents as applications, you can use the agent server consoles described in the *GroupWise 8 Administration Guide*:

- ◆ "Using the POA Server Console"
- ◆ "Using the MTA Server Console"
- ◆ "Using the Internet Agent Server Console"
- ◆ "Using the WebAccess Agent Server Console"
- ◆ "Using the Monitor Agent Server Console"

Automatically When the Windows Server Starts

After the GroupWise agents are running smoothly, you should configure them to start automatically whenever you restart the Windows server.

For example, on a Windows Server 2003 machine:

1 Click *Start > Control Panel > Scheduled Tasks > Add Scheduled Task*.

2 Click *Next* to start the Scheduled Task Wizard.

3 Browse to and select the GroupWise agent that you want to start automatically, then click *Next*.

The GroupWise agents are listed in the following alphabetical order:

GroupWise Monitor
Internet Agent GWIA
MTA *domain_name*
POA *post_office_name*

4 Change the task name if desired, select *When My Computer Starts*, then click *Next*.

5 Change the name of the user that runs the agent if desired, type the password twice, then click *Next*.

6 If the agent requires a startup file, select *Open Advanced Properties* to edit properties, then click *Finish* to create the new scheduled task.

For the POA, the MTA, and the Internet Agent:

7 In the *Run* field of the Properties dialog box, add the startup file for the agent, as in the following examples:

```
c:\Program Files\Novell\GroupWise Server\Agents\gwpoa.exe
                                      @post_office_name.poa
c:\Program Files\Novell\GroupWise Server\Agents\gwmta.exe
                                      @domain_name.mta
c:\Program Files\Novell\GroupWise Server\Agents\gwia.exe @gwia.cfg
```

8 Click *OK* to save the updated properties.

9 To see the scheduled task, click *Start > Control Panel > Scheduled Tasks*.

The new scheduled task is listed under the *Add Scheduled Task* menu item.

10 To edit the scheduled task, right-click it, then click *Properties*.

Manually or Automatically as Services

If you installed the GroupWise agents as services, you can manage them just like you would any other Windows services.

NOTE: The Monitor Agent cannot currently be installed as a Window service.

For example, on a Windows Server 2003 machine:

1 From the Windows desktop, click *Start > Administrative Tools > Services*.

2 Select the agent service, then click *Start*.

The POA service is named after the post office. The MTA service is named after the domain. The Internet Agent service is named GWIA. The WebAccess Agent service is named WebAccess (*webaccess_agent_object_name*).

3 (Optional) Check the status of the agent service by using the Windows Event Viewer:

   3a From *Administrative Tools*, double-click *Event Viewer*.

   3b Click *Application Log*, then sort the log entries on the *Source* column.

   3c Scroll to the agent service, then double-click a log entry to view information about it.

4 To configure the agent service to start automatically when the server reboots, right-click the agent service, then click *Properties*.

5 In the *Startup Type* field, click *Automatic*, then click *OK*.

When running as services, the GroupWise agents typically do not display an agent console on the Windows server where they are running. Instead, you can monitor the GroupWise agents by using their Web consoles described in the *GroupWise 8 Administration Guide*:

- "Using the POA Web Console"
- "Using the MTA Web Console"
- "Using the Internet Agent Web Console"
- "Using the WebAccess Agent Web Console"

Stopping the Windows GroupWise Agents

How you stop the Windows GroupWise agents depends on how you started them.

- "As Applications" on page 224
- "As Services" on page 224

As Applications

When the GroupWise agents run as applications, you can stop them from their server consoles.

POA:	At the POA server console, click *File > Exit*.
MTA:	At the MTA server console, click *File > Exit*.
Internet Agent:	At the Internet Agent server console, click *File > Exit*.
WebAccess:	From the Windows desktop, click the title bar of the window in which the WebAccess Agent or Document Viewer Agent is running, then press F7.
Monitor:	At the Monitor Agent server console, click *Configuration > Exit*.

If the GroupWise agent does not respond to *Exit*, you can close the agent server console window to stop the agent or use the Windows Task Manager to terminate the agent task.

As Services

When the GroupWise agents run as Windows services, you can stop them as you would any other Windows services.

For example, on a Windows Server 2003 machine:

1 From the Windows desktop, click *Start > Administrative Tools > Services*.

2 Select the agent service, then click *Stop*.

The POA service is named after the post office. The MTA service is named after the domain. The Internet Agent service is named GWIA. The WebAccess Agent service is named WebAccess (*webaccess_agent_object_name*).

Uninstalling the Windows GroupWise Agents

If you move the GroupWise agents to a different server, you can uninstall the agent software from the old location to reclaim disk space.

POA and MTA:	Stop the POA and the MTA, then run the GroupWise Installation program (`setup.exe`). On the Install Type page, select *Uninstall*, then follow the prompts

Internet Agent:	Stop the Internet Agent, then run the GroupWise Installation program (`setup.exe`). On the Install Type page, select *Uninstall*, then follow the prompts This deletes most of the contents of the `c:\Program Files\Novell\GroupWise Server\GWIA` directory and uninstalls the Internet Agent as a Windows service.
WebAccess:	Stop the WebAccess Agent. Delete the contents of the `c:\Program Files\Novell\GroupWise Server\WebAccess` directory to delete the WebAccess Agent software. If the WebAccess Agent was running as a Windows service, run `Delete Service.exe` in the `\internet\webacces` subdirectory of the GroupWise software distribution directory. If you want to delete the WebAccess Application from your Apache Web server, locate the `WebAccessUninstall.ini` file under the Tomcat root directory (for example, under `\tomcat\5`). It lists all files that the GroupWise Installation program installed to your Web server. Delete the listed files to uninstall the WebAccess Application from your Web server.
Monitor:	Stop the Monitor Agent. Delete the contents of the `c:\Program Files\Novell\GroupWise Server\Monitor` directory.

8.5 What's Next

After you have created new domains and post offices, and installed the agents for them, you can complete their configuration by referring to the following sections of the *GroupWise 8 Administration Guide*:

- Refining the configuration of the agents to meet the specific needs of the new domains and post offices. See "Post Office Agent" and "Message Transfer Agent".
- Refining the configuration of the new domains and post offices. See "Post Offices" and "Domains".
- Adding users to the new post offices. See "Users".

8.6 GroupWise Agent Installation Summary Sheet

Installation Program Field	Value for Your GroupWise System	Explanation
Agent Software Platform:		Section 8.3.1, "Selecting the Agent Platform," on page 185
• NetWare		
• Windows		
• Linux		

Installation Program Field	Value for Your GroupWise System	Explanation

Agents and Locations:
 	
POA:
 	
  ◆ Local to post office
 	
  ◆ Different server from post office
 	
     /dn setting (NetWare only)
 	
MTA
 	
  ◆ Local to domain
 	
  ◆ Different server from domain
 	
     /dn setting (NetWare only)
		Section 8.3.2, "Selecting the Agent Location," on page 185

Installation Path:		Section 8.3.3, "Selecting the Agent Installation Directory," on page 185

NetWare Installation Options:
 	
  ◆ Launch the GroupWise agents on system startup
 	
  ◆ Launch the GroupWise agents in Protected Mode
 	
  ◆ Configure the GroupWise agents for clustering
		"NetWare Installation Options: Automatic Startup, Protected Mode, and Clustering" on page 187

Linux Installation Options:
 	
  ◆ Launch the GroupWise agents on system startup
 	
  ◆ Configure the GroupWise Agents for Clustering
		"Linux Installation Options: Automatic Startup and Clustering" on page 188

Windows Installation Options:
 	
  ◆ Install and configure SNMP for GroupWise agents
 	
  ◆ Install as Windows services
		"Windows Installation Options: SNMP Traps and Service vs. Application" on page 188

Agent Language Selection:
 	
  ◆ English
 	
  ◆ French
 	
  ◆ German
 	
  ◆ Brazilian Portuguese
 	
  ◆ Spanish
		Section 8.3.5, "Deciding Which Languages to Install," on page 186

Installation Program Field	Value for Your GroupWise System	Explanation
Client Language Selection: ◆ Arabic ◆ Brazilian Portuguese ◆ Chinese Traditional ◆ Chinese Simplified ◆ Czech ◆ Danish ◆ Dutch ◆ English ◆ Finnish ◆ French ◆ German ◆ Hebrew ◆ Hungarian ◆ Italian ◆ Japanese ◆ Korean ◆ Norwegian ◆ Polish ◆ Russian ◆ Spanish ◆ Swedish		Section 8.3.5, "Deciding Which Languages to Install," on page 186
Domain Information: ◆ Name ◆ Path		Section 8.3.4, "Gathering Domain and Post Office Information," on page 186
Post Office Information: ◆ Name ◆ Path		Section 8.3.4, "Gathering Domain and Post Office Information," on page 186

Installation Program Field	Value for Your GroupWise System	Explanation

Service Information:
 	
Windows only
 	
  ◆ User local system account
     ◆ Allow service to interact with desktop
  ◆ Use this Windows user account
     ◆ Name of Windows user account
     ◆ Password
  ◆ Startup type
     ◆ Automatic
     ◆ Manual
     ◆ Disabled
		Section 8.3.8, "Windows Installation Options: SNMP Traps and Service vs. Application," on page 188

9 Installing the GroupWise Clients

The following sections assist you with assigning GroupWise accounts to users and with installing the Novell GroupWise 8 Windows, Mac, and Linux clients.

- Section 9.1, "GroupWise Client Overview," on page 229
- Section 9.2, "Setting Up GroupWise Client Users," on page 229
- Section 9.3, "Installing and Starting the GroupWise Windows Client," on page 231
- Section 9.4, "Installing and Starting the GroupWise Mac Client," on page 234
- Section 9.5, "Installing and Starting the GroupWise Linux Client," on page 235
- Section 9.6, "What's Next," on page 237

For information about client licensing requirements, see "Auditing Mailbox License Usage in the Post Office" in "Post Offices" in the *GroupWise 8 Administration Guide*.

9.1 GroupWise Client Overview

Each user with a GroupWise account has a mailbox in a post office. In a corporate workplace environment, GroupWise users with Windows workstations can run the GroupWise Windows client to access their mailboxes and to send and receive mail. GroupWise users with Macintosh or Linux workstations can run the GroupWise Mac or Linux client.

GroupWise users can also access their mailboxes via a Web browser, WAP-enabled cellular phone, Palm OS device, or Windows Pocket PC device by using the GroupWise WebAccess client. For information about WebAccess, see Chapter 5, "Installing GroupWise WebAccess," on page 101.

The GroupWise Windows client provides a full set of features, the GroupWise WebAccess and Mac/Linux clients provides a similar but more limited set of features.

9.2 Setting Up GroupWise Client Users

- Section 9.2.1, "Assigning GroupWise Accounts to Users," on page 229
- Section 9.2.2, "Implementing System-Wide Rollouts," on page 231

9.2.1 Assigning GroupWise Accounts to Users

After you've finished your basic GroupWise system setup, you need to add users to the post office before they can log in to a GroupWise client. To do so, follow the instructions in one of the following sections:

- "Assigning GroupWise Accounts to eDirectory Users" on page 230
- "Assigning GroupWise Accounts to Non-eDirectory Users" on page 230

Assigning GroupWise Accounts to eDirectory Users

To give an eDirectory user a GroupWise account in the post office:

1 In ConsoleOne, right-click the user you want to give an account to, then click *Properties*.

2 Click the *GroupWise* tab to display the GroupWise Account page.

3 In the *Post Office* field, click the *Browse* button to select the post office.

4 In the *Mailbox ID* field, specify the name the user will use when logging in to his or her mailbox. The field defaults to the eDirectory username.

5 Click *OK*.

Assigning GroupWise Accounts to Non-eDirectory Users

You give a non-eDirectory user a GroupWise account in a post office by adding the user to eDirectory as a GroupWise external entity.

1 In ConsoleOne, right-click the container where you want to create the GroupWise external entity, click *New*, then click *Object* to display the New Object dialog box.

2 In the list, select *GroupWise External Entity*, then click *OK* to display the Create GroupWise External Entity dialog box.

3 Define the following properties:

GroupWise Object ID: Specify the user's GroupWise ID. The user's ID, along with the user's post office and domain, provide the user with a unique name within the GroupWise system.

Last Name: Specify the user's last name.

GroupWise Post Office: Select the post office where you want the user's mailbox.

External Network ID: Specify the user's network ID for the network that he or she logs in to.

Define Additional Properties: Select this option so that you can define additional information such as the user's first name. The user's first name appears in the GroupWise Address Book.

Create Another External Entity: As soon as you select *Define Additional Properties*, this option becomes unavailable.

4 Click *Create*.

5 Specify the user's first name in the *Given Name* field.

6 Fill in any other fields you want, then click *OK*.

The user is given a GroupWise account in the post office you selected and can access his or her mailbox through the GroupWise client.

Logging In to GroupWise as a Non-eDirectory User

Because non-eDirectory users do not log in to eDirectory, the GroupWise clients cannot use the GroupWise information in eDirectory to automatically log in to the users' post office. When a non-eDirectory user starts a GroupWise client for the first time, he or she is prompted for a GroupWise user ID and post office location (IP address and port number). You need to provide non-eDirectory users with this information.

If you don't want to provide non-eDirectory users with the post office information, you can automate the login process by creating a GroupWise name server. A GroupWise name server is a DNS hostname entry that defines the TCP/IP address of the POA. During startup, the GroupWise client automatically looks for the GroupWise name server in DNS. For information about creating a GroupWise name server, see "Post Office Agent" in the *GroupWise 8 Administration Guide*.

9.2.2 Implementing System-Wide Rollouts

For a system-wide rollout of the GroupWise client software, you might want to consider alternatives to each user installing from the DVD, the downloaded software image, or the software distribution directory.

For the GroupWise Windows client, if you have Novell ZENworks Desktop Management, you can use it, along with the .msi files included with GroupWise 8, to distribute the client. Or, you can have a login script run the client setup program with a response file to perform a silent install on workstations.

For the GroupWise Linux client, you can use ZENworks Linux Management for a system-wide rollout.

For more information about these and other installation methods, see "Client" in the *GroupWise 8 Administration Guide*.

9.3 Installing and Starting the GroupWise Windows Client

- Section 9.3.1, "GroupWise Windows Client Workstation Requirements," on page 231
- Section 9.3.2, "Installing the Windows Client," on page 231
- Section 9.3.3, "Starting the Windows Client," on page 233

9.3.1 GroupWise Windows Client Workstation Requirements

❒ x86-32 processor or x86-64 processor

On a 64-bit processor, GroupWise still runs as a 32-bit application.

❒ Any of the following Windows versions:
- Windows XP on a 300 MHz or higher workstation with at least 128 MB of RAM
- Windows Vista on a 1 GHz or higher workstation with at least 1 GB of RAM
- Windows 7 on a 1 GHz or higher workstation with at least 1 GB of RAM

❒ 200 MB of free disk space to install the GroupWise Windows client

9.3.2 Installing the Windows Client

1 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program.

or

Run setup.exe from the root of the downloaded *GroupWise 8* software image.

or

If you have already copied the Windows client software to a software distribution directory, run setup.exe from the root of the software distribution directory to start the GroupWise Installation program.

In order to install from the software distribution directory, users need a drive mapped to the software distribution directory. Users also require Read and File Scan rights to the *drive*:\grpwise\software directory to start the GroupWise Installation program and to the *drive*:\grpwise\software\client\win32 directory to run the Windows Client Setup program.

2 Select the language in which you want to run the GroupWise Installation program, then click *OK*.

NOTE: All available languages are included on the *GroupWise 8* DVD and the multilanguage version of the downloaded *GroupWise 8* software image, but you can select which languages you want to install.

The main GroupWise System Installation page appears.
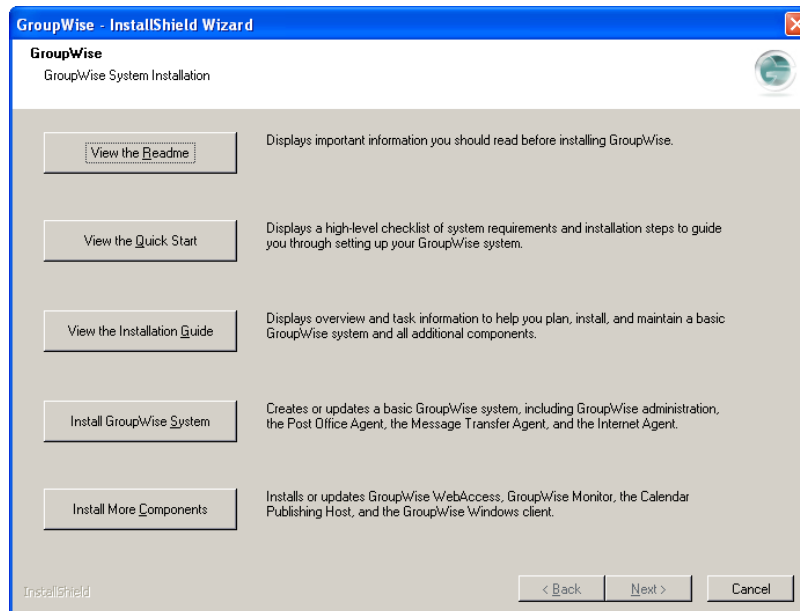
3 Click *Install More Components > Install GroupWise Client* to start the client Setup program.

4 Select the language in which you want to run the client Setup program, then click *OK*.

5 Click *Next* to display the Setup Type dialog box.
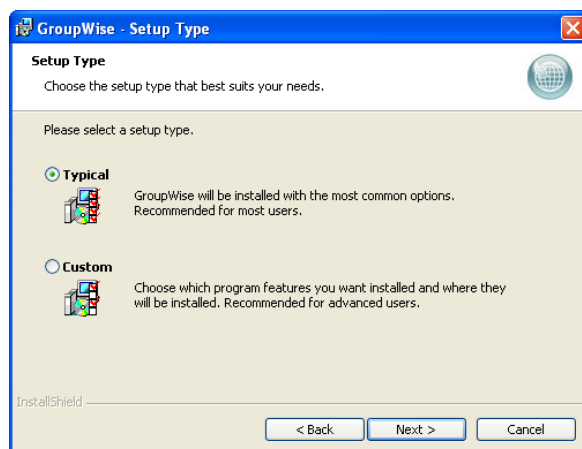
6 Select one of the following options:

Typical: For a new installation, installs the most commonly used components in the standard installation directory of c:\Program Files\Novell\Groupwise without prompting for further information. By default, this installs the software integration and Internet browser mail

integration. A *GroupWise* icon is added to your Desktop as well as to the Quick Launch bar. However, Notify is not added to your startup group. This means Notify does not run when Windows starts.

Upgrade: For an update installation, installs GroupWise 8 over your existing installation of GroupWise with the same components you already had installed. The installation directory is also the same as your previous installation of GroupWise.

Custom: For a new or update installation, allows you to select what components of GroupWise you want to install. Select this option if you want to add Notify to your Startup group.

See "Client" in the *GroupWise 8 Administration Guide* for more information about setting up GroupWise Remote and Caching modes.

7 Click *Next*.

8 If you selected *Typical* or *Upgrade*:

   8a Click *Install* to install the client files.

