

The Caledonia Upgrade Guide for GroupWise 2012

Upgrading/Migrating from NetWare

By Danita Zanrè

December 11, 2011

Version .90



The Caledonia Upgrade Guide for GroupWise 2012

Upgrading/Migrating from NetWare

By Danita Zanrè

Published by:

Caledonia Network Press

20116 E. Aintree Court

Parker, CO 80138

<http://www.caledonia.net>

All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without written permission from the publisher. However, in the event this book is delivered to the purchaser electronically as a PDF file, then the purchaser is allowed to 1) make ONE printed copy and 2) possess ONE electronic copy at any given time. The electronic version of this book will not be placed on a network server, accessible by more than one person at any given time. By following the requirements outlined above for electronic distribution of this book, the purchaser will, in effect have one copy of the book, which can be viewed by a single reader, as though the book were delivered in a bound copy.

Copyright ©2011 by Caledonia Network Press

Disclaimer

The authors and publisher have made every effort to make this book as complete and accurate as possible. The authors and Caledonia Network Press make no representations or warranties of any kind as to the accuracy of the contents of this book, and accept no liability whatsoever with respect to any loss or damages arising from the information contained in this book or from the use of any programs that may accompany it.

Electronic Publication

This book is being delivered to you as an electronic publication in Adobe Acrobat PDF format. The book is formatted with the assumption that it will be printed duplexed. As such, if you choose to print the document single-sided you will discover some blank pages that would have been pages facing a new chapter. You can discard these pages, as long as you keep in mind that the overall pagination of the document assumes these “place keeper” pages exist.

Acknowledgements

A number of people have been very helpful in the course of writing this book.

Paul Lamontagne and Pam Robello at Novell always gave me support and help when I needed it.

At Novell, the GroupWise Engineering team were the biggest help. Without them, we wouldn't have GroupWise 2012 at all!

My daughter cheered me on, and my son stayed out of my hair. And of course, my dear husband just put up with my work, work, work for the past few weeks.

Thanks to all who supported me through this!

About the Author

Danita Zanrè (the “GroupWise Goddess”) has been using “GroupWise” since 1989, when its precursor was known as WordPerfect Office 2.0. She has been involved closely with every version of the product since that time. Danita is widely regarded as one of the top experts in e-mail in general, and GroupWise specifically. She has written many books and articles, and has been a frequent speaker at BrainShare, GWAVACon, and other conferences throughout the world.

Contents

Acknowledgements	iii
About the Author	iv
1 Introduction	1
Server Requirements	3
2 Preparing for Your GroupWise Migration and Upgrade	3
Administration Requirements	4
WebAccess/Monitor/Calendar Publishing Host Requirements	4
Windows Server 2003/2003 R2	5
Windows Server 2008/2008 R2	5
GroupWise Client Requirements	5
Windows	5
Linux	5
Mac	5
Software Distribution Directory	6
A Quick Health Check	6
WebAccess Changes	6
The Migration and Upgrade Overview	7
Small, Single Server System	7
Small, Multiple Server System	8
Complex GroupWise System on Multiple Servers	8
A Few Important Conventions	10
eDirectory	11
3 Preparing your New GroupWise Server	11
Why Move to Linux?	12

The Case for Linux	12
Developing Linux Skills	14
Using Linux to Learn It	15
Studying Linux	15
Special Considerations for Linux	15
The Great Linux File System Debate	17
NSS for OES	18
EXT3 for SLES	19
What About ReiserFS?	19
Understanding Linux Mount Points.	19
Dealing with Linux Case Sensitivity.	20
Making Linux Accessible to your Administrators	21
Running your GroupWise Agents as Linux Daemons/Windows Services	22
The GroupWise Server Migration Utility.	22
Novell Client	22
Extracting Your Software	23
Install DBcopy	23
Windows	23
Linux	23
Attach to Your NetWare Server.	25
Linux - Create a Mount Point for the NetWare Server	25
4 Moving a Domain	25
Windows - Map a Drive to Your NetWare Server.	26
Unload the MTA	26
Unload Gateways.	26
Rename Your Domain Directory	26
Copy the Domain Files to New Server.	26
To Linux	27
To Windows	28
How Does the Upgrade Work?	29
5 Upgrading Your GroupWise Domain.	29
Locations for Administering GroupWise	30
Windows.	30
Linux	30
Updating Your ConsoleOne Snapins	30