       When the client Setup program has completed, a shortcut to run GroupWise appears on your desktop and on the Quick Launch bar.

   8b Click *Finish* to exit the GroupWise Installation program.

9 If you selected *Custom*:

   9a Make sure each component you want to install is selected.

       Languages: Select which languages to install.

       Software Integrations: Select the applications for integration with GroupWise Document Management Services for saving and retrieving files from GroupWise libraries.

       Internet Browser Mail Integration: Sets GroupWise to be the default e-mail program on the workstation, so that whenever the user clicks an e-mail link on a Web page or chooses the `Mail` command in the browser, GroupWise starts.

   9b Click *Next*.

   9c Select the Program Folder where you want to add the GroupWise icons.

       The default is *Novell GroupWise*.

   9d Select if you want the GroupWise icon added to your Desktop and Quick Launch.

   9e Select if you want Notify added to the Startup Folder. This starts Notify when Windows starts.

       You can also choose to start Notify when GroupWise starts, as described in "Starting Notify When GroupWise Starts " in "Notify" in the *GroupWise 8 Windows Client User Guide*.

   9f Click *Next*.

   9g Click *Install* to install the client files.

       When the client Setup program has completed, a shortcut to run GroupWise appears on your desktop.

   9h Click *Finish* to exit the GroupWise Installation program.

9.3.3 Starting the Windows Client

At startup, the Windows GroupWise client needs to know the location (IP address/hostname and port number) of the user's post office. There are three ways that the client can get this information:

* If the user is logged into eDirectory, the GroupWise client can read eDirectory for the post office's location.

- If the user is not logged into eDirectory, the GroupWise client can use a GroupWise name server to get the user's post office location.

   A GroupWise name server is a DNS hostname entry that defines the IP address of the post office's POA. During startup, the GroupWise client automatically looks for the GroupWise name server in DNS. For information about creating a GroupWise name server, see "Post Office Agent" in the *GroupWise 8 Administration Guide*.

- The user can provide the post office location when prompted.

To start the GroupWise Windows client for the first time:

1 Double-click the GroupWise icon on the Windows desktop.

2 Enter the password and post office address information, then click *OK*.

See also "Getting Started" in the *GroupWise 8 Windows Client User Guide*.

9.4   Installing and Starting the GroupWise Mac Client

The GroupWise Mac client is not included with GroupWise 8 Support Pack 3, but is available in earlier versions of GroupWise 8. The GroupWise 8 Support Pack 2 Mac client can continue to be used with a GroupWise system that has been updated to GroupWise 8 Support Pack 3 or to GroupWise 2012.

- Section 9.4.1, "GroupWise Mac Client," on page 234
- Section 9.4.2, "Installing the Mac Client," on page 235
- Section 9.4.3, "Starting the Mac Client," on page 235

9.4.1   GroupWise Mac Client

❏ x86-32 processor or x86-64 processor; PowerPC

On a 64-bit processor, GroupWise still runs as a 32-bit application.

❏ Any of the following desktop operating systems:

- Mac OS 10.6.8 and later (Snow Leopard), Mac OS 10.7 (Lion), Mac OS 10.8 (Mountain Lion) or later, for use with the GroupWise 8.0.2 HP3 or HP4 Mac client that is available on the Novell Downloads site (http://download.novell.com)

   or

   Mac OS 10.4 (Tiger), Mac OS 10.5 (Leopard), Mac OS 10.6.7 and earlier (Snow Leopard), for the GroupWise 8.0.2 HP2 Mac client that is available on the Novell Downloads site (http://download.novell.com)

- Mac OS X for Intel

- Mac OS X for PowerPC for the GroupWise 8.0.2 HP2 Mac client that is available on the Novell Downloads site (http://download.novell.com)

   The GroupWise 8.0.2 HP3 Mac client is not supported on Mac OS X for PowerPC.

❏ Apple Java Virtual Machine (JVM) 1.5 or later

❏ 75 MB of free disk space to install the GroupWise Mac client

9.4.2 Installing the Mac Client

1 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program, double-click the CDROM icon that appears on your desktop, double-click the `mac` folder, then double-click the GroupWise `.dmg` file to create the GroupWise package.

or

Double-click the downloaded GroupWise `.dmg` file to create the GroupWise package.

2 Drag the GroupWise package to the `Applications` folder to install the software on your Mac.

3 Drag the GroupWise package from the `Applications` folder to the Mac dock to create a GroupWise icon for convenient access.

4 Click the GroupWise Mac client icon on the dock to start the Mac client.

9.4.3 Starting the Mac Client

At startup, the GroupWise Mac client needs to know the location (IP address/hostname and port number) of the user's post office. There are three ways that the client can get this information:

- If the user is logged into eDirectory, the GroupWise client can read eDirectory for the post office's location.

- If the user is not logged into eDirectory, the GroupWise client can use a GroupWise name server to get the user's post office location.

  A GroupWise name server is a DNS hostname entry that defines the IP address of the post office's POA. During startup, the GroupWise client automatically looks for the GroupWise name server in DNS. For information about creating a GroupWise name server, see "Post Office Agent" in the *GroupWise 8 Administration Guide*.

- The user can provide the post office location when prompted.

To start the GroupWise Mac client for the first time:

1 Click the GroupWise icon on the Mac dock.

2 Enter the password and post office address information, then click *OK*.

See also "Getting Started" in the *GroupWise 8 Mac/Linux Client User Guide*.

9.5 Installing and Starting the GroupWise Linux Client

The GroupWise Linux client is not included with GroupWise 8 Support Pack 3, but is available in earlier versions of GroupWise 8. The GroupWise 8 Support Pack 2 Linux client can continue to be used with a GroupWise system that has been updated to GroupWise 8 Support Pack 3 or to GroupWise 2012.

9.5.1 GroupWise Linux Client Workstation Requirements

❑ x86-32 processor or x86-64 processor

On a 64-bit processor, GroupWise still runs as a 32-bit application.

❒ SUSE Linux Enterprise Desktop (SLED) 10 or SLED 11, plus the latest Support Pack, plus the KDE desktop or the GNOME desktop

❒ Java Virtual Machine (JVM) 1.5 or later

❒ 200 MB of free disk space to install the GroupWise Linux client

9.5.2 Prerequisites on SUSE Linux Enterprise Desktop 11

If you are installing the Linux client on SUSE Linux Enterprise Desktop (SLED) 11, you need to manually install the `libstdc++33` library.

If you are installing the Linux client on SLED 10, skip to .

To install the `libstdc++33` library:

1 On the SLED 11 desktop, click *Computer > YaST* to launch the YaST Control Center.

2 Click *Software > Software Management*.

3 In the search field, type `libstdc++33`, then select it when it appears in the *Packages listing* section.

4 Click *Install > Apply*.

5 Continue with .

9.5.3 Installing the Linux Client

1 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program.

or

Run `./install` from the root of the downloaded *GroupWise 8* software image.

or

If you have already copied the client software to a software distribution directory, run `./install` from the root of the software distribution directory to start the GroupWise Installation program.

2 Specify the `root` password, then click *OK*.

3 Select the language you want, then click *OK*.

The main GroupWise System Installation page appears.
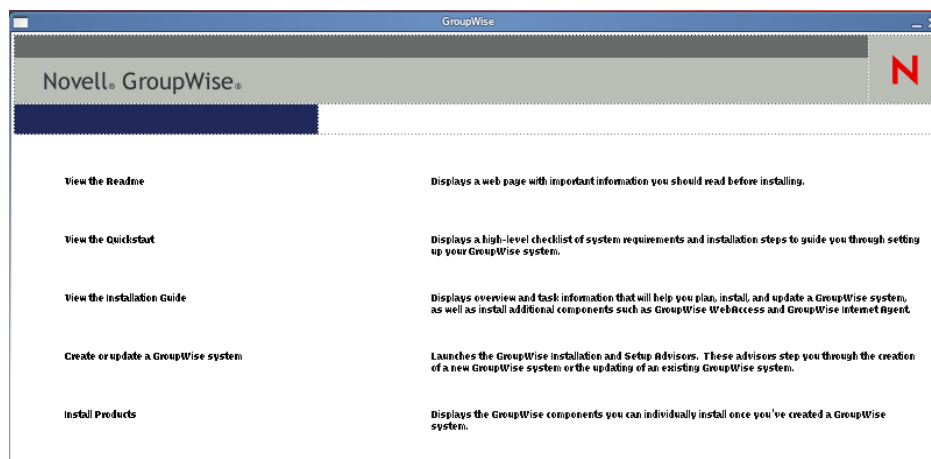
4 Click *Install Products > Install GroupWise Client*.

The GroupWise Linux client is installed to `/opt/novell/groupwise/client`. The installation process adds a GroupWise Linux client icon to your desktop.

5 Double-click the GroupWise Linux client icon to start the Linux client.

You can also install the Linux client by changing to the `/client/linux` directory on the *GroupWise 8* DVD or downloaded *GroupWise 8* software image, then installing the RPM.

9.5.4 Starting the Linux Client

At startup, the GroupWise Linux client needs to know the location (IP address/hostname and port number) of the user's post office. There are three ways that the client can get this information:

- If the user is logged into eDirectory, the GroupWise client can read eDirectory for the post office's location.

- If the user is not logged into eDirectory, the GroupWise client can use a GroupWise name server to get the user's post office location.

  A GroupWise name server is a DNS hostname entry that defines the IP address of the post office's POA. During startup, the GroupWise client automatically looks for the GroupWise name server in DNS. For information about creating a GroupWise name server, see "Post Office Agent" in the *GroupWise 8 Administration Guide*.

- The user can provide the post office location when prompted.

To start the GroupWise Linux client for the first time:

1 Double-click the GroupWise icon on the Linux desktop.

2 Enter the password and post office address information, then click *OK*.

If you want to start the GroupWise Linux client from the command line:

1 Enter the following:

```
groupwise
```

During installation, a symbolic link is create in the `/usr/bin` directory that points to the GroupWise executable, so that you can execute the command in any directory.

2 Specify the username, password, and server information, then click *OK*.

See also "Getting Started" in the *GroupWise 8 Mac/Linux Client User Guide*.

9.6 What's Next

For information about using the features in the GroupWise Windows, Linux, and Mac clients, click *Help > Help Topics*, or *Help > User Guide* in the client. The user guides are available at the GroupWise 8 Documentation Web site (http://www.novell.com/documentation/gw8).

10 Installing Novell Messenger

Novell Messenger is a corporate-based, secure instant messaging solution that supports instant messaging, presence, and archiving of conversations. The Messenger client integrates with the GroupWise Windows client to provide access to instant messaging features from within the GroupWise Windows client.

Novell Messenger is installed separately from GroupWise and does not rely on your GroupWise system. All Messenger information is stored in eDirectory, not in GroupWise databases. For more information, see the *Novell Messenger 2.2 Installation Guide*.

11 Installing the Novell Data Synchronizer Mobility Pack

You can use Novell Data Synchronizer to synchronize e-mail and other Personal Information Manager (PIM) data from Novell GroupWise to mobile devices. The Mobility Pack includes Data Synchronizer, the GroupWise Connector, and the Mobility Connector. Additional connectors can be added to a Synchronizer system to synchronize GroupWise data to other supported applications.

For more information, see:

- Novell Data Synchronizer Documentation Web site (http://www.novell.com/documentation/datasynchronizer1)
- Novell Data Synchronizer Connectors Documentation Web site (http://www.novell.com/documentation/datasync_connectors1)

12 Installing Novell Vibe

Novell Vibe enhances GroupWise by bringing together people and the content they need to do their jobs. Users create workspaces and invite others to participate, from within or outside organizational boundaries. Virtual teams can easily and securely manage, share, locate, and access documents, calendars, discussion forums, wikis, and blogs. Powerful workflow functions can track project status and progress. Team workspaces enable enterprise social networking, with team members chosen not by their proximity, but for their expertise.

For more information, see:

* Novell Vibe Documentation Web site (http://www.novell.com/documentation/vibe32)
* "Novell Vibe" in the *GroupWise 8 Interoperability Guide*

NOTE: Novell Vibe 3.2 is the next major product release after Novell Teaming 2.1.

13 Installing Novell Conferencing

Novell Conferencing enhances GroupWise by providing instant telephone conferencing, phone number management, meeting scheduling and management, meeting presence, chat, desktop sharing, whiteboarding, and more.

For more information, see:

- Novell Conferencing Documentation Web site (http://www.novell.com/documentation/novell_conferencing)

- "Using GroupWise with Conferencing" in the *GroupWise 8 Interoperability Guide*
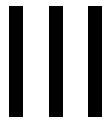
III Update

14 What's New in GroupWise 8

Novell GroupWise 8 provides substantial improvements over GroupWise 7 in five areas:

- Section 14.1, "GroupWise Windows Client," on page 249
- Section 14.2, "GroupWise Mac/Linux Client," on page 249
- Section 14.3, "GroupWise WebAccess Client," on page 249
- Section 14.4, "GroupWise Administration," on page 250
- Section 14.5, "GroupWise Agents," on page 252

14.1 GroupWise Windows Client

The Windows client now lets you choose either OpenOffice or Microsoft Word as your editor when composing messages, and provides Auto-Save protection against message loss. Panels can be configured to display Web pages and RSS feeds. Improved Calendar features include accepting items into any calendar, publishing personal GroupWise calendars and free/busy schedules on the Web, subscribing to calendars on the Web, and checking the free/busy schedules of Internet users. Improved Contact features include business card format, a contacts index with lettered tabs, multiple Contacts folders, and contact photos. Improved Tasklist features include subtasks, percent complete, date complete, and task sorting.

For information about using new features, from the GroupWise Windows client, click *Help > What's New*, or see "What's New in GroupWise 8" in the *GroupWise 8 Windows Client User Guide*.

14.2 GroupWise Mac/Linux Client

The Mac/Linux client has added many features, including the Home Folder, the Nav Bar, more flexible panels, toolbar customization, categories, improved Find capabilities, item personalization, item type modification, multiple calendars, calendar selection for appointment acceptance, shared calendars, updated calendar views, import/export calendars, additional forms for calendar printing, date/time format modification, CASA login support, Auto-Save protection against message loss, external accounts (POP, IMAP, and NNTP), and Notify.

For information about using new features, from the GroupWise Mac/Linux client, click *Help > What's New*, or see "What's New in GroupWise 8" in the *GroupWise 8 Mac/Linux Client User Guide*.

14.3 GroupWise WebAccess Client

The WebAccess client now provides a scrollable message list, auto-save protection against message loss, name completion, HTML Compose mode, improved spell checking, and categories. Calendar enhancements include a graphical Calendar with multiple-calendar support, drag-and-drop appointments, publishing personal GroupWise calendars and free/busy schedules on the Web,

calendar colors, and automatic time zone synchronization with your workstation. Contact Management now includes a contact summary, e-mail history, and notes. Keyboard shortcuts such as Ctrl+A to select all items and Del to delete items make the new message list very easy to use.

For information about using new features, from the GroupWise WebAccess client, click *Help > Help Topics > Appendix A: What's New*, or see "What's New In GroupWise 8 WebAccess" in the *GroupWise 8 WebAccess Client User Guide*.

14.4   GroupWise Administration

GroupWise administrators benefit from a new GroupWise Installation program that streamlines creation of a basic GroupWise system (administration, domain, post office, and agents) and that provides for saving installation options so that installations can be repeated without interaction. The GroupWise snap-ins to ConsoleOne have been improved to provide more currently appropriate agent settings defaults, more efficient addressing for external Internet domains, a significantly larger maximum mailbox size, the ability to set the default MIME encoding character set, and the ability to customize the Training and Tutorials URL. The options file for GroupWise Check now uses the same XML format across NetWare, Linux, and Windows so that the same options file can be used on any platform. The following sections provide additional detail:

- Section 14.4.1, "Enhanced Installation Program," on page 250
- Section 14.4.2, "E-Mail Address Publishing," on page 251
- Section 14.4.3, "Simplified Addressing for External GroupWise Systems," on page 251
- Section 14.4.4, "Client Auditing," on page 251
- Section 14.4.5, "Customized Client User Training and Tutorials URL," on page 251
- Section 14.4.6, "Default MIME Encoding," on page 251
- Section 14.4.7, "New Format for the GWCheck Options File," on page 252
- Section 14.4.8, "Updated Identity Manager Driver," on page 252
- Section 14.4.9, "Access Control for Distribution Lists (v8.0.2)," on page 252
- Section 14.4.10, "Attachment Restrictions for Specified File Types (v8.0.2)," on page 252
- Section 14.4.11, "Maximum Number of Recipients (v8.0.2)," on page 252

14.4.1   Enhanced Installation Program

The GroupWise 8 Installation program provides the following new capabilities:

- Runs on Windows Vista and Windows 7.
- Streamlines installing and updating a basic GroupWise system (administration, domain, post office, MTA, POA, and Internet Agent). Additional components (GroupWise WebAccess, GroupWise Monitor, and Calendar Publishing Host) are installed separately.
- Enables you to save all installation option settings you select, so that you can run the installation again on additional servers, either by using the saved selections as defaults, or by performing an installation that automatically uses the save selections and requires no interactions at all.

14.4.2   E-Mail Address Publishing

The GroupWise databases and eDirectory both contain information about users' e-mail address formats. When you change settings for users' GroupWise e-mail addresses, you can publish the changes to eDirectory so that user e-mail address information matches in both places.

For setup instructions, see "Publishing E-Mail Addresses to eDirectory." in "System" in the *GroupWise 8 Administration Guide*.

14.4.3   Simplified Addressing for External GroupWise Systems

Before GroupWise 8, if you wanted users in your GroupWise system to be able to exchange messages conveniently with users in another GroupWise system, you needed to set up external domains, external post offices, and external users, or use dynamic Internet links, as described in "Connecting to Other GroupWise Systems" in the *GroupWise 8 Multi-System Administration Guide*.

Starting with GroupWise 8, you can set up an Internet domain in GroupWise to represent the other GroupWise system. As a result, messages are routed to the other GroupWise system based on links set up in the Link Configuration Tool, rather than through the Internet Agent.

For setup instructions, see "Using External System Links" in "Connecting to Other GroupWise Systems" in the *GroupWise 8 Multi-System Administration Guide*.

14.4.4   Client Auditing

ConsoleOne can now display the number of users who are using the Windows, Mac, or Linux client. The client version is also displayed.

For instructions, see "Viewing Current Client Usage in the Post Office" in "Post Offices" in the *GroupWise 8 Administration Guide*.

14.4.5   Customized Client User Training and Tutorials URL

When the user clicks *Help > Training and Tutorials* in the GroupWise Windows client, the GroupWise 8 End-User Training Web page (http://www.brainstorminc.com/cbt/gw8/index.html) displays by default. If you purchase more in-depth training from BrainStorm, or you want to provide your own customized training materials for your GroupWise users, you can change the URL that *Help > Training and Tutorials* displays.

For instructions, see "Educating Your New Users" in "Users" in the *GroupWise 8 Administration Guide*.

14.4.6   Default MIME Encoding

You can now set the default MIME encoding (for example, UTF-8, Windows Default, ISO Default, and so on) that is used by the GroupWise clients.

For instructions, see "MIME Encoding" in "System" in the *GroupWise 8 Administration Guide*.

GroupWise users can override the default MIME encoding in the GroupWise clients, as described in:

- "Changing the MIME Encoding for E-Mail You Send" in "E-Mail" in the *GroupWise 8 Windows Client User Guide*

- "Changing the MIME Encoding for E-Mail You Send" in "E-Mail" in the *GroupWise 8 Mac/Linux Client User Guide*
- "Changing the MIME Encoding of a Message" in "E-Mail" in the *GroupWise 8 WebAccess Client User Guide*

14.4.7 New Format for the GWCheck Options File

In the past, the GWCheck options file (`gwcheck.opt`, by default) was created in a different format on Linux than it was on NetWare and Windows. As a result, if you migrated from NetWare or Windows to Linux, you could not use any existing GWCheck options files on Linux.

In GroupWise 8, the GWCheck options file is created in XML format on all platforms. Therefore, you can create the GWCheck options file on any platform and use it on any platform interchangeably.

14.4.8 Updated Identity Manager Driver

The GroupWise Identity Manager driver has been updated with additional searches and more client options. It is available by selecting *Identity Manager Drivers* at Novell Downloads (http://download.novell.com).

14.4.9 Access Control for Distribution Lists (v8.0.2)

In GroupWise 8 Support Pack 2, you can restrict the users who are allowed to send to a distribution list. For instructions, see "Controlling Access to a Distribution List" in "Distribution Lists, Groups, and Organizational Roles" in the *GroupWise 8 Administration Guide*.

14.4.10 Attachment Restrictions for Specified File Types (v8.0.2)

In GroupWise 8 Support Pack 2, you can restrict the types of files that users can attach to messages. For instructions, see "Restricted Attachment Extensions" in "Client" in the *GroupWise 8 Administration Guide*,

14.4.11 Maximum Number of Recipients (v8.0.2)

In GroupWise 8 Support Pack 2, you can restrict the maximum number of recipients that users can send a message to. For instructions, see "Maximum Recipients Allowed" in "Client" in the *GroupWise 8 Administration Guide*.

14.5 GroupWise Agents

14.5.1 Post Office Agent and Message Transfer Agent

- The POA provides support for the calendar publishing and free/busy searching features in the Windows and WebAccess clients.
- The POA includes the new Document Conversion Agent to provide indexing of additional document formats such as PDF, OpenOffice, and Microsoft Office 2007.
- The POA also has enhanced performance when auto-archiving and emptying large numbers of items.
- You can now display the agent startup files (`domain`.mta and `post_office`.poa) from the agent Web consoles.

14.5.2 GroupWise Internet Agent

- "Delayed Message Notification" on page 253
- "More Flexibility with Rule-Generated Messages" on page 253
- "More Complete Configuration Information in the Internet Agent Web Console" on page 253

Delayed Message Notification

Before GroupWise 8, users needed to check the Properties pages of messages sent to Internet users to see whether or not the messages had been transferred out of the GroupWise system. In GroupWise 8, the Internet Agent can be configured to provide a notification message to users whose e-mail messages cannot be immediately sent out across the Internet.

For more information, see "Configuring SMTP/MIME Services" in "Internet Agent" in the *GroupWise 8 Administration Guide*.

More Flexibility with Rule-Generated Messages

Blocking of rule-generated messages has been enhanced to provide more options. Before GroupWise 8, you could configure the Internet Agent to either block all rule-generated messages or allow all rule-generated messages. In GroupWise 8, you can differentiate between rule-generated replies to messages (such as vacation rule messages) and rule-generated forwards of messages (which can be a security issue).

For setup instructions, see "Creating a Class of Service" in "Internet Agent" in the *GroupWise 8 Administration Guide*.

More Complete Configuration Information in the Internet Agent Web Console

The Internet Agent Web console now displays configuration settings for all settings that are available through ConsoleOne. In addition, you can view the Internet Agent startup file (`gwia.cfg`) at the Internet Agent Web console; however, you cannot edit it from the Web console.

For instructions, see "Using the Internet Agent Web Console" in "Internet Agent" in the *GroupWise 8 Administration Guide*.

14.5.3 GroupWise WebAccess Agent

The GroupWise 8 WebAccess Agent includes no changes from the previous release.

14.5.4 GroupWise Monitor Agent

The GroupWise 8 Monitor Agent includes no changes from the previous release.

14.5.5 GroupWise Calendar Publishing Host

The Calendar Publishing Host is a new feature in GroupWise 8. It provides the following new capabilities:

- ◆ Publishes GroupWise users' personal calendars to the Web, so that they are readily available to non-GroupWise users.
- ◆ Returns free/busy status to non-GroupWise users who want to set up appointments with GroupWise users.

For setup instructions, see Chapter 6, "Installing the GroupWise Calendar Publishing Host," on page 135. See also "Calendar Publishing Host" in the *GroupWise 8 Administration Guide*.

15 Understanding the Update Process

You can update a Novell GroupWise 5.*x*, 6.*x*, or 7 system to GroupWise 8.

NOTE: To update a GroupWise 4.*x* system to GroupWise 8, you must first update the system to GroupWise 5.*x*. The functionality to update from GroupWise 4.*x* is not part of the GroupWise 8 Administrator snap-ins to ConsoleOne.

Before you begin updating your GroupWise system to GroupWise 8, you should review the following sections. These sections, which describe the process to follow when updating, help you plan and implement a successful update strategy:

- Section 15.1, "Understanding eDirectory Schema Extensions," on page 255
- Section 15.2, "Understanding GroupWise Software Updates," on page 256
- Section 15.3, "Understanding How the Agents Update Domain and Post Office Databases," on page 256
- Section 15.4, "Understanding GroupWise Client Updates," on page 257
- Section 15.5, "Understanding Internet Agent Updates," on page 258
- Section 15.6, "Understanding WebAccess Updates," on page 258
- Section 15.7, "Understanding Monitor Updates," on page 259
- Section 15.8, "Understanding GroupWise Gateway Compatibility," on page 259

For a list of enhancements and new features in GroupWise 8, see Chapter 14, "What's New in GroupWise 8," on page 249.

In some cases, you might need to maintain a mixed-version environment as you roll out GroupWise 8. For a table showing which GroupWise 5.*x*, 6.*x*, and 7 components can be used with GroupWise 8, see Appendix A, "GroupWise Version Compatibility," on page 281.

For additional advice and counsel on the update process, specifically for NetWare, see Consultant's Corner: Upgrading to GroupWise 8 (http://www.novell.com/communities/node/6771/consultants-corner-upgrading-gro).

15.1 Understanding eDirectory Schema Extensions

GroupWise 8 includes new functionality that requires you to extend the schema of any Novell eDirectory trees where you have GroupWise objects. The GroupWise Installation program does not currently extend the eDirectory for you. Before you run the Installation program, use ConsoleOne to extend the eDirectory schema for GroupWise 8.

1 In ConsoleOne, select an eDirectory tree that contains GroupWise objects.

2 Click *Tools > GroupWise Utilities > Check eDirectory Schema*.

If the schema is current, a message notifies you. If the schema is not current, you can use this utility to update to the current schema.

3 Repeat this procedure for each eDirectory tree that contains GroupWise objects.

15.2 Understanding GroupWise Software Updates

The GroupWise 8 software requirements are different than previous GroupWise software requirements. To review the requirements, see Chapter 2, "GroupWise System Requirements," on page 17.

- Section 15.2.1, "Software Distribution Directory," on page 256
- Section 15.2.2, "ConsoleOne," on page 256

15.2.1 Software Distribution Directory

The GroupWise Installation program helps you copy the GroupWise 8 software (administration, agents, client, and so forth) to a GroupWise software distribution directory. This can be an existing software distribution directory or a new software distribution directory.

NOTE: Starting with GroupWise 7, GroupWise Windows client users cannot run the client software from the software distribution directory. They must install the GroupWise Windows client locally on their workstations. Users running the GroupWise client from their local drives can continue to run the local GroupWise client until you prompt them to update to GroupWise 8.

15.2.2 ConsoleOne

GroupWise 8 is administered through ConsoleOne, using the version listed in Section 2.1, "GroupWise Administration Requirements," on page 17. You can use the same version of ConsoleOne to administer earlier GroupWise components in your GroupWise system.

IMPORTANT: Earlier versions of ConsoleOne should not be used to administer GroupWise 8 domains, post offices, users, or other GroupWise 8 objects.

The Windows and Linux versions of ConsoleOne are included on the *GroupWise 8* DVD and downloaded *GroupWise 8* software image. If necessary, you can install ConsoleOne at the same time as the other GroupWise software. For instructions, see "ConsoleOne" on page 27.

NOTE: Earlier versions of GroupWise required or allowed the use of NetWare Administrator to administer your GroupWise system. Currently, NetWare Administrator should only be used if you still run very early gateways that require it. Otherwise, do not use NetWare Administrator.

15.3 Understanding How the Agents Update Domain and Post Office Databases

Functionality enhancements in GroupWise 8 require the GroupWise domain and post office databases to be updated with new records and fields, similar to the schema extensions that are required for eDirectory. The following diagram illustrates the required update sequence.

Figure 15-1   *Required Software Update Sequence*
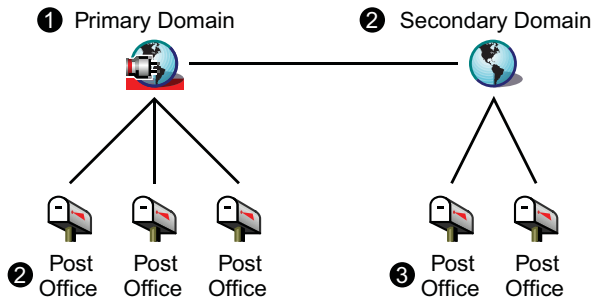
1. Update the primary domain first, so that correct replication of GroupWise 8 information can take place as you update post offices and secondary domains.

2. Update the post offices in the primary domain.

   or

   Update secondary domains

3. Update the post offices in the updated secondary domains.

To update a domain database, you run the GroupWise 8 Message Transfer Agent (MTA) against it. The first time the GroupWise 8 MTA runs against a domain, it rebuilds the domain database (`wpdomain.db`) so the database includes the records required for new GroupWise 8 information. The MTA uses a new domain dictionary file (`gwdom.dc`) to rebuild the database for use with GroupWise 8.

Likewise, to update a post office database, you run the GroupWise 8 Post Office Agent (POA) against it. The first time the GroupWise 8 POA runs against the post office, it rebuilds the post office database (`wphost.db`) so the database includes the new records required for GroupWise 8 information. The POA uses a new post office dictionary file (`gwpo.dc`), which it requests from the MTA, to rebuild the database for use with GroupWise 8. A user cannot run a GroupWise 8 client until his or her post office has been updated.

IMPORTANT: Before you update a secondary domain, you must wait until the update to the primary domain has run to completion. Before you update a post office, you must wait until the update to its domain has run to completion. Updating a large domain database can take 20 minutes or more. If you do not wait until the update runs to completion, you might encounter database versioning discrepancies. If such discrepancies occur, see "MTA Fails to Update the Domain Database Version" and "POA Fails to Update the Post Office Database Version" in "Strategies for Agent Problems" in *GroupWise 8 Troubleshooting 2: Solutions to Common Problems*.

15.4 Understanding GroupWise Client Updates

After a post office is updated to version 8, users can run the GroupWise 8 Windows client or Mac/ Linux client on workstations listed in Section 2.2, "GroupWise Client Requirements," on page 19. If necessary, they can also continue to run their older GroupWise clients, but they will not have GroupWise 8 functionality.

IMPORTANT: Users who need to proxy into other users' mailboxes should not update to the GroupWise 8 clients until the proxy users' post office has been updated to version 8. GroupWise 8 client users cannot proxy into users' mailboxes that have not been updated to GroupWise 8.

For a list of new features in the GroupWise 8 client, see Chapter 14, "What's New in GroupWise 8," on page 249.

For client update instructions, see Section 17.4, "Updating Users' GroupWise Clients," on page 271.

15.5 Understanding Internet Agent Updates

The GroupWise 5.*x*, 6.*x*, and 7 Internet Agent can run against a GroupWise 8 domain and post office, which means that you can continue to use it until all domains and post offices are updated to version 8.

For a list of new features in the GroupWise 8 Internet Agent, see Chapter 14, "What's New in GroupWise 8," on page 249.

NOTE: If you are updating from GroupWise 7 or earlier, see "Using Internet Agent Startup Switches" in "Internet Agent" in the *GroupWise 8 Administration Guide* for important changes to where Internet Agent configuration information is stored.

For Internet Agent update instructions, see Chapter 16, "Preparing Your GroupWise System for Update," on page 261.

15.6 Understanding WebAccess Updates

As you plan how to update GroupWise WebAccess, you need to consider both the WebAccess Agent and the WebAccess Application on the Web server.

- Section 15.6.1, "WebAccess Agent," on page 258
- Section 15.6.2, "WebAccess Application on the Web Server," on page 259

For a list of new features in GroupWise 8 WebAccess, see Chapter 14, "What's New in GroupWise 8," on page 249.

For WebAccess update instructions, see Chapter 16, "Preparing Your GroupWise System for Update," on page 261.

15.6.1 WebAccess Agent

The GroupWise 8 WebAccess Agent cannot access earlier (pre-GroupWise 8) domains and post offices. In addition, WebAccess Agents older than version GroupWise 5.5 Enhancement Pack SP3 cannot access GroupWise 8 domains and post offices.

Therefore, to continue to provide WebAccess service to users while you are updating your system, you need to:

- Update the WebAccess Agent at the same time you update its domain and post offices. This keeps the WebAccess Agent version synchronized with the domain and post office version.
- If you have multiple domains or post offices that will be updated over a long period of time, install the GroupWise 8 WebAccess Agent in a GroupWise 8 domain to service users on GroupWise 8 post offices. Keep your current WebAccess Agent, installed in a GroupWise domain that supports it, to service users on post offices where earlier GroupWise versions are still running.

15.6.2 WebAccess Application on the Web Server

Before GroupWise 8, you could successfully run different versions of the WebAccess Agent and the WebAccess Application together. For example, you could install a new version of the WebAccess Application on your Web server while still running the previous version of the WebAccess Agent for the domain.

Starting in GroupWise 8, the recommended update procedure is to update all the WebAccess Agents in your GroupWise system first, then update all the WebAccess Applications. Long-term use of the mixed-version configuration is not supported and can result in time zone problems. You must update both the WebAccess Agent and the WebAccess Application to the same version in order to ensure proper functioning of the GroupWise 8 WebAccess client.

IMPORTANT: Running a new WebAccess Application with an older WebAccess Agent is no longer supported.

15.7 Understanding Monitor Updates

GroupWise Monitor is not dependent on any other GroupWise agents, so it can be updated at any time.

For a list of changes and new features in GroupWise 8 Monitor, see Chapter 14, "What's New in GroupWise 8," on page 249.

For Monitor update instructions, see Chapter 16, "Preparing Your GroupWise System for Update," on page 261.

15.8 Understanding GroupWise Gateway Compatibility

There are no known issues with using GroupWise gateways with GroupWise 8.

16 Preparing Your GroupWise System for Update

To prepare your Novell GroupWise system to be updated to version 8, complete the following tasks:

- Update the eDirectory schema for all trees that contain GroupWise objects, as described in Section 15.1, "Understanding eDirectory Schema Extensions," on page 255.

- Validate your domain and post office databases to make sure that there are no physical inconsistencies with the database. If problems exist, you should recover or rebuild the database. For information about validating, recovering, or rebuilding a database, see the documentation for your GroupWise version at the Novell Documentation Web site (http://www.novell.com/documentation).

- Back up the domain or post office immediately before updating it. For information about backing up your GroupWise databases, see the documentation for your GroupWise version at the Novell Documentation Web site (http://www.novell.com/documentation).

- Collect the information about your GroupWise system that the GroupWise Installation program prompts you for as your update the GroupWise software. If you are not completely familiar with all aspects of your GroupWise system, you might find it helpful to record the information on the summary sheets provided for an initial installation:

  - "Basic GroupWise System Summary Sheet" on page 68 (includes administration, domain, post office, and agent information)

  - "GroupWise Internet Agent Installation Summary Sheet" on page 96

  - "GroupWise WebAccess Installation Summary Sheets" on page 130

  - "GroupWise Monitor Installation Summary Sheets" on page 177

  - "GroupWise Agent Installation Summary Sheet" on page 225

- Ensure that all GroupWise client user workstations are running a supported version of the operating system. For current system requirements, see Section 2.2, "GroupWise Client Requirements," on page 19.

17 Updating Your GroupWise 7 System to Version 8

The following sections provide step-by-step instructions for updating your Novell GroupWise 7 system to GroupWise 8. Before beginning, make sure you have reviewed Chapter 15, "Understanding the Update Process," on page 255 and Chapter 16, "Preparing Your GroupWise System for Update," on page 261.

The update process described in this section is generalized to apply to all GroupWise platforms (NetWare, Linux, and Windows). Platform-specific cross-references are provided as needed.

17.1 Installing the GroupWise 8 Software

17.1.1 Installing the GroupWise 8 Software on NetWare or Windows

1 Make sure that you have updated the eDirectory schema for eDirectory trees that contain GroupWise objects, as described in Section 15.1, "Understanding eDirectory Schema Extensions," on page 255.

2 Stop the MTA for the primary domain of your GroupWise system.

3 At a Windows workstation, log in as an Admin equivalent to the eDirectory tree in which you are updating GroupWise.

4 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program.

or

Run `setup.exe` from the root of the downloaded *GroupWise 8* software image.
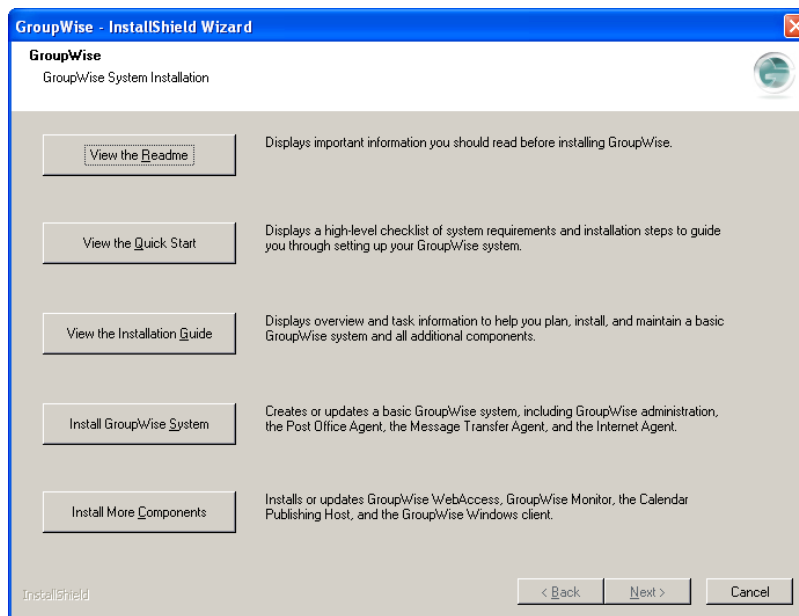
5 Click *Install GroupWise System*, then click *Yes* to accept the license agreement.