Windows	31
Linux	31
Edit Important information in ConsoleOne	32
Extending your eDirectory Schema.	34
Enabling the HTTP Monitor for Your Agent	34
Prepare The Domain	35
The Domain Upgrade Overview	35
Installing your Agent Software	36
Windows	36
Linux	38
Configuration of your Agents during installation.	40
Windows	40
Install and Configure SNMP for GroupWise Agents.	40
Install as Windows services	40
Linux	42
Troubleshooting	45
6 Upgrading Your GroupWise Internet Agent	47
Preparing for the Upgrade.	47
Linux	47
Windows	48
Installing your Agent Software	49
Windows	49
Load the GWIA on the Windows Server	51
Linux	51
Cleaning Up	55
Troubleshooting	56
New Options of Note	56
Delayed Message Notification	56
Rule-Generated Messages	56
Internet Agent Web Console	56
Preparing For The Upgrade To GroupWise 2012 WebAccess	57
7 Upgrading Your GroupWise WebAccess	57
Windows Server 2003/2003 R2	58
Windows Server 2008/2008 R2	58
Upgrading WebAccess	58

Windows WebAccess Installation	58
Linux WebAccess Installation	59
Loading the GroupWise WebAccess Application	61
Linux	61
Microsoft Windows Server	61
Configuration Options	61
Configuring Additional Post Office Agents	61
Configuring Additional Document Viewer Agents	62
Configuring HTTP Monitor for WebAccess	62
Setting the GroupWise 2012 WebAccess as Your Default	63
Security Timeouts	63
8 Moving a GroupWise Post Office	65
Migrating our Post Office - Stage One.	66
Attach to Your NetWare Server.	67
Linux - Create a Mount Point for the NetWare Server	67
Windows - Map a Drive to Your NetWare Server.	67
Performing Our First Pass DBCopy of the Post Office.	68
Linux	68
Windows	69
Install and Configure the Agent Software	69
Linux	69
Windows	71
Migration Day	75
Unload the POA	76
Rename the post office directory	76
Perform our final DBCopy pass.	76
Linux	76
Windows	76
Additional Migration Tasks to Do While the Final Copy Continues	77
Edit the Details of the Post Office in ConsoleOne	77
NGWNameserver	78
How Does the Upgrade Work?	79
9 Upgrading Your Post Offices	79
Enabling SOAP	80
Enabling the HTTP Monitor for Your Agent	81

Preparing the Post Office Database	81
Windows	82
Installing your Agent Software	83
Windows	83
Linux	87
Upgrading Your Post Office	90
Troubleshooting	92
Checking the MTP Link	92
Log into the POA on the New Server	94
New Options to Explore	95
Preparing for the Upgrade	97
Shutting Down the Monitor Agent	97
Linux	97
10 Upgrading Your GroupWise Monitor	97
Windows	98
Installing your Agent Software	99
Linux	100
Troubleshooting	101
Installing the Monitor Application Software	101
Windows Monitor Application Installation	101
Linux Monitor Application Installation	102
Loading The GroupWise Monitor Application	104
Linux	104
Microsoft IIS – Web Server	104
Logging Into GroupWise Monitor Application	105
Overview of the Windows Client Upgrade	107
The Auto-Update Algorithm	107
11 Upgrading Your GroupWise Clients	107
Creating a Software Distribution Directory for your Post Office	109
SETUP.INI	111
SOFTWARE.INF	111
SETUP.CFG	112
Choosing Your Windows Client Installation Method	113
Auto-Update through Direct Access	113
Upgrading the GroupWise Client with SETUPIP	114