When you update your GroupWise system, you are performing a Standard installation.

6 Click *Next* to accept the default of *Standard*.
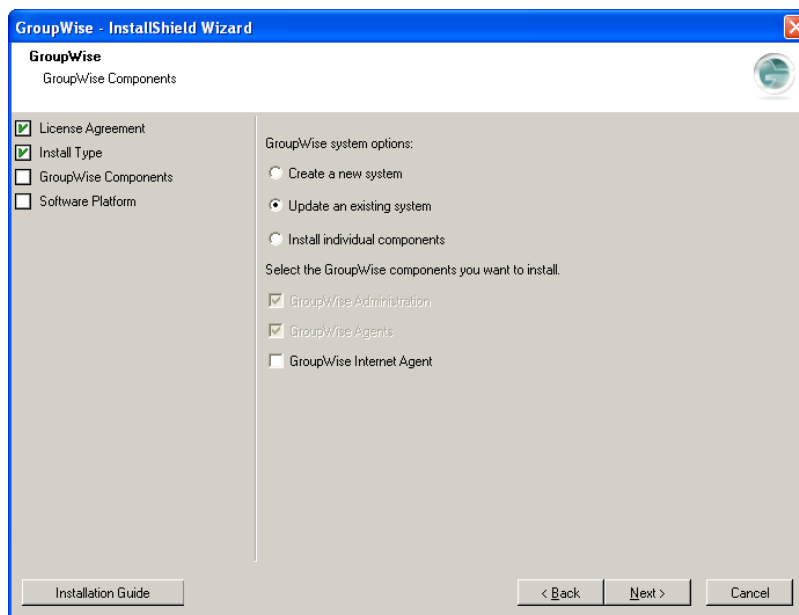
7 Select *Update an Existing System*, then click *Next*.

8 Follow the prompts to provide the following information from your Basic GroupWise System Summary Sheet.

Software Platform
ConsoleOne Path
Software Distribution Directory
Software Selection
Installation Path

> **IMPORTANT**: On the Domains / Post Offices page, add only the primary domain, even if the primary domain has one or more post offices. The MTA must update the primary domain database before any post offices are updated.

When you reach the Update an Existing System page, carefully review the steps that are involved in updating your GroupWise system from a previous version to GroupWise 8.
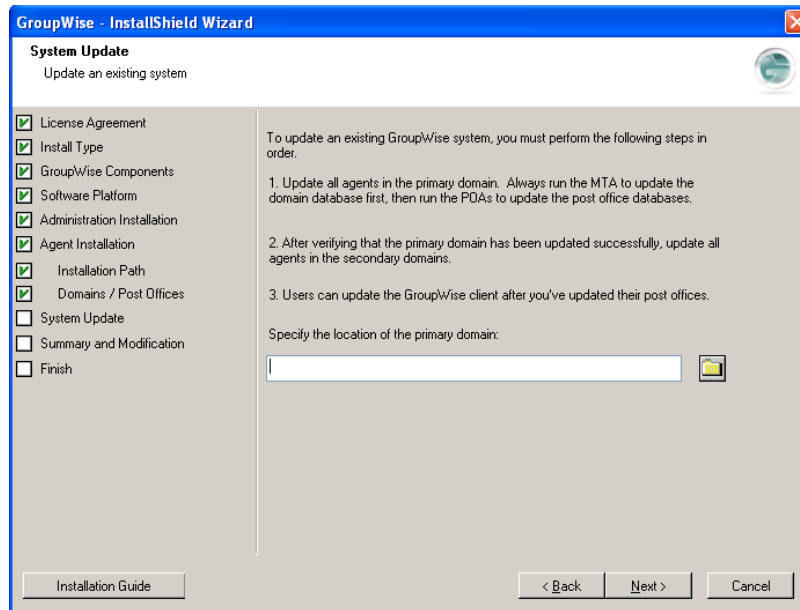
More detailed instructions are provided in the sections following the software update instructions.

9 Browse to and select the primary domain directory, then click *Next*.

By specifying the primary domain directory, you inform the GroupWise Installation program where to copy the GroupWise 8 data dictionary (`.dc`) files. Without the GroupWise 8 `.dc` files, the GroupWise MTA cannot rebuild the primary domain database into the structure required for GroupWise 8. Having the GroupWise 8 `.dc` files in the domain directory is critical to a successful GroupWise system update.

10 On the Summary and Modification page, review the information you have provided to the GroupWise Installation program for your update to GroupWise 8, modifying information if needed.

11 When you are satisfied with the information you have provided, click *Install* to update your primary domain to GroupWise 8.

12 When the installation completed, click *Finish*.

13 Skip to Section 17.2, "Updating the Primary Domain," on page 268.

17.1.2 Installing the GroupWise 8 Software on Linux

1 In a terminal window, become `root` by entering `su -` and the `root` password.

2 Make sure that you have updated the eDirectory schema for eDirectory trees that contain GroupWise objects, as described in Section 15.1, "Understanding eDirectory Schema Extensions," on page 255.

3 Stop the MTA for the primary domain of your GroupWise system.

4 Insert the *GroupWise 8* DVD into the DVD drive to start the GroupWise Installation program.

or

Run `install` from the root of the downloaded *GroupWise 8* software image.

5 Select the language in which you want to run the GroupWise Installation program, then click *OK*.
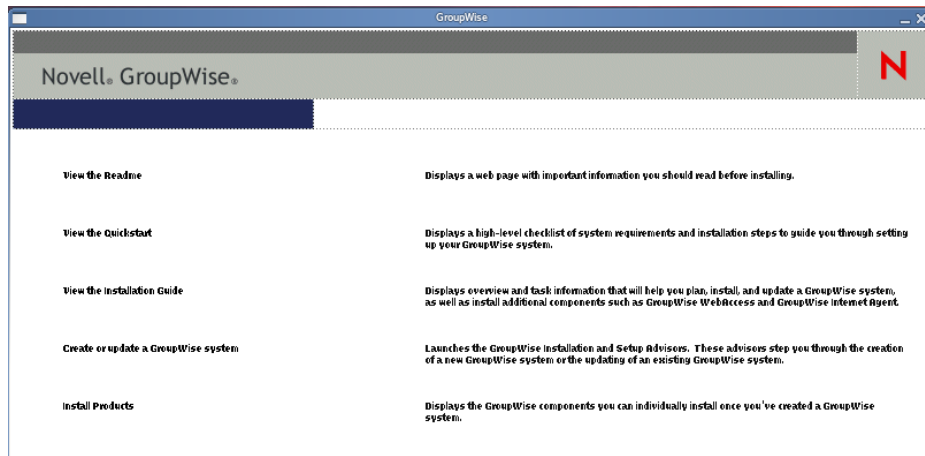
6 Click *Create or Update a GroupWise System*.
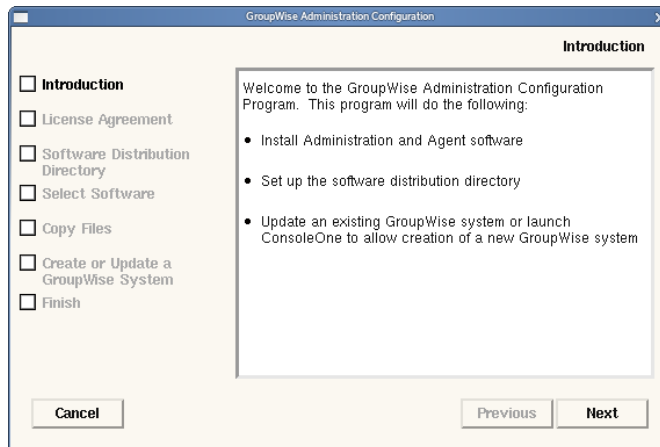
7 Follow the prompts to provide the following information from your Basic GroupWise System Summary Sheet.

Software Distribution Directory
Software Selection

If the Installation program detects that multiple GroupWise components are installed on the server, a message lists the installed components and prompts you to update all of them. All components on the server must be updated to GroupWise 8 at the same time.

8 If you are prompted to update all GroupWise components on the server, click *Yes*.

This process updates the software but does not change the configuration of any of the components. Depending on the number of components to update, this process might take several minutes.

9 When the software copying is complete, click *Next*.
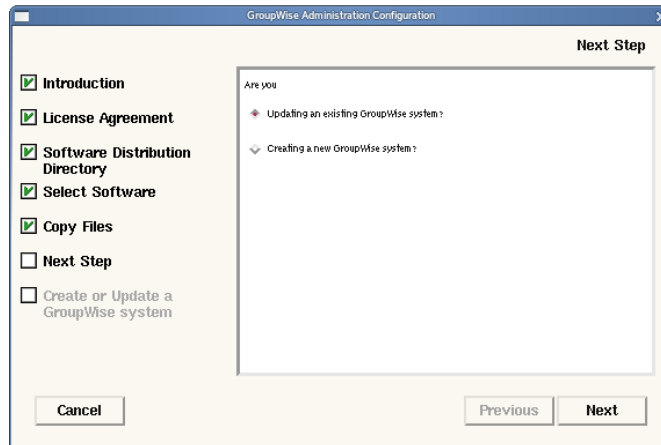
10 Retain the default of *Updating an Existing GroupWise System*, then click *Next*.

On the Update an Existing System page, carefully review the steps that are involved in updating your GroupWise system from a previous version to GroupWise 8.
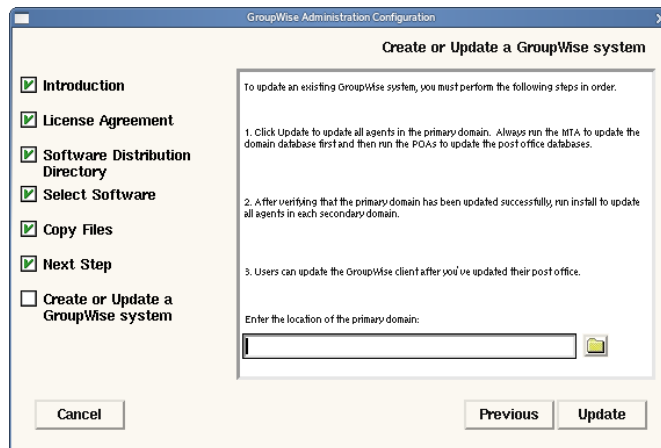
More detailed instructions are provided in the sections following the software update instructions.

11 Browse to and select the primary domain directory, then click *Update*.

By specifying the primary domain directory, you inform the GroupWise Installation program where to copy the GroupWise 8 data dictionary (`.dc`) files. Without the GroupWise 8 `.dc` files, the GroupWise MTA cannot rebuild the primary domain database into the structure required for GroupWise 8. Having the GroupWise 8 `.dc` files in the domain directory is critical to a successful GroupWise system update.

12 Continue with Updating the Primary Domain.

17.2 Updating the Primary Domain

By following the instructions in Section 17.1, "Installing the GroupWise 8 Software," on page 263, you have installed the GroupWise 8 MTA for the primary domain. You have also installed the data dictionary (.dc) files to the primary domain. To finish updating the primary domain, you need to start the GroupWise 8 MTA. The MTA uses the new domain dictionary file (gwdom.dc) to update the domain database to version 8.

1 Make sure that the GroupWise 7 MTA is no longer running for the primary domain.

2 Follow the instructions for your platform to start the GroupWise 8 MTA for your primary domain.

- "Starting the NetWare GroupWise Agents" on page 197
- "Starting the Linux Agents with a User Interface" on page 202
- "Starting the Windows GroupWise Agents" on page 222

The MTA then updates the primary domain database (wpdomain.db) to GroupWise 8.

3 Before you update post offices in the primary domain or any secondary domains in your system, make sure that the domain database has been updated by checking the *Database Version* field on the Identification property page of the Domain object in ConsoleOne.
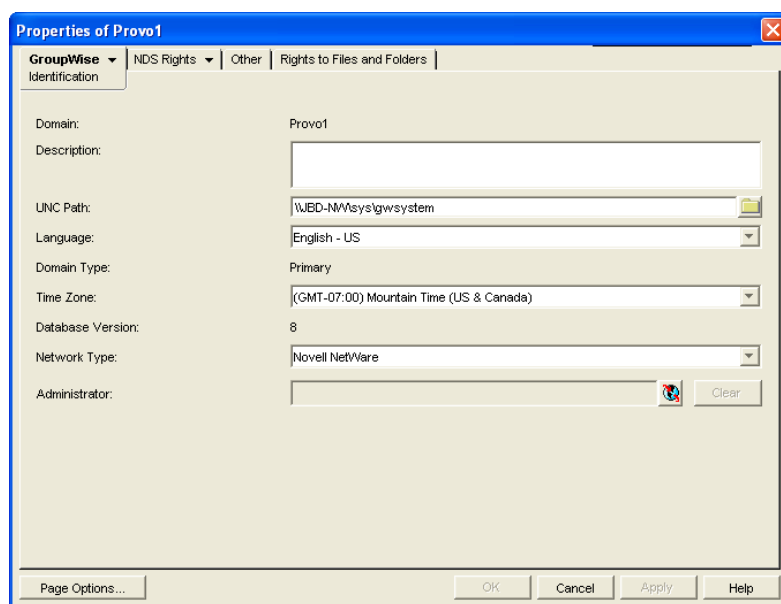
4 To update post offices in the primary domain, continue with the next section, Updating Post Offices.

or

To update other domains, skip to Section 17.5, "Updating Secondary Domains," on page 272.

17.3 Updating Post Offices

To update a post office, you need to install the GroupWise 8 POA and run it for the post office. The POA uses a new 8 version of the post office dictionary file (`gwpo.dc`) to update the post office database to version 8.

- Section 17.3.1, "Installing and Starting the POA," on page 269
- Section 17.3.2, "Copying the GroupWise Views to the Post Office Directory," on page 270

17.3.1 Installing and Starting the POA

The POA cannot be running while you update it. Users who connect to the post office via client/ server (TCP/IP) cannot access the post office while the POA is shut down.

IMPORTANT: The MTA for the domain that the post office belongs to should be updated and running before you install and start the POA.

To install and start the POA:

1 Follow the instructions for your platform to install the GroupWise 8 POA for each post office in your GroupWise system.

- "Installing the NetWare Agent Software" on page 193
- "Installing the GroupWise Agents on Linux" on page 199
- "Installing the Windows Agent Software" on page 219

2 Follow the instructions for your platform to start the GroupWise 8 POA for each post office in your GroupWise system.

- "Starting the NetWare GroupWise Agents" on page 197
- "Starting the Linux Agents with a User Interface" on page 202
- "Starting the Windows GroupWise Agents" on page 222

This updates the post office database (`wphost.db`) in each post office to GroupWise 8.

3 Before you run GroupWise 8 clients against the post office, make sure that the post office database has been updated by checking the *Database Version* field on the Identification property page of the Post Office object in ConsoleOne.
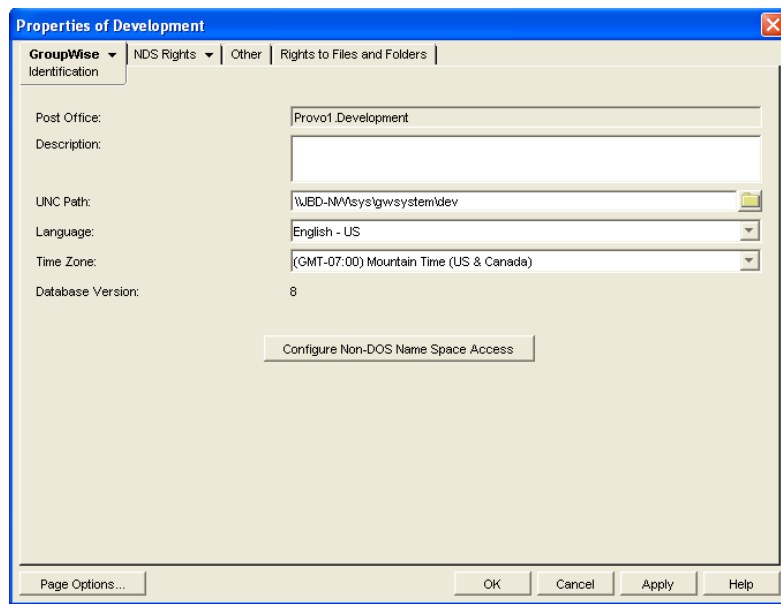
4 Continue with Copying the GroupWise Views to the Post Office Directory.

17.3.2 Copying the GroupWise Views to the Post Office Directory

GroupWise 8 includes new views for the GroupWise Windows client. When the POA starts, it updates the post office database and also attempts to update the client views in the post office directory. To do so, it requires access to the software distribution directory. If it doesn't have access, you must manually copy the views.

You can check whether or not the POA was able to update the views by verifying the existence of the en02*.vew files in the *drive*:*post_office*\ofviews\win directory, where *post_office* is the path to the post office directory.

If the en02*.vew files do not exist or have older dates, copy all files from

drive:*software*\client\win32\ofviews\win

to

drive:*post_office*\ofviews\win

where *drive*:*software* is the path to the software distribution directory and *drive*:*post_office* is the path to the post office directory.

You can also perform this task in ConsoleOne. See "Refreshing the Client View Files in the Post Office" in "Post Offices" in the *GroupWise 8 Administration Guide*.

17.4 Updating Users' GroupWise Clients

After a post office is updated to version 8, users who have accounts in that post office can start using the GroupWise 8 clients. Starting with GroupWise 7, uses cannot run the GroupWise client software from the software distribution directory, but the software is still installed to users' workstations from software distribution directories. Users might access a software distribution directory and run the installations themselves, or you might configure automatic updates for them.

When you used the GroupWise Installation program as described in Section 17.1, "Installing the GroupWise 8 Software," on page 263, you had the opportunity to update one software distribution directory. To fully implement GroupWise 8 throughout your GroupWise system, you must update all of your software distribution directories.

IMPORTANT: Before you update a software distribution directory, make sure all post offices that use the software distribution directory have been updated. The GroupWise 8 client cannot access a post office that still uses an earlier version of GroupWise. Users who update to the GroupWise 8 client before their post office has been updated are locked out of the post office.

To update a GroupWise software distribution directory to GroupWise 8:

1 Make sure you have Read, Write, Create, Erase, Modify, and File Scan rights (or equivalent rights) in an existing GroupWise 8 software distribution directory and in the software distribution directory you are updating to version 8.

or

If you still have access to the *GroupWise 8* DVD or downloaded *GroupWise 8* software image, you can use it instead of an existing GroupWise 8 software distribution directory.

2 In ConsoleOne, click *Tools > GroupWise System Operations > Software Directory Management*.
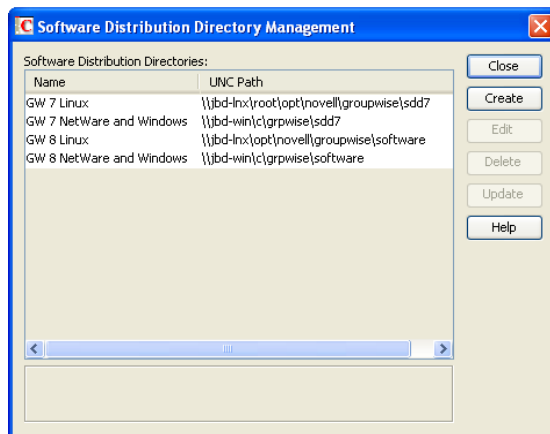
3 Select the software distribution directory you want to update, then click *Update* to display the Update Software Distribution Directory dialog box.
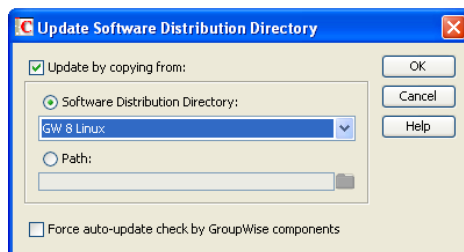
4 Click *Update by Copying From*.

5 Click *Software Distribution Directory*, then select the GroupWise 8 software distribution directory.

or

If the GroupWise 8 software distribution directory is not listed, click *Path*, then enter the path to the directory. You can use this option to update the software directly from the *GroupWise 8* DVD or downloaded *GroupWise 8* software image.
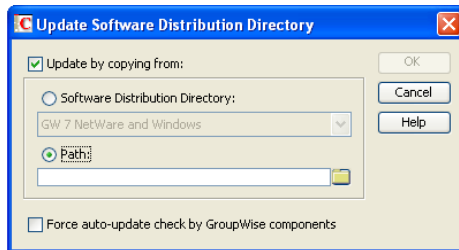
The *Force Auto-Update Check by GroupWise Components* option is deselected by default.

6 Select *Force Auto-Update Check by GroupWise Components* to cause the GroupWise client to check for a new version; if a new version is found, the client then prompts users to update the next time they start the client.

IMPORTANT: If the software distribution directory is already updated to version 8 and you are now trying to force users to update to the GroupWise 8 client, you should select only the *Force Auto-Update Check by GroupWise Components* option. You do not need to modify the other fields in this case.

7 Click *OK* to copy the files or force the client update.

IMPORTANT: When you select *Force Auto-Update Check by GroupWise Components*, a flag is set in each post office database. This flag instructs the GroupWise client to check for updated software. GroupWise clients running in client/server mode do not access the post office database directly; instead, the Post Office Agent accesses the post office database for them. For the Post Office Agent to read the new auto-update setting, you need to restart the Post Office Agent. Only after the POA restarts will GroupWise clients running in client/server mode check for updated software.

17.5 Updating Secondary Domains

After you have updated the primary domain, you can update any secondary domains in your system by installing updated MTA software in each secondary domain. For information about update issues you should consider, see Section 15.3, "Understanding How the Agents Update Domain and Post Office Databases," on page 256.

IMPORTANT: The MTA for the domain that the secondary domain links to should be updated and running before you update the secondary domain.

For information about installing the GroupWise 8 MTA, see Chapter 8, "Installing GroupWise Agents," on page 181.

If the secondary domain has additional agents, update those agents as described in:

◆ Section 17.6, "Updating the GroupWise Internet Agent," on page 273

Update the post offices and users in the secondary domain as described in:

17.6 Updating the GroupWise Internet Agent

After you've updated your domains and post offices, you can update the Internet Agent. For information about update issues you should consider, see Section 15.5, "Understanding Internet Agent Updates," on page 258.

For information about installing the GroupWise 8 Internet Agent, see Chapter 4, "Installing the GroupWise Internet Agent," on page 73.

IMPORTANT: If you are updating from GroupWise 7 without Support Packs or from an earlier version of GroupWise, see "Using Internet Agent Startup Switches" in "Internet Agent" in the *GroupWise 8 Administration Guide* for important changes to where Internet Agent configuration information is stored.

17.7 Updating GroupWise WebAccess

After you've updated your domains and post offices, you can update GroupWise WebAccess. For information about update issues you should consider, see Section 15.6, "Understanding WebAccess Updates," on page 258.

For information about installing GroupWise 8 WebAccess, see Chapter 5, "Installing GroupWise WebAccess," on page 101.

After installing GroupWise 8 WebAccess, complete the following tasks as needed for your system:

17.7.1 Clearing Browser Caches

After you have updated the WebAccess software, notify your WebAccess client users that they should clear their browser caches before logging into their mailboxes with the updated WebAccess client. If old WebAccess files are pulled from users' browser caches, they might not be compatible with the updated files pulled from the Web server. The results can be unpredictable and undesirable.

17.7.2 Handling New URLs for WebAccess and Monitor

Prior to GroupWise 7, users of WebAccess accessed the following URLs on NetWare and Windows Web servers:

Web Services page:	Default `index.html` file of the Web server
WebAccess:	`http://web_server_address/servlet/webacc`
WebPublisher:	`http://web_server_address/servlet/webpub`

Starting with GroupWise 7, the WebAccess URLs on NetWare and Windows Web servers are the same as the URLs used on Linux:

GroupWise-specific Web Services page:	`http://web_server_address/gw/index.html`
WebAccess:	`http://web_server_address/gw/webacc`
WebPublisher:	`http://web_server_address/gw/webpub`

To keep users' browser bookmarks from being broken when you update from a version of GroupWise earlier than GroupWise 7, you should redirect the old URLs to the new URLs. Follow the instructions below for your Web server.

- "Apache Web Server" on page 274
- "Internet Information Server (IIS)" on page 274

Apache Web Server

1 Change to the `conf` subdirectory of the Apache root directory (for example, `\apache2\conf`.

2 Edit the Apache configuration file (`gwapache2.conf`) for GroupWise.

3 Add the following line:

```
redirect permanent /servlet/webacc http://web_server_address/
                                                    gw/webacc
```

4 If you use WebPublisher, add the following additional line:

```
redirect permanent /servlet/webpub http://web_server_address/
                                                    gw/webpub
```

5 Save the file, then exit the editor.

6 Restart Apache to put the redirections into effect.

Internet Information Server (IIS)

1 Change to the `inetpub\wwwroot` subdirectory of the IIS root directory (for example, `c:\inetpub\wwwroot`)

2 Create a subdirectory named `servlet`.

3 Under the `servlet` subdirectory, create a subdirectory named `webacc`.

4 If you use WebPublisher, create a second subdirectory named `webpub`.

5 In IIS Manager, expand the tree in the left pane to display *Default Web Site* under *Web Sites*.

   Under *Default Web Sites*, you should see the `servlet` subdirectory you created in Step 2.

6 Expand the `servlet` subdirectory to display the `webacc` subdirectory (and optionally, the `webpub` subdirectory) that you created in Step 3.

7 Right-click the `webacc` subdirectory, then click *Properties*.

8 Click *Directory*, select *A Redirection to a URL*, then type `/gw/webacc` in the associated field.

9 Select *A Permanent Redirection for This Resource*, then click *OK* to save your changes.

10 If you use WebPublisher, repeat Step 7 through Step 9, using `webpub` in place of `webacc`.

11 Restart the IIS Web server to put the redirections into effect.

17.7.3 Cleaning Up Obsolete Web Server Files

As part of the change from `/servlet/webacc` to `/gw/webacc` in GroupWise 7, the WebAccess Installation program installs the WebAccess Application files into the servlet container (`gw`) but it does not remove old `servlet` and `htdoc` files located under the `ROOT` container of the servlet and the Web server. Therefore, you might want to manually delete the following directories and files if you are updating from a version of GroupWise earlier than GroupWise 7:

```
sys:\apache2\htdocs\com
sys:\apache2\htdocs\index.html (if customized for GroupWise)
sys:\apache2\htdocs\novell.html (if index.html was not customized)
sys:\tomcat\4\webapps\ROOT\WEB-INF\classes\com
sys:\tomcat\4\webapps\ROOT\WEB-INF\lib\ldapfilt.jar
sys:\tomcat\4\webapps\ROOT\WEB-INF\lib\ldapjdk.jar
sys:\tomcat\4\webapps\ROOT\WEB-INF\lib\njgwap.jar
sys:\tomcat\4\webapps\ROOT\WEB-INF\lib\njweb.jar
sys:\tomcat\4\webapps\ROOT\WEB-INF\lib\SpellServlet.jar
sys:\tomcat\4\webapps\ROOT\WEB-INF\web.xml
```

You should definitely delete `web.xml`, because it might cause the WebAccess, WebPublisher, and Monitor Applications to run in both the old and new locations. Also, if you have customized the GroupWise template files, you should copy the contents of the template subdirectories under:

```
sys:\tomcat\4\webapps\ROOT\WEB-INF\classes\com\novell
```

to the corresponding templates subdirectories under:

```
sys:\tomcat\4\webapps\gw\WEB-INF\classes\com\novell
```

17.7.4 Document Viewer Agent Cache Compatibility

The Document Viewer Agent was introduced in GroupWise 7. The cache created by the Document Viewer Agent is not compatible with the cache previously used with WebPublisher. If you are updating from a version earlier than GroupWise 7, old WebPublisher cache directories should be removed from servers where the Viewer Agent is installed.

17.8 Updating GroupWise Monitor

You can update GroupWise Monitor at any time. For information about installing GroupWise 8 Monitor, see Chapter 7, "Installing GroupWise Monitor," on page 159.

18 Updating Your GroupWise 5.*x* or 6.*x* System to Version 8

The process and procedures for updating a Novell GroupWise 5.*x*, or 6.*x* system to version 8 are the same as when updating a GroupWise 7 system to version 8. Refer to the following sections for instructions:

- Chapter 15, "Understanding the Update Process," on page 255
- Chapter 16, "Preparing Your GroupWise System for Update," on page 261
- Chapter 17, "Updating Your GroupWise 7 System to Version 8," on page 263

What's New Since Your GroupWise Version

The GroupWise features and functionality that are new to you depend on the version of GroupWise that you are updating from. For example, if you are updating from GroupWise 6, the new features and functionality added in versions 6, 6.5, 7, and 8 are all new. If you are updating from GroupWise 6.5, only the version 7 and 8 features are new.

Chapter 14, "What's New in GroupWise 8," on page 249 includes only the changes made since version 7. For changes made in previous versions, refer to the following:

- **Version 5.5 Enhancement Pack to 6:** What's New in GroupWise 6 (http://www.novell.com/documentation/gw6/gw6_install/data/aady5l3.html)
- **Version 6 to 6.5:** What's New in GroupWise 6.5 (http://www.novell.com/documentation/gw65/gw65_install/data/aady5l3.html)
- **Version 6.5 to 7:** What's New in GroupWise 7 (http://www.novell.com/documentation/gw7/gw7_install/data/aady5l3.html)

GroupWise 5.2 Administration Agent

WARNING: Beginning with GroupWise 5.5, the Administration Agent's functionality was moved into the Message Transfer Agent (MTA) and the Post Office Agent (POA). If you are updating a GroupWise 5, 5.1, or 5.2 system, you need to make sure that you do not run the Administration Agent for the domain after you've started the GroupWise 8 MTA. Doing so can result in the loss of GroupWise 8 information.

IV Appendixes

A GroupWise Version Compatibility

Use the tables in this section to determine compatibility among the following Novell GroupWise versions:

-
-

IMPORTANT: GroupWise 5.*x* and 6.*x* versions have entered the end-of-life phase and are no longer actively supported. For update instructions, see Chapter 18, "Updating Your GroupWise 5.x or 6.x System to Version 8," on page 277.

For each GroupWise version, the tables indicate compatibility for:

- **Administrative components:** Domain and post office database platforms and versions, eDirectory platforms, and GroupWise snap-in to ConsoleOne platforms and versions
- **Agents:** Domain and post office database platforms and versions, agent platforms and versions
- **Clients:** Post office directory platforms and access, POA platforms and versions, client modes

In the compatibility tables, cells with combinations that are not applicable are marked N/A. For example, the POA never communicates with the Internet Agent, so that table cell is N/A.

For information about what operating system versions are supported for GroupWise 8 on NetWare, Linux, and Windows, refer to "GroupWise System Requirements" on page 17. For information about earlier versions of GroupWise, refer to:

- *GroupWise 7 Installation Guide* (http://www.novell.com/documentation/gw7)
- *GroupWise 6.5 Installation Guide* (http://www.novell.com/documentation/gw65)

For information about the features that each GroupWise version includes, see *Novell GroupWise Feature Comparison* (http://www.novell.com/products/groupwise/compare.html).

A.1 GroupWise 8 on NetWare and Windows

Select the GroupWise version that you want to determine GroupWise 8 compatibility with:

-
-

A.1.1 Compatibility with GroupWise 7 on NetWare and Windows

-
-

GroupWise 7 Administrative Components with GroupWise 8

GroupWise 8 Components	GroupWise 7 Domain and Post Office Databases	GW 7 Objects in eDirectory	ConsoleOne + GW 7 Snap-Ins
GW 8 Domain and Post Office Databases	N/A	N/A	Not Supported
GW 8 Objects in eDirectory	N/A	N/A	Not Supported
ConsoleOne + GW 8 snap-ins	Supported	Supported	N/A

Table Summary: ConsoleOne with the GroupWise 8 snap-ins can be used to access GroupWise 7 databases for domains and post office and GroupWise 7 eDirectory objects. However, ConsoleOne with the GroupWise 7 snap-ins cannot be used to access GroupWise 8 databases and GroupWise 8 eDirectory objects. The general rule is that later GroupWise snap-ins can administer earlier GroupWise system components, but earlier GroupWise snap-ins cannot administer later GroupWise system components.

NOTE: If your GroupWise administration includes Novell Identity Manager, see "Identity Manager Version Compatibility" in the *GroupWise 8 Readme* on the GroupWise 8 Documentation Web site (http://www.novell.com/documentation/gw8).

GroupWise 7 Agents with GroupWise 8

GroupWise 8 Agents	GroupWise 7 Domain and Post Office Databases	GW 7 MTA	GW 7 POA	GW 7 GWIA	GW 7 WebAccess	GW 7 Monitor
GW 8 Domain and Post Office Databases	N/A	Not Supported	Not Supported	Not Supported	Not Supported	Not Supported
GW 8 MTA	Supported	Supported	Supported	Supported	N/A	Supported
GW 8 POA	Supported	Supported	N/A	N/A	Supported	Supported
GW 8 GWIA	Supported	Supported	N/A	Not Supported	N/A	Supported
GW 8 WebAccess	Not Supported	N/A	Not Supported	N/A	N/A	Supported
GW 8 Monitor	Supported	Supported	Supported	Supported	Supported	N/A

Table Summary: GroupWise 7 agents cannot access domain and post office databases that have been updated to GroupWise 8. When a GroupWise 8 MTA or POA accesses a GroupWise 7 database, it automatically updates the database to GroupWise 8. Although most GroupWise 8/GroupWise 7 agent combinations are supported, two combinations are not supported.

GroupWise 7 Windows Client with GroupWise 8

GroupWise 7 Windows Client	GroupWise 8 Post Office Direct Access	GW 8 POA Client/Server Access Online Mode	GW 8 POA Client/Server Access Caching Mode	GW 8 POA Dial-Up Access Remote Mode
Windows client	Not Supported	Supported	Supported	Supported

Table Summary: The GroupWise 7 Windows client can communicate with the GroupWise 8 POA, but it cannot access a GroupWise 8 post office directly. The general rule is that later POAs can always communicate with earlier GroupWise clients, but earlier POAs cannot communicate with later GroupWise clients.

GroupWise 8 Windows Client with GroupWise 7

GroupWise 8 Windows Client	GroupWise 7 Post Office Direct Access	GW 7 POA Client/Server Access Online Mode	GW 7 POA Client/Server Access Caching Mode	GW 7 POA Dial-Up Access Remote Mode
Windows client	Not Supported	Not Supported	Not Supported	Not Supported

Table Summary: The GroupWise 8 Windows client cannot communicate with the GroupWise 7 POA, nor can it access a GroupWise 7 post office directly. The general rule is that earlier POAs cannot communicate with later GroupWise clients, but later POAs can always communicate with earlier GroupWise clients.

A.1.2 Compatibility with GroupWise 6.5 on NetWare and Windows

GroupWise 6.5 Administrative Components with GroupWise 8

GroupWise 8 Components	GroupWise 6.5 Domain and Post Office Databases	GW 6.5 Objects in eDirectory	ConsoleOne + GW 6.5 Snap-Ins
GW 8 Domain and Post Office Databases	N/A	N/A	Not Supported

GroupWise 8 Components	GroupWise 6.5 Domain and Post Office Databases	GW 6.5 Objects in eDirectory	ConsoleOne + GW 6.5 Snap-Ins
GW 8 Objects in eDirectory	N/A	N/A	Not Supported
ConsoleOne + GW 8 snap-ins	Supported	Supported	N/A

Table Summary: ConsoleOne with the GroupWise 8 snap-ins can be used to access GroupWise 6.5 databases for domains and post office and GroupWise 6.5 eDirectory objects. However, ConsoleOne with the GroupWise 6.5 snap-ins cannot be used to access GroupWise 8 databases and GroupWise 8 eDirectory objects. The general rule is that later GroupWise snap-ins can administer earlier GroupWise system components, but earlier GroupWise snap-ins cannot administer later GroupWise system components.

GroupWise 6.5 Agents with GroupWise 8

GroupWise 8 Agents	GroupWise 6.5 Domain and Post Office Databases	GW 6.5 MTA	GW 6.5 POA	GW 6.5 GWIA	GW 6.5 WebAccess	GW 6.5 Monitor
GW 8 Domain and Post Office Databases	N/A	Not Supported	Not Supported	Not Supported	Not Supported	Not Supported
GW 8 MTA	Supported	Supported	Supported	Supported	N/A	Supported
GW 8 POA	Supported	Supported	N/A	N/A	Supported	Supported
GW 8 GWIA	Supported	Supported	N/A	Not Supported	N/A	Supported
GW 8 WebAccess	Not Supported	N/A	Not Supported	N/A	N/A	Supported
GW 8 Monitor	Supported	Supported	Supported	Supported	Supported	N/A

Table Summary: GroupWise 6.5 agents cannot access domain and post office databases that have been updated to GroupWise 8. When a GroupWise 8 MTA or POA accesses a GroupWise 6.5 database, it automatically updates the database to GroupWise 8. Although most GroupWise 8/ GroupWise 6.5 agent combinations are supported, two combinations are not supported.

GroupWise 6.5 Windows Client with GroupWise 8

GroupWise 6.5 Windows Client	GroupWise 8 Post Office Direct Access	GW 8 POA Client/Server Access Online Mode	GW 8 POA Client/Server Access Caching Mode	GW 8 POA Dial-Up Access Remote Mode
Windows client	Not Supported	Supported	Supported	Supported

Table Summary: The GroupWise 6.5 Windows client can communicate with the GroupWise 8 POA, but it cannot access a GroupWise 8 post office directly. The general rule is that later POAs can always communicate with earlier GroupWise clients, but earlier POAs cannot communicate with later GroupWise clients.

GroupWise 8 Windows Client with GroupWise 6.5

GroupWise 8 Windows Client	GroupWise 6.5 Post Office Direct Access	GW 6.5 POA Client/Server Access Online Mode	GW 6.5 POA Client/Server Access Caching Mode	GW 6.5 POA Dial-Up Access Remote Mode
Windows client	Not Supported	Not Supported	Not Supported	Not Supported

Table Summary: The GroupWise 8 Windows client cannot communicate with the GroupWise 6.5 POA, nor can it access a GroupWise 6.5 post office directly. The general rule is that earlier POAs cannot communicate with later GroupWise clients, but later POAs can always communicate with earlier GroupWise clients.

A.2 GroupWise 8 on Linux

Select the GroupWise version that you want to determine GroupWise 8 compatibility with:

A.2.1 Compatibility with GroupWise 8 on NetWare and Windows

GroupWise 8 Linux Administrative Components with GroupWise 8 on NetWare or Windows

GroupWise 8 on Linux Administrative Components	GroupWise 8 Domain and Post Office Databases on NetWare or Windows	GW 8 Objects in eDirectory on NetWare or Windows	Windows ConsoleOne + GW 8 Snap-Ins
GW 8 Domain and Post Office Databases on Linux	N/A	N/A	Supported

GroupWise 8 on Linux Administrative Components	GroupWise 8 Domain and Post Office Databases on NetWare or Windows	GW 8 Objects in eDirectory on NetWare or Windows	Windows ConsoleOne + GW 8 Snap-Ins
GW 8 Objects in eDirectory on Linux	N/A	N/A	Supported
Linux ConsoleOne + GW 8 snap-ins on Linux	Supported	Supported	N/A

Table Summary: On both Linux and Windows, ConsoleOne with the GroupWise snap-ins can be used to access GroupWise databases for domains and post offices and GroupWise objects in eDirectory located on NetWare, Linux, or Windows. When using Linux ConsoleOne to administer domains and post offices on NetWare or Windows, you must mount the NetWare or Windows server to your Linux machine. When using Windows ConsoleOne to administer domains and post offices on Linux, you can use a Samba share to access the Linux server from your Windows machine.

GroupWise 8 Linux Agents with GroupWise 8 on NetWare or Windows

GroupWise 8 on Linux Agents	GroupWise 8 Domain or Post Office Databases on NetWare or Windows	GW 8 MTA on NetWare or Windows	GW 8 POA on NetWare or Windows	GW 8 GWIA on NetWare or Windows	GW 8 WebAccess on NetWare or Windows	GW 8 Monitor on Windows
GW 8 Domain and Post Office Databases on Linux	N/A	Supported	Supported	Supported	Supported	Supported
GW 8 MTA on Linux	Supported	Supported	Supported	Supported	N/A	Supported
GW 8 POA on Linux	Supported	Supported	N/A	N/A	Supported	Supported
GW 8 GWIA on Linux	Supported	Supported	N/A	Supported	N/A	Supported
GW 8 WebAccess on Linux	Supported	N/A	Supported	N/A	N/A	Supported
GW 8 Monitor on Linux	Supported	Supported	Supported	Supported	Supported	N/A

Table Summary: Domains and post offices can be located on NetWare, Linux, or Windows. We do not recommend that you run the Linux agents for domains and post offices located on NetWare and Windows. However, existing GroupWise 6.5 or 7 domains and post offices can be moved onto Linux servers so that the Linux agents can update them to GroupWise 8 on Linux. All the Linux agents can communicate as usual with the NetWare and Windows agents.

GroupWise 8 Mac/Linux Client with GroupWise 8 on NetWare or Windows

GroupWise 8 Linux Client	GroupWise 8 Post Office Direct Access on NetWare or Windows	GW 8 POA Client/Server Access Online Mode on NetWare or WIndows	GW 8 POA Client/Server Access Caching Mode on NetWare or Windows	GW 8 POA Dial-Up Access Remote Mode on NetWare or Windows
Mac/Linux client on Linux	Not Supported	Supported	Supported	Not Supported

Table Summary: The GroupWise 8 Mac/Linux client can communicate in client/server mode with the GroupWise 8 POA on NetWare or Windows. The Mac/Linux client cannot access the post office directly, nor can it communicate with the GroupWise 8 POA across a dial-up connection over a modem. Remote mode is not supported in the Mac/Linux client.

GroupWise 8 Windows Client with GroupWise 8 on Linux

GroupWise 8 Windows Client	GroupWise 8 Post Office Direct Access on Linux	GW 8 POA Client/Server Access Online Mode on Linux	GW 8 POA Client/Server Access Caching Mode on Linux	GW 8 POA Dial-Up Access Remote Mode on Linux
Windows Client	Not Supported	Supported	Supported	Supported

Table Summary: The GroupWise 8 Windows client can communicate in client/server mode with the GroupWise 8 POA on Linux. The Windows client cannot access the post office directly.

A.2.2 Compatibility with GroupWise 7 on NetWare and Windows

- "GroupWise 8 Linux Administrative Components with GroupWise 7 on NetWare or Windows" on page 287
- "GroupWise 8 Linux Agents with GroupWise 7 on NetWare or Windows" on page 288
- "GroupWise 8 Mac/Linux Client with GroupWise 7 on NetWare or Windows" on page 289
- "GroupWise 7 Windows Client with GroupWise 8 on Linux" on page 289

GroupWise 8 Linux Administrative Components with GroupWise 7 on NetWare or Windows

GroupWise 8 on Linux Administrative Components	GroupWise 7 Domain and Post Office Databases on NetWare or Windows	GW 7 Objects in eDirectory on NetWare or Windows	Windows ConsoleOne + GW 7 Snap-Ins
GW 8 Domain and Post Office Databases on Linux	N/A	N/A	Supported

GroupWise 8 on Linux Administrative Components	GroupWise 7 Domain and Post Office Databases on NetWare or Windows	GW 7 Objects in eDirectory on NetWare or Windows	Windows ConsoleOne + GW 7 Snap-Ins
GW 8 Objects in eDirectory on Linux	N/A	N/A	Supported
Linux ConsoleOne + GW 8 snap-ins on Linux	Supported	Supported	N/A

Table Summary: On both Linux and Windows, ConsoleOne with the GroupWise snap-ins can be used to access GroupWise databases for domains and post offices and GroupWise objects in eDirectory located on NetWare, Linux, or Windows. When using Linux ConsoleOne to administer domains and post offices on NetWare or Windows, you must mount the NetWare or Windows server to your Linux machine. When using Windows ConsoleOne to administer domains and post offices on Linux, you can use a Samba share to access the Linux server from your Windows machine.

GroupWise 8 Linux Agents with GroupWise 7 on NetWare or Windows

GroupWise 8 on Linux Agents	GroupWise 7 Domain or Post Office Databases on NetWare or Windows	GW 7 MTA on NetWare or Windows	GW 7 POA on NetWare or Windows	GW 7 GWIA on NetWare or Windows	GW 7 WebAccess on NetWare or Windows	GW 7 Monitor on Windows
GW 8 Domain and Post Office Databases on Linux	N/A	Supported	Supported	Supported	Supported	Supported
GW 8 MTA on Linux	Supported	Supported	Supported	Supported	N/A	Supported
GW 8 POA on Linux	Supported	Supported	N/A	N/A	Supported	Supported
GW 8 GWIA on Linux	Supported	Supported	N/A	Supported	N/A	Supported
GW 8 WebAccess on Linux	Not Supported	N/A	Not Supported	N/A	N/A	Supported
GW 8 Monitor on Linux	Supported	Supported	Supported	Supported	Supported	N/A

Table Summary: Domains and post offices can be located on NetWare, Linux, or Windows. We do not recommend that you run the Linux agents for domains and post offices located on NetWare and Windows. However, existing GroupWise 7 domains and post offices can be moved onto Linux servers so that the Linux agents can update them to GroupWise 8 on Linux. All the Linux agents can communicate as usual with the NetWare and Windows agents. Although most GroupWise 8/GroupWise 7 agent combination are supported, two combinations are not supported.

GroupWise 8 Mac/Linux Client with GroupWise 7 on NetWare or Windows

GroupWise 8 Linux Client	GroupWise 7 Post Office Direct Access on NetWare or Windows	GW 7 POA Client/Server Access Online Mode on NetWare or WIndows	GW 7 POA Client/Server Access Caching Mode on NetWare or Windows	GW 7 POA Dial-Up Access Remote Mode on NetWare or Windows
Mac/Linux client on Linux	Not Supported	Not Supported	Not Supported	Not Supported

Table Summary: The GroupWise 8 Mac/Linux client cannot communicate in client/server mode with the GroupWise 7 POA on NetWare or Windows, nor can it access the post office directly. The general rule is that earlier POAs cannot communicate with later GroupWise clients, but later POAs can always communicate with earlier GroupWise clients. Remote mode is not supported in the Mac/Linux client.

GroupWise 7 Windows Client with GroupWise 8 on Linux

GroupWise 7 Windows Client	GroupWise 8 Post Office Direct Access on Linux	GW 8 POA Client/Server Access Online Mode on Linux	GW 8 POA Client/Server Access Caching Mode on Linux	GW 8 POA Dial-Up Access Remote Mode on Linux
Windows Client	Not Supported	Supported	Supported	Supported

Table Summary: The GroupWise 7 Mac/Linux client can communicate in client/server mode with the GroupWise 8 POA on NetWare or Windows. The Mac/Linux client cannot access the post office directly, nor can it communicate with the GroupWise 8 POA across a dial-up connection over a modem. Remote mode is not supported in the Mac/Linux client.

A.2.3   Compatibility with GroupWise 6.5 on NetWare or Windows

GroupWise 8 Linux Administrative Components with GroupWise 6.5 on NetWare or Windows

GroupWise 8 on Linux Administrative Components	GroupWise 6.5 Domain and Post Office Databases on NetWare or Windows	GW 6.5 Objects in eDirectory on NetWare or Windows	Windows ConsoleOne + GW 6.5 snap-ins
GW 8 Domain and Post Office Databases on Linux	N/A	N/A	Not Supported
GW 8 Objects in eDirectory on Linux	N/A	N/A	Not Supported
Linux ConsoleOne + GW 8 snap-ins on Linux	Supported	Supported	N/A

Table Summary: On Linux, ConsoleOne with the GroupWise snap-ins can be used to access GroupWise databases for domains and post offices and GroupWise objects in eDirectory on NetWare, Linux, and Windows. On Windows, ConsoleOne with the GroupWise 6.5 snap-ins cannot be used to access GroupWise 8 domains and post offices on Linux. The general rule is that later GroupWise snap-ins can administer earlier GroupWise system components, but earlier GroupWise snap-ins cannot administer later GroupWise system components.

GroupWise 8 Linux Agents with GroupWise 6.5 on NetWare or Windows

GroupWise 8 Linux Agents	GroupWise 6.5 Domain and Post Office Databases on NetWare or Windows	GW 6.5 MTA on NetWare or Windows	GW 6.5 POA on NetWare or Windows	GW 6.5 GWIA on NetWare or Windows	GW 6.5 WebAccess on NetWare or Windows	GW 6.5 Monitor on Windows
GW Domain and Post Office Databases on Linux	N/A	Not Supported	Not Supported	Not Supported	Not Supported	Not Supported
GW 8 MTA on Linux	Supported	Supported	Supported	Supported	N/A	Supported
GW 8 POA on Linux	Supported	Supported	N/A	N/A	Supported	Supported
GW 8 GWIA on Linux	Supported	Supported	N/A	Not Supported	N/A	Supported
GW 8 WebAccess on Linux	Supported	N/A	Not Supported	N/A	N/A	Supported
GW 8 Monitor on Linux	Supported	Supported	Supported	Supported	Supported	N/A

Table Summary: Domains and post offices can be located on NetWare, Linux, or Windows. We do not recommend that you run the Linux agents for domains and post offices located on NetWare and Windows. However, existing GroupWise 6.5 domains and post offices can be moved onto Linux servers so that the Linux agents can update them to GroupWise 8 on Linux. Although most GW 8 on Linux/GW 6.5 agent combinations are supported, two combinations are not supported.

GroupWise 8 Mac/Linux Client with GroupWise 6.5 on NetWare or Windows

GroupWise 8 Client on Linux	GroupWise 6.5 Post Office Direct Access on NetWare or WIndows	GW 6.5 POA Client/Server Access Online Mode on NetWare or Windows	GW 6.5 POA Client/Server Access Caching Mode on NetWare or Windows	GW 6.5 POA Dial-Up Access Remote Mode on NetWare or Windows
Mac/Linux client on Linux	Not Supported	Not Supported	Not Supported	Not Supported

Table Summary: The GroupWise 8 Mac/Linux client cannot communicate in client/server mode with the GroupWise 6.5 POA on NetWare or Windows, nor can it access the post office directly. The general rule is that earlier POAs cannot communicate with later GroupWise clients, but later POAs can always communicate with earlier GroupWise clients. Remote mode is not supported in the Mac/Linux client.

GroupWise 6.5 Mac/Linux Client with GroupWise 8 on NetWare or Windows

GroupWise 6.5 Client on Linux	GroupWise 8 Post Office Direct Access on NetWare or WIndows	GW 8 POA Client/Server Access Online Mode on NetWare or Windows	GW 8 POA Client/Server Access Caching Mode on NetWare or Windows	GW 8 POA Dial-Up Access Remote Mode on NetWare or Windows
Mac/Linux client on Linux	Supported	Supported	Supported	Not Supported

Table Summary: The GroupWise 6.5 Mac/Linux client can communicate in client/server mode with the GroupWise 8 POA on NetWare or Windows, but it cannot access the post office directly. The general rule is that later POAs can always communicate with earlier GroupWise clients, but earlier POAs cannot communicate with later GroupWise clients. Remote mode is not supported in the Mac/Linux client.

B GroupWise Linux Executables

This section provides the information in the GroupWise man pages that are available on your Linux server.

grpwise(1)

Name

grpwise - GroupWise Script

Syntax

```
grpwise start [agent_location_name]
grpwise status [agent_location_name]
grpwise stop [agent_location_name]
grpwise restart [agent_location_name]
grpwise print [agent_location_name]
```

The agent location names are:

```
POA: post_office_name.domain_name
MTA: domain_name
Internet Agent: gwia.domain_name
WebAccess Agent: webac80a.domain
Document Viewer Agent: gwdva.hostname
```

NOTE: The Monitor Agent is not controlled by the grpwise script. It has its own script named grpwise-ma, which works essentially the same as the grpwise script.

Description

The grpwise script is created during installation and can control any agents installed on the local server. It is created in the /etc/init.d directory. It works in conjunction with the gwha.conf file, which is created in the /etc/opt/novell/groupwise directory. The gwha.conf file lists the agents installed on the local server so that the grpwise script know what agents to start.

The GroupWise agents are Run Control compliant. During installation, a symbolic link is created from /etc/init.d/grpwise to /usr/sbin/rcgrpwise. Typically, /usr/sbin is already on your path, so you can run rcgrpwise from any directory, rather than changing to /etc/init.d in order to run the grpwise script. A /usr/sbin/grpwise-ma link is also created.

Options

Usage Options:

start

> Starts all GroupWise agents on the local server or the GroupWise agent specified in the grpwise command. A green "done" indicates that an agent is running. If a green "done" does not appear, then agent was unable to start.

status

> Displays status for all GroupWise agents on the local server or for the GroupWise agent specified in the grpwise command. A green "done" indicates that an agent is running. A black "unused" indicates than an agent is not running.

stop

Stops all GroupWise agents on the local server or the GroupWise agent specified in the `grpwise` command. A green "done" indicates that an agent is stopped. A black "unused" indicates than an agent is not running and, therefore, cannot be stopped.

restart

Stops all GroupWise agents on the local server or the GroupWise agent specified in the `grpwise` command. A green "done" indicates that an agent is stopped. A black "unused" indicates than an agent is not running and, therefore, cannot be stopped. Then starts the agents again with the standard start status indicators.

print

Lists settings for all GroupWise agents in the `gwha.conf` file or for the GroupWise agent specified in the `grpwise` command.

post_office_name.domain_name

Specifies the POA to stop. The syntax allows for multiple POAs running on the same server and specifies which POA to stop.

domain_name

Specifies the MTA to stop. The syntax allows for multiple MTAs running on the same server and specifies which MTA to stop.

gwia.domain_name

Specifies the Internet Agent to stop. The syntax allows for multiple Internet Agents running on the same server and specifies which Internet Agent to stop.

webac80a.domain

Specifies the eDirectory object name of the WebAccess Agent to stop. The syntax allows for multiple WebAccess Agents running on the same server and specifies which WebAccess Agent to stop.

gwdva.hostname

Stops the Document Viewer Agent. The syntax stops all Document View Agents on the server.

Help Options:

--help, -?

Displays the help information and exits.

Files

/etc/opt/novell/groupwise/gwha.conf

GroupWise High Availability service configuration file. This configuration file lists all information necessary to start and stop each GroupWise agent that is installed on the server. For example, an entry for an MTA might look similar to this example:

```
server   = /opt/novell/groupwise/agents/bin/gwmta
command  = /etc/init.d/grpwise
startup  = provo1.mta
delay    = 2
wait     = 10
```

The `server =` setting specifies the full path to the agent executable.

The `command =` setting specifies the full path to the `grpwise` script.

The `startup =` setting specifies the name of the agent startup file. All agent startup files are located in the `/opt/novell/groupwise/agents/share` directory.

The `delay =` setting controls the length of time between when the script issues the command to start an agent and when the script displays a message indicating that the agent has started. The default delay time is 2 seconds.

The `wait =` setting controls the length of time between when the script issues the command to stop an agent and when the script kills the agent if the agent has not yet stopped. The default wait time is 10 seconds.

By default, the `grpwise` script starts the agents as daemons with no user interface. If you want a user interface, you can add a `show = yes` line for each agent that you want to have a user interface.

Examples

This program must be run as `root`. If you have configured the GroupWise agents to run as a non-`root` user, they switch over to that user after they have started.

/etc/init.d/grpwise start

Start all GroupWise agents that are installed on the server

/etc/init.d/grpwise status development.provo1

Show the status of the Development post office POA. The Development post office belongs to the Provo1 domain.

/etc/init.d/grpwise stop provo1.gwia

Stop the Internet Agent that belongs to the Provo1 domain.

Diagnostics

If a GroupWise agent fails to start when using the `grpwise` script, try starting the agent manually, as described in the man page for each agent. You might receive an error message indicating why the agent is failing to start.

If you have changed the non-`root` user that you want the agent to run by modifying the `/etc/opt/novell/groupwise/agents/uid.conf` file, you might have forgotten to delete the corresponding `uid.run` file in the domain or post office directory that the agent services. Delete the `uid.run` file, then use the `grpwise` script to try to start the agent again.

Authors

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See Also

gwpoa(1), gwmta(1), gwia(1), gwinter(1).

To report problems with this software or its documentation, visit Novell Bugzilla. (http://bugzilla.novell.com).

grpwise-ma(1)

Name

grpwise-ma - GroupWise Monitor Script.

Syntax

`grpwise-ma [start] [stop] [status] [restart]`

Description

The `grpwise-ma` script is created during installation and controls the Monitor Agent. (The `grpwise` script controls the other four GroupWise agents.) The `grpwise-ma` script is created in the `/etc/ init.d` directory. It works in conjunction with the `monitor.xml` file, which is created in the `/etc/ opt/novell/groupwise/agents/share` directory. The `monitor.xml` file points the Monitor Agent to a domain database (`wpdomain.db`) where it can access a list of agent to monitor in your GroupWise system.

The `grpwise-ma` script includes an MA_OPTIONS variable where you can specify Monitor Agent startup switches. This is convenient because the Monitor Agent does not use a startup file as the other GroupWise agents do.

The Monitor Agent is Run Control compliant. During installation, a symbolic link is created from `/ etc/init.d/grpwise-ma` to `/usr/sbin/rcgrpwise-ma`. Typically, `/usr/sbin` is already on your path, so you can run `rcgrpwise-ma` from any directory, rather than changing to `/etc/init.d` in order to run the `grpwise-ma` script.

Options

Usage Options:

start

Starts the Monitor Agent as a daemon on the local server. A green "done" indicates that the agent is running. If a green "done" does not appear, then the agent was unable to start.

status

Displays status for the Monitor Agent. A green "running" indicates that the agent is running. A black "unused" indicates that the agent is not running.

stop

Stops the Monitor Agent. A green "done" indicates that the agent is stopped. A black "unused" indicates than the agent is not running and, therefore, cannot be stopped.

restart

Stops the Monitor Agent. A green "done" indicates that the agent is stopped. A black "unused" indicates than the agent is not running and, therefore, cannot be stopped. The Monitor Agent then starts again with the standard start status indicators.

Help Options:

--help, -?

Displays the help information and exits.

Files

/opt/novell/groupwise/agents/share/monitor.xml

Configuration file. Provides a domain directory where the Monitor Agent can determine what GroupWise and Messenger agents to monitor. The monitor.xml file is created during installation.

Examples

This program does not run as root.

/etc/init.d/grpwise-ma start

Starts the Monitor Agent. You can view the Monitor Agent Web console at the following URL:

http://localhost:8200

Authors

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See Also

gwmon(1).

To report problems with this software or its documentation, visit Novell Bugzilla (http://bugzilla.novell.com).

gwpoa(1)

Name

gwpoa - GroupWise Post Office Agent.

Syntax

```
gwpoa [--show] --home post_office_directory
gwpoa [--show] @startup_file
```

Description

A post office is a collection of user mailboxes and GroupWise objects. Messages are delivered to mailboxes by the Post Office Agent (POA).

You can provide POA startup switches on the command line or in a startup file. By default, the startup file is named after the post office and has a `.poa` extension. It is located in the `/opt/novell/groupwise/agents/share` directory.

Options

Usage Options:

--home *post_office_directory*

Specifies the post office directory, where the POA can access message and user databases. There is no default location. You must use this switch in order to start the POA. The Agent Installation program automatically sets the --home switch to the post office directory in the POA startup file.

@*startup_file*

Specifies the location of the POA startup file. By default, the POA startup file is created in the `/opt/novell/groupwise/agents/share` directory and is named after the post office, with a `.poa` extension. The startup file must reside on the same server where the POA is installed.

--show

Starts the POA with a user interface similar to that provided for the NetWare and Windows POA. By default, no user interface is provided for the POA on Linux. The --show startup switch can only be used on the command line; it cannot be placed in the startup file.

Help Options:

--help, -?

Displays the help information and exits.

Files

/opt/novell/groupwise/agents/share/*post_office_name.poa*

Startup file where startup switches are specified.

/var/log/novell/groupwise/*post_office*.poa/*mmdd*poa.*nnn*

> Log file where error messages are written.

Examples

By default, this program runs as root, but it is preferable to run it as a non-root user. See the *GroupWise Installation Guide* (http://www.novell.com/documentation/gw8) to set up the POA to run as a non-root user.

/opt/novell/groupwise/agents/bin/gwpoa --home /gwsystem/acct

> Starts the POA by specifying the post office directory.

/opt/novell/groupwise/agents/bin/gwpoa @acct.poa

> Starts the POA by specifying the POA startup file.

/opt/novell/groupwise/agents/bin/gwpoa --show @acct.poa

> Starts the POA with a user interface.

Diagnostics

If you use the --show startup switch, error messages are displayed in the Log Message box of the POA server console where the POA is running. By default, error messages are also written to the POA log file located in the /var/log/novell/groupwise/*post_office*.poa directory.

Typically you find multiple log files in this directory. The first four characters of each filename represent the date. The next three identify the agent. A three-digit extension allows for multiple log files created on the same day. For example, a log file named 0518poa.001 indicates that it is a POA log file created on May 18. If you restart the POA on the same day, a new log file is created, named 0518poa.002.

For information about POA error messages, see *Troubleshooting 1: Error Messages* (http://www.novell.com/documentation/gw8).

Authors

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See Also

grpwise(1)

To report problems with this software or its documentation, visit Novell Bugzilla (http://bugzilla.novell.com).

gwmta(1)

Name

gwmta - GroupWise Message Transfer Agent

Syntax

```
gwmta [--show] --home domain_directory
gwmta [--show] @startup_file
```

Description

A domain organizes post offices into a logical grouping for addressing, routing, and administration purposes in your GroupWise system. Messages are transferred between post offices and domains by the Message Transfer Agent (MTA).

You can provide MTA startup switches on the command line or in a startup file. By default, the startup file is named after the domain and has a `.mta` extension. It is located in the `/opt/novell/groupwise/agents/share` directory.

Options

Usage Options:

--home domain_directory

Specifies the domain directory, where the MTA can access the domain database (`wpdomain.db`). There is no default location. You must use this switch in order to start the MTA. The Agent Installation program automatically sets the --home switch to the domain directory in the MTA startup file.

@startup_file

Specifies the location of the MTA startup file. By default, the MTA startup file is created in the `/opt/novell/groupwise/agents/share` directory and is named after the domain, with a `.mta` extension. The startup file must reside on the same server where the MTA is installed.

--show

Starts the MTA with a user interface similar to that provided for the NetWare and Windows MTA. By default, no user interface is provided for the MTA on Linux. The --show startup switch can only be used on the command line; it cannot be placed in the startup file.

Help Options:

--help, -?

Displays the help information and exits.

Files

/opt/novell/groupwise/agents/share/domain_name.mta

Startup file where startup switches are specified.

`/var/log/novell/groupwise/`*`domain`*`.mta/`*`mmdd`*`mat.`*`nnn`*

Log file where error messages are written.

Examples

By default, this program runs as root, but it is preferable to run it as a non-root user. See the *GroupWise Installation Guide* (http://www.novell.com/documentation/gw8) to set up the MTA to run as a non-root user.

`/opt/novell/groupwise/agents/bin/gwmta --home /gwsystem/provo1`

Starts the MTA by specifying the domain directory.

`/opt/novell/groupwise/agents/bin/gwmta @provo1.mta`

Starts the MTA by specifying the MTA startup file.

`/opt/novell/groupwise/agents/bin/gwmta --show @provo1.mta`

Starts the MTA with a user interface.

Diagnostics

If you use the --show startup switch, error messages are displayed in the Alert box of the MTA server console where the MTA is running. By default, error messages are also written to the MTA log file located in the `/var/log/novell/groupwise/`*`domain_name`*`.mta` directory.

Typically you find multiple log files in this directory. The first four characters of each filename represent the date. The next three identify the agent. A three-digit extension allows for multiple log files created on the same day. For example, a log file named `0518mta.001` indicates that it is an MTA log file created on May 18. If you restart the MTA on the same day, a new log file is created, named `0518mta.002`.

For information about MTA error messages, see *Troubleshooting 1: Error Messages* (http://www.novell.com/documentation/gw8).

Authors

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See Also

grpwise(1).

To report problems with this software or its documentation, visit Novell Bugzilla (http://bugzilla.novell.com).

gwia(1)

Name

gwia - GroupWise Internet Agent

Syntax

```
gwia [--show] --home gateway_directory
gwia [--show] @startup_file
gwia [--show] --dhome SMTP_directory
gwia [--show] --hn hostname
```

Description

The GroupWise Internet Agent enables you to send and receive messages over the Internet.

You can provide Internet Agent startup switches on the command line or in a startup file. At startup, the Internet Agent reads its startup file, `gwia.cfg`. It is located in the `/opt/novell/groupwise/agents/share` directory.

Options

Usage Options:

--home *gateway_directory*

Points the Internet Agent to the Internet Agent's gateway directory. Normally, this is the *domain_directory*/wpgate/gwia directory.

@_startup_file_

Specifies the location of the Internet Agent startup file, which is `gwia.cfg` by default. The Internet Agent looks for `gwia.cfg` in the `/opt/novell/groupwise/agents/share` directory.

--dhome *SMTP_directory*

Points to the SMTP service work area. This is normally the same as the Internet Agent's gateway directory (*domain_directory*/wpgate/gwia).

--hn *hostname*

Provides the hostname that is displayed when someone connects to your Internet Agent via a Telnet session. You should enter the hostname assigned to you by your Internet service provider. Normally, the Internet Agent can get the information from another source and does not need this switch. If you receive a message that the --hn switch is required, you must use the switch.

--show

Starts the Internet Agent with a user interface similar to that provided for the NetWare and Windows Internet Agent. By default, no user interface is provided for the Internet Agent on Linux. The --show startup switch can only be used on the command line; it cannot be placed in the startup file.

Help Options:

--help, -?

    Displays the help information and exits.

Files

/opt/novell/groupwise/agents/share/gwia.cfg

    Startup file where startup switches are specified.

/var/log/novell/groupwise/*domain_name*.gwia/*mmdd*gwia.*nnn*

    Log file where error messages are written.

Examples

By default, this program runs as root, but it is preferable to run it as a non-root user. See the *GroupWise Installation Guide* (http://www.novell.com/documentation/gw8) to set up the Internet Agent to run as a non-root user.

/opt/novell/groupwise/agents/bin/gwia --home /gwsystem/provo1/wpgate/gwia

    Start the Internet Agent by specifying its gateway directory in the domain.

/opt/novell/groupwise/agents/bin/gwia @gwia.cfg

    Start the Internet Agent by specifying its startup file.

/opt/novell/groupwise/agents/bin/gwia --show @gwia.cfg

    Run the Internet Agent with a user interface.

Diagnostics

If you have used the --show startup switch, error messages are displayed in the Log Message box of the Internet Agent server console where it is running. By default, error messages are also written to the Internet Agent log file located in the /var/log/novell/groupwise/*domain_name*.gwia directory.

Log files are named according to the date they are created. If the Internet Agent restarts during the day, the file extension indicates which session is logged (for example 0518gwia.003 indicates the third session logged for May 18).

For information about Internet Agent error messages, see *Troubleshooting 1: Error Messages* (http://www.novell.com/documentation/gw8).

Authors

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See Also

grpwise(1).

To report problems with this software or its documentation, visit Novell Bugzilla (http://bugzilla.novell.com).

gwinter(1)

Name

gwinter - GroupWise WebAccess Agent.

Syntax

```
gwinter [--show] --home gateway_directory
gwinter [--show] @startup_file
```

Description

The WebAccess Agent receives user requests to view messages and documents from the WebAccess Application and WebPublisher Application, accesses post offices and libraries to process the requests, and then passes information back to the applications for display in your Web browser. The WebAccess Agent is required for both WebAccess and WebPublisher.

You can provide WebAccess Agent startup switches on the command line or in a startup file. By default, the startup file is named after the agent's object name and has a .waa extension, for example, webac80a.waa.

Options

Usage Options:

--home gateway_directory

Specifies the path to the WebAccess Agent's gateway directory under the domain directory (*domain_name*/wpgate/webac80a).

@startup_file

Specifies a startup file to use, for example, webac80a.waa. You can add any of the WebAccess Agent startup switches to the startup file and then reference the file when starting the WebAccess Agent. The default startup file, webac80a.waa, automatically includes the --home switch set to the WebAccess gateway directory.

--show

Displays log information about the WebAccess Agent in the terminal window where you start the WebAccess Agent. By default, no user interface is provided for the WebAccess Agent on Linux. The --show startup switch can only be used on the command line; it cannot be placed in the startup file.

Help Options:

--help, -?

Displays the help information and exits.

Files

/opt/novell/groupwise/share/webac80a.waa

Startup file where startup switches are specified.

/var/log/novell/groupwise/*domain_name.gateway_name*/000.prc/*mmdd*web.*nnn*

Log file where error messages are written.

Examples

By default, this program runs as root, but it is preferable to run it as a non-root user. See the *GroupWise Installation Guide* (http://www.novell.com/documentation/gw8) to set up the WebAccess Agent to run as a non-root user.

/opt/novell/groupwise/agents/bin/gwinter --home /gwsystem/provo1/wpgate/webac80a

Starts the WebAccess Agent by specifying its gateway directory in the domain.

/opt/novell/groupwise/agents/bin/gwia @webac80a.waa

Starts the WebAccess Agent by specifying its startup file.

/opt/novell/groupwise/agents/bin/gwia --show @webac80a.waa

Runs the WebAccess Agent with a user interface.

Diagnostics

The WebAccess Agent creates a new log file each day and each time it is started. The log file is named *mmdd*web.*nnn*, where *mm* is the month, *dd* is the day, and *nnn* is a sequenced number (001 for the first log file of the day, 002 for the second, and so forth). The default location for the log files is the /var/log/novell/groupwise/*domain_name.gateway_name*/000.prc directory.

For information about WebAccess Agent error messages, see *Troubleshooting 1: Error Messages* (http://www.novell.com/documentation/gw8).

Authors

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See Also

grpwise(1).

To report problems with this software or its documentation, visit Novell Bugzilla (http://bugzilla.novell.com).

gwmon(1)

Name

gwmon - GroupWise Monitor Agent.

Syntax

```
gwmon --home domain_directory
```

Description

The Monitor Agent is a monitoring and management tool that allows you to monitor GroupWise agents and gateways, along with Messenger agents, from any location where you are connected to the Internet and have access to a Web browser. Some agent administration can also be performed from your Web browser.

Monitor agent configuration information is stored in the `gwmonitor.cfg` file in the `/opt/novell/groupwise/gwmonitor` directory.

Options

NOTE: The --show switch that is available for the other GroupWise agents to provide a user interface is not available for the Linux Monitor Agent.

Usage Options:

--home ***domain_directory***

Specifies a domain directory where the Monitor Agent can access a domain database (`wpdomain.db`). From the domain database, the Monitor Agent can determine which agents to monitor, what user names and passwords are necessary to access them, and so on.

Help Options:

--help, -?

Displays the help information and exits.

Files

/opt/novell/groupwise/gwmonitor/gwmonitor.cfg

Configuration file with Monitor Agent properties. The Monitor Agent does not have a startup file like the other agents. Its startup switches can be used only on the command line.

/var/log/novell/groupwise/gwmon/*mmdd*mon.*nnn*

Log file for Monitor Agent events.

/var/log/novell/groupwise/gwmon/*mmdd*hist.*nnn*

Log file for dumps of monitored agent MIB values.

Examples

This program can run as any user.

`/opt/novell/groupwise/agents/bin/gwmon --home /gwsystem/provo1`

> Starts the Monitor Agent by accessing the domain database in the specified domain directory.

Diagnostics

The Monitor Agent writes to two different types of log files. Event log files record error messages, status messages, and other types of event-related messages. History log files record dumps of all MIB values gathered during each poll cycle of monitored agents. By default, both types of log files are created in the `/var/log/novell/groupwise/gwmon` directory.

Typically you find multiple log files in this directory. The first four characters of each filename represent the date. The following characters are `mon` for event log files and `hist` for history log files. A three-digit extension allows for multiple log files created on the same day. For example, a log file named `0518mon.001` indicates that it is a Monitor Agent event log file created on May 18. If you restart the Monitor Agent on the same day, a new event log file is created, named `0518mon.002`.

For information about Monitor Agent error messages, see *Troubleshooting 1: Error Messages* (http://www.novell.com/documentation/gw8).

Authors

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See Also

grpwise(1).

To report problems with this software or its documentation, visit Novell Bugzilla (http://bugzilla.novell.com).

gwcheck(1)

Name

gwcheck - GroupWise Check utility.

Syntax

```
gwcheck [--opt [/pathname/]options_file [--batch] ] [--po post_office_directory][-
-pa archive_directory][--pr remote_mailbox_directory]
```

Description

GroupWise Check (GWCheck) is a tool provided for GroupWise to check and repair GroupWise user, message, library, and resource databases without needing ConsoleOne. In addition to checking databases in the post office, it also checks users' remote, caching, and archive databases on user workstations or other personal locations.

GWCheck provides a user interface similar to the Mailbox/Library Maintenance feature in ConsoleOne. The list below illustrates the types of database repair that you can perform using GWCheck. Click *Help* in GWCheck for more information about the database repair options that are available.

Analyze/Fix Databases

```
Structure
     Index Check
Contents
     Collect Statistics
     Attachment File Check
Fix Problems
     Update User Disk Space Totals
```

Expire/Reduce Messages

```
Reduce Only
Expire and Reduce
     Items Older Than
     Downloaded Items Older Than
     Items Larger Than
     Trash Older Than
     Reduce Mailbox To
     Reduce Mailbox to Limited Size
Include
     Received Items
     Sent Items
     Calendar Items
     Only Backed-Up Items
     Only Retained Items
```

Mailbox Statistics

```
Mailbox Statistics
     Box Limit
Expire Statistics
     (same as the Expire and Reduce options)
```

Archive/Delete Documents

(no options)

Delete Activity Logs

```
Delete Logs Older Than nn Days
```

Analyze/Fix Library

```
Verify Library
Fix Document/Version/Element
Verify Document Files
Validate All Document Security
Synchronize User Name
Remove Deleted Storage Areas
     Move Documents First
Reassign Orphaned Documents
     New Author
Reset Word Lists
```

Audit Report

```
Show Accounts without Activity for Previous nn Days
```

GWCheck Options File

If you repeatedly use the same set of database repair options, you can save them in an options file. To create an options file, start GWCheck, select database repair options as needed, then click *Save*. By default, the options file is named gwcheck.opt and is saved in your home directory. You can change the filename and location as needed. You can retrieve the options file from the user interface or you can specify the options file on the command line. The options file is created in XML format on all platforms. Therefore, you can create the options file on any platform and use it on any platform interchangeably.

After you have created one or more options files, you can run GWCheck as a script, rather than using the user interface.

Options

Usage Options:

--opt *options_file*

Specifies the name of the options file. By default, this file is saved in your home directory. If you want to save it to another directory, specify a path relative to your home directory or specify an absolute path.

--batch

Runs GWCheck in the background, without a user interface. Use an options file to specify the database repair options.

--po *post_office_directory*

Specifies the path to the post office directory.

--pa *archive_directory*

Specifies the path to the archive directory.

--pr *remote_mailbox_directory*

Specifies the path to the remote mailbox database.

Help Options:

--help, -?

Displays the help information and exits.

Files

[/*pathname*/]gwcheck.opt

Options file. Create this file by setting database repair options in GWCheck, then click *Save*. The options file is created in XML format on all platforms. Therefore, you can create the options file on any platform and use it on any platform interchangeably.

Examples

This program normally runs as root.

/opt/novell/groupwise/gwcheck/bin/gwcheck

Starts the GUI GWCheck.

/opt/novell/groupwise/gwcheck/bin/gwcheck --opt gwcheck.opt --batch

Starts GWCheck with an options file that provides default database repair options and runs it in batch mode so that there is no user interface.

/opt/novell/groupwise/gwcheck/bin/gwcheck --opt gwcheck.opt --pa /home/gsmith/ gwarchive

Runs GWCheck for an archive mailbox.

Diagnostics

For information about GWCheck error messages, see *Troubleshooting 1: Error Messages* (http:// www.novell.com/documentation/gw8).

Authors

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See Also

gwcheckt(1).

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gwcheckt(1)

Name

gwcheckt - Text-Based GroupWise Check

Syntax

gwcheckt *options_file* [--dump]

Description

Text-Based GroupWise Check (GWCheckT) is a tool provided for GroupWise to check and repair GroupWise user, message, library, and resource databases without needing ConsoleOne or any GUI environment.

Text-Based GWCheckT has no user interface. You must create the required options file by using the GUI GroupWise Check (GWCheck) or the Mailbox/Library Maintenance feature in ConsoleOne. Text-Based GWCheckT can perform all of the same types of database repair as the GUI GWCheck, but in a text-only environment.

To create the required options file, start the GUI GWCheck in an environment where the X Window System is available, select database repair options as needed, then click *Save*. By default, the options file is named gwcheck.opt and is saved in your home directory. You can change the filename and location as needed.

Options

Usage Options:

[/*pathname/*]*options_file*

Specifies the name of the options file. By default, this file is saved by the GUI GWCheck in your home directory. If you saved it to another directory, specify a path relative to your home directory or specify an absolute path.

--dump

Displays the contents of the options file so that you can see what database repair options have been selected.

Help Options:

--help, -?

Displays the help information and exits.

Files

options_file

(Required) Use the GUI GWCheck to select and save database repair options in the gwcheck.opt file, then run the Text-Based GWCheckT with the options file to execute the database repair options.

Examples

This program normally runs as `root`.

/opt/novell/groupwise/gwcheck/bin/gwcheckt gwcheck.opt

> Runs GWCheckT in a text only environment, based on the database repair options provided in the options file created in the GUI GWCheck.

/opt/novell/groupwise/gwcheck/bin/gwcheckt gwcheck.opt --dump

> Lists the settings of the database repair options in the specified options file.

Diagnostics

For information about GWCheck error messages, see *Troubleshooting 1: Error Messages* (http://www.novell.com/documentation/gw8).

Authors

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See Also

gwcheck(1).

To report problems with this software or its documentation, visit Novell Bugzilla (http://bugzilla.novell.com).

dbcopy(1)

Name

dbcopy - GroupWise Database Copy utility

Syntax

```
dbcopy /source_directory /destination_directory
dbcopy [-b] [-i] [-t] [-v] [-w] /source_directory /destination_directory
dbcopy -m [-d] [-p] [-f] [-s] [-a] [-u] [-k] [-o] [-l]
                              /source_directory /destination_directory
```

Description

The GroupWise Database Copy utility (DBCopy) copies files from a live GroupWise domain, post office, or remote document storage area to a static location for backup. During the copy process, it prevents the files from being modified, using the same locking mechanism used by other GroupWise programs that access databases. This ensures that the backed-up versions are consistent with the originals even when large databases take a substantial amount of time to copy.

The DBCopy utility is not installed automatically with the rest of the GroupWise software. The DBCopy RPM is located in the /admin subdirectory of your software distribution directory (/opt/ novell/groupwise/software). When you install the RPM, the dbcopy executable is placed in the / opt/novell/groupwise/agents/bin directory.

In addition to backups, the DBCopy utility is used in conjunction with the GroupWise Server Migration Utility (http://www.novell.com/documentation/gwutilities/gw8_svrmig11/data/ ab32nt1.html), which helps you migrate GroupWise data from NetWare or Windows to Linux. Some startup switches can be used for both backups and migration. Other startup switches are used only for migration.

Options

Usage Options:

source_directory

Specifies the full path to the domain directory, post office directory, or remote document storage area directory.

destination_directory

Specifies the full path to the directory where you want to copy the domain, post office, or remote document storage area.

-b

Copies a remote document storage area associated with a library, including all subdirectories and compressed BLOB (binary large object) files in which library documents are stored.

-i *mm-dd-yyyy*

Indicates that you are performing an incremental copy of only those files with the specified date or newer.

-t

Specifies the number of copy threads. The default is 5. Valid values range from 1 to 10.

-v

Turns on verbose logging. The DBCopy log file is named *mmddgwbk.nnn*. The first four characters represent the date. A three-digit extension allows for multiple log files created on the same day. The log file is created at the root of the destination domain, post office, or document storage area directory. In addition to status and error messages, it lists any remote document storage areas associated with a post office.

-w

Turns on continuous logging to the screen.

-m

Copies all directories and files associated with a domain, post office, or document storage area as part of a migration.

-d

Indicates migration of a domain.

-p

Indicates migration of a post office.

-f

Indicates that this is the first pass of the migration process.

-s

Indicates that this is the second pass of the migration process.

-a

Specifies the IP address to bind to for the migration process. The default is all available IP addresses.

-u

Specifies the TCP port number for status requests during the migration.

-k

Skips collecting database size information during the migration.

-o

Skips the second copy of the post office `offiles` directory during the migration

-l

Performs the GroupWise Check function of `storelowercase` on the migrated GroupWise databases. Its purpose is to do an "in-place" conversion of files and directories to lowercase, rather than as part of a copy operation. For a post office, it also updates the guardian database with the new, lowercase names.

For example, you could use this functionality if you have a domain or post office located on a SAN that was mounted for access by the GroupWise NetWare agents, but you now want to run the GroupWise Linux agents for the domain or post office.

Help Options:

`-h, --help, -?`

    Displays the help information and exits.

Files

`/pathname/mmddgwbk.nnn`

    Log file created at the root of the destination directory.

Examples

This program normally runs as `root`.

`/opt/novell/groupwise/agents/bin/dbcopy /gwsystem/acct /backups/acct`

    Copies a post office to a backup location.

`/opt/novell/groupwise/agents/bin/dbcopy --b /gwsystem/acct_library /backups/acct_library`

    Copies a library to a backup location.

Authors

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See Also

gwtmstmp(1).

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gwtmstmp(1)

Name

gwtmstmp - GroupWise Time Stamp utility.

Syntax

```
gwtmstmp --postpath post_office_directory [--set] [--get] [--clear] [--backup] [--
restore] [--retention] [--date mm/dd/yyyy] [--time hh:mm[am|pm]] [--gmttime
seconds] [--userid GroupWise_userID] [--userdb user_database]
```

Description

The GroupWise Time Stamp utility (GWTMSTMP) places a time stamp on a GroupWise user database to indicate the last time the database was backed up. If a user deletes an item from his or her mailbox and purges it from the Trash, the item is removed from the user's database only if the time stamp shows that the item has already been backed up. Otherwise, the item remains in the user's database until the database is backed up, at which time it is purged from the database.

The GroupWise Time Stamp utility places date and time information on user databases (user*xxx*.db) in order to support message backup, restore, and retention. No other databases are affected. You can run the GroupWise Time Stamp utility on all user databases in a post office or on a single user database.

Backup

To ensure thorough user database backups, you can make sure that deleted items are not purged from users' databases until they have been backed up. Two conditions must be met in order to provide this level of protection against loss of deleted items:

- The *Do Not Purge Items Until They Are Backed Up* option must be selected for the post office in ConsoleOne (*Tools > GroupWise Utilities > Client Options > Environment > Cleanup*).
- User databases (user*xxx*.db) must be time-stamped every time a backup is performed so that items can be purged only after they are backed up.

Restore

You can use the GroupWise Time Stamp utility to manually add the restore time stamp to the database. The restore time stamp is not required for any GroupWise feature to work properly. Its primary purpose is informational.

Retention

If you use a message retention application, the application should automatically add the retention time stamp after retaining the database's messages. Any messages with dates that are newer than the retention time stamp cannot be purged from the database. You can use the GroupWise Time Stamp utility to manually add a retention time stamp.

Options

Usage Options:

--postpath */post_office_directory,* **-p** */post_office_directory*

(Required) Specifies the full path to the post office directory where the user databases to time-stamp are located.

--set, -s

Sets the current date and time (of backup, restore, or retention) on user databases.

--get, -g

Lists existing backup, restore, and retention time stamp information for user databases. If no time stamps are set, "unknown" is displayed. If no other operational switch is used, --get is assumed.

--clear, -c

Removes time stamps (of backup, restore, or retention) from user databases.

--backup, --restore, --retention, -b, -r, -n

Specifies the type of time stamp (backup, restore, or retention) on which to perform the get or set operation. If no time stamp type is specified, the operation is performed on the backup time stamp. Multiple time stamp types can be specified together.

--date *mm/dd/yyyy,* **-d** *mm/dd/yyyy*

Specifies the date that you want placed on user databases. Use the format *mm/dd/yyyy*; for example, 05/18/2010 for May 18, 2010. If no date is specified, the current date is used. If your locale does not use the *mm/dd/yyyy* format, use gwtmstmp --help to determine the format for your locale.

--time *hh:mm*[am|pm], **-t** *hh:mm*[am|pm]

Specifies the time that you want placed on user databases. Use the format *hh:mm*, expressed in a 24-hour format (for example, 20:45) or expressed with the am or pm option (for example, 8:45pm. If no time is specified, 00:00 is used.

--gmttime *seconds,* **-m** *seconds*

Specifies the number of seconds since midnight on January 1, 1970 GMT that you want placed on the user databases.

--userid *username,* **-u** *username*

Provides a specific GroupWise user ID so that an individual user database can be time-stamped.

--userdb *user_database,* **-e** *user_database*

Provides a specific database name so that an individual user database can be time-stamped.

Help Options:

--help, -?

Displays the help information and exits.

Examples

This program normally runs as `root`.

/opt/novell/groupwise/agents/bin/gwtmstmp -p /gwsystem/acct

   Checks the existing time stamp on all GroupWise user databases in a post office.

/opt/novell/groupwise/agents/bin/gwtmstmp -p /gwsystem/acct --set

   Set a current time stamp on all user databases in a post office.

Diagnostics

For information about GroupWise Time Stamp utility error messages, see *Troubleshooting 1: Error Messages* (http://www.novell.com/documentation/gw8).

Authors

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See Also

dbcopy(1).

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gwcsrgen(1)

Name

gwcsrgen - GroupWise Generate CSR utility

Syntax

`gwcsrgen`

Description

The GroupWise Generate CSR utility (GWCSRGEN) generates a certificate signing request (CSR) file and a private key file. These files are needed to provide secure communication through SSL (Secure Socket Layer) connections between GroupWise agents and clients.

When you run the Generate CSR utility, you must fill in the following fields in the interface provided:

Key Filename

The name for the private key file (for example, `server1.key`). If you don't want the file stored in the same directory as the gwcsrgen executable, specify a full path with the filename (for example, `/certs/server1.key`).

Key Password

The password for the private key. The password can be up to 256 characters (single-byte environments).

CSR Filename

The name for the certificate signing request file (for example, `server1.csr`). If you don't want the file stored in the same directory as the `gwcsrgen` executable, specify a full path with the filename (for example, `/certs/server1.csr`).

Country

The two-letter abbreviation for your country (for example, US).

State/Province

The name of your state or province (for example, Utah). Use the full name. Do not abbreviate it.

City

The name of your city (for example, Provo).

Organization

The name of your organization (for example, Novell, Inc.).

Division

The division of your organization that this certificate is being issued to (for example, Product Development).

Hostname of Server

Enter the DNS hostname of the server where the server certificate will be used (for example, dev.provo.novell.com).

Configuration File

For convenience, you can record the information for the above fields in a configuration file so that it is automatically provided whenever you run the Generate CSR utility. The configuration file must have the following format:

```
[Private Key]
Location =
Extension = key

[CSR]
Location =
Extension = csr

[Required Information]
Country =
State =
City =
Organization =
Division =
Hostname =
```

If you do not want to provide a default for a certain field, insert a comment character (#) in front of that line. Name the file gwcsrgen.cnf. You can save the file in your current directory (for example, /opt/novell/groupwise/agents/bin if you run the gwcsrgen executable from that default location) or in /etc/opt/novell/groupwise/agents.

What's Next

After the CSR and private key files are created, you need to submit the CSR to a Certificate Authority in order to receive a server certificate. If you haven't previously used a Certificate Authority, you can use the keywords "Certificate Authority" to search the Web for Certificate Authority companies. The process of submitting the CSR varies from company to company. Most provide online submission of the request. Follow their instructions for submitting the request.

When you receive the server certificate, you can store it, along with the private key file, anywhere on the server where they will be used. Any GroupWise agent (MTA, POA, Internet Agent, or WebAccess Agent) that is running on the server can use the certificate and private key when using SSL for secure connections.

Files

/etc/opt/novell/groupwise/agents/bin/gwcsrgen.cnf

Configuration file. By providing a configuration file, you do not need to fill in the fields manually every time you run the Generate CSR utility.

Examples

This program normally runs as `root`.

`/opt/novell/groupwise/agents/bin/gwcsrgen`

Starts the Generate CSR utility. If you have supplied a configuration file, the fields are filled in based on the data in the configuration file.

Authors

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D D Documentation Updates

This section lists updates to the *Installation Guide* that have been made since the initial release of Novell GroupWise 8. The information helps you to keep current on documentation updates and, in some cases, software updates (such as a Support Pack release).

The information is grouped according to the date when the *Installation Guide* was republished. Within each dated section, the updates are listed by the section title.

The *GroupWise 8 Installation Guide* has been updated on the following dates:

- Section D.1, "September 12, 2012 (GroupWise 8 SP2 HP4 Mac Client Update)," on page 335
- Section D.2, "June 26, 2012 (GroupWise 8 SP3)," on page 335
- Section D.3, "December 9, 2010 (Compatibility with Vibe 3)," on page 336
- Section D.4, "July 14, 2010 (GroupWise 8 SP2)," on page 336
- Section D.5, "August 31, 2009 (GroupWise 8 SP1)," on page 337

D.1   September 12, 2012 (GroupWise 8 SP2 HP4 Mac Client Update)

Location	Change
Product Overview	
Section 2.2.2, "Mac Client Requirements," on page 19	Added support for Mac OS 10.8 (Mountain Lion).

D.2   June 26, 2012 (GroupWise 8 SP3)

Location	Change
Product Overview	
Section 2.1, "GroupWise Administration Requirements," on page 17	Added OES 11 as a supported operating system; updated the Tomcat requirement to Tomcat 6 for OES 11 and SLES 11; added a link for obtaining the LDAP snap-in to ConsoleOne.
Section 2.2.2, "Mac Client Requirements," on page 19	Noted that GroupWise 8 Support Pack 3 does not include the Mac client or the Linux client, but earlier versions can still be used; updated the supported versions of Mac OS.
Installation	

Location	Change
Section 6.4.2, "Configuring the Calendar Publishing Host in ConsoleOne," on page 148	Corrected the port number on which the Calendar Publishing Host communicates with the POA.
"Enabling the Groupwise High Availability Service for the Linux GroupWise Agents" on page 209	Improved the instructions for enabling the GroupWise High Availability service (gwha).
Chapter 12, "Installing Novell Vibe," on page 243	Updated for the product name change from Novell Vibe OnPrem to Novell Vibe.

D.3   December 9, 2010 (Compatibility with Vibe 3)

Location	Change
Installation	
Chapter 12, "Installing Novell Vibe," on page 243	Updated for the product name change from Novell Teaming to Novell Vibe OnPrem.

D.4   July 14, 2010 (GroupWise 8 SP2)

Location	Change
Installation	
Section 2.2, "GroupWise Client Requirements," on page 19	Updated the supported operating systems for the GroupWise Windows client.
Part II, "Installation," on page 23	Added links to the "GroupWise 8 Good and Bad Habits" wiki throughout the *Installation Guide*.
"Enabling the Groupwise High Availability Service for the Linux GroupWise Agents" on page 209	Introduced the High Availability service configuration file.
"Configuring the Groupwise High Availability Service in the gwha.conf File" on page 210	Noted that the user that the High Availability service runs as cannot be a LUM-enabled user.
Section 9.5.2, "Prerequisites on SUSE Linux Enterprise Desktop 11," on page 236	Added platform-specific client installation instructions.
Chapter 10, "Installing Novell Messenger," on page 239	Updated the documentation links to the latest version of Novell Messenger.
Chapter 11, "Installing the Novell Data Synchronizer Mobility Pack," on page 241	Replaced the documentation links to GroupWise Mobile Server documentation with links to the Novell Data Synchronizer Mobility Pack documentation. Synchronizer is the next generation of mobile device support for GroupWise users.

Location	Change
Chapter 12, "Installing Novell Vibe," on page 243	Updated the documentation links to the latest version of Novell Teaming.
Chapter 13, "Installing Novell Conferencing," on page 245	Updated the documentation links to the new version of Novell Conferencing.
Update	
Section 17.5, "Updating Secondary Domains," on page 272	Clarified the process of updating secondary domains.
Appendixes	
dbcopy(1) (page 314)	Clarified the functionality of the -I switch.

D.5 August 31, 2009 (GroupWise 8 SP1)

Location	Change
Installation	
Chapter 2, "GroupWise System Requirements," on page 17	Updated the supported operating environments for GroupWise 8 Support Pack 1.
Section 2.3.5, "Citrix Support," on page 22	Added Citrix XenServer as a supported environment.
Section 2.3.6, "Domain Services for Windows Support," on page 22	Added Domain Services for Windows as a supported environment.
Section 4.3.9, "NetWare Installation Options: Automatic Startup, Protected Mode, and Clustering," on page 82	Added Protected Mode as an Internet Agent installation option.
Section 7.1, "GroupWise Monitor Overview," on page 159	Clarified that the Monitor web-based consoles are available on both Windows and Linux.
"Monitor Server" on page 163	Stated that the Monitor Agent cannot run as a Windows service; recommended installing the Monitor Agent on the same server with a domain and its MTA.
Section 6.3.3, "Determining the Configuration of the Calendar Publishing Host," on page 139 and Section 6.4.1, "Installing the Calendar Publishing Host," on page 143	Added the new Calendar Publishing Host Name dialog box in the Calendar Publishing Host Installation program.
Update	
Section 14.4.3, "Simplified Addressing for External GroupWise Systems," on page 251	Removed user synchronization as an aspect of simplified addressing.

Location	Change
Section 15.1, "Understanding eDirectory Schema Extensions," on page 255, Chapter 16, "Preparing Your GroupWise System for Update," on page 261, and Section 17.1, "Installing the GroupWise 8 Software," on page 263	Clarified that, during an update from GroupWise 7 to GroupWise 8, the GroupWise Installation program does not automatically extend the eDirectory schema. You must do it manually in ConsoleOne.
Chapter 16, "Preparing Your GroupWise System for Update," on page 261	Emphasized that GroupWise client user workstations must be running a supported version of the operating system.