Configuring Your Web Server	115
Configure and Generate the setupip.exe Executable	115
Troubleshooting SETUPIP	117
Upgrading Mobile Users with SETUPIP	117
Upgrading Users with ZCM	117
Adding Grace Logins Before a Forced Upgrade	124
Upgrading the Linux Cross-Platform Client	124
Upgrading the MAC Cross-Platform Client	125
Auditing the GroupWise Client Upgrade	125
Configuration Settings of Note.	126
Sent Items Folder Issues:	126
GroupWise 2012 Home View	126

1 Introduction

As a long-time GroupWise administrator, user and consultant, GroupWise 2012 brings with it many changes for me. I've used GroupWise since before it was GroupWise! I started with WordPerfect 2.0 in 1989, and I've used every version since.

We will discuss all of the changes that you need to know about GroupWise 2012 in the next chapter, [“Preparing for Your GroupWise Upgrade”](#). There is, however, one major change that needs to be addressed before you continue. With GroupWise 2012, Novell has discontinued NetWare as a server platform for GroupWise. This means that any GroupWise installation on NetWare will not be a simple upgrade. Rather, we will need to do a migration/upgrade.

The version of the guide you are reading is being released while GroupWise 2012 is still in beta so that you can prepare for your upgrade once the product is released. We do NOT recommend that you attempt to upgrade your production system to GroupWise 2012 before the released version of the software.

Once GroupWise 2012 ships, a new version of this book will be available, that will cover all of the changes from the public beta that is available now and the released version. When the released version of this guide is available, you can retrieve it by logging into your account at <http://www.caledonia.net/download.html> and downloading the update.

This guide has been written for sites which currently run GroupWise on NetWare, and now need to both migrate the GroupWise system from NetWare to Linux or Windows, and subsequently upgrade to GroupWise 2012. If you have purchased this guide in error, and need the guide intended to upgrade your Linux or Windows GroupWise system in place, please contact info@caledonia.net and we will make sure you get the proper guide.

2 Preparing for Your GroupWise Migration and Upgrade

For a new GroupWise administrator, the prospect of upgrading the GroupWise system can be a bit daunting. And of course, even those of us who have done hundreds of upgrades run into issues occasionally. To complicate matters, since you have purchased this guide, your current system is on NetWare (in whole or in part), and Novell has discontinued support for NetWare. As such, you will need to both migrate your system and upgrade it to GroupWise 2012. That said, with proper planning, you will get to your destination with less pain than you might have anticipated. And indeed, it is the planning that is of utmost importance. In this chapter we will deal with the planning. And it's important to know that even those of us who have indeed done hundreds of GroupWise migrations and upgrades make a point to plan out even the simplest of migrations and upgrades, making sure to check off all of the necessary steps as we go. (Danita has even been known to carry around a copy of this book to customer sites to make sure nothing is forgotten). So, do not feel like you need to keep a lot of information on the upgrade in your head. Keep a copy of the upgrade guide close at hand, and refer to it often during your upgrade, and you'll be less likely to run into trouble.

To simplify things in this book, since you are performing both a migration from NetWare and upgrade to GroupWise 2012, we will generally just say *upgrade* throughout this guide, even though the upgrade also necessitates a migration.

Be certain to check the Errata Page for this book (<http://www.caledonia.net/errata2012.html>) prior to your upgrade to see if there are any important updates to the process that might not have been available when you downloaded the guide.

Server Requirements

We'll start with the technicalities! What do you need to be able to perform this upgrade? For the most part, your GroupWise 6.5 or higher server is likely to be adequate for your upgrade, but let's look at what Novell says you need (and what our recommendations are).

All Servers	32-bit/x86 processor or 64-bit/x86 processor
Any of the following, updated to the latest Support Pack*	
Linux	SuSE Linux Enterprise Server (SLES) 10 or 11, Novell Open Enterprise Server (OES) 2 or OES 11
Windows	Windows Server 2003, Windows Server 2003 R2, Windows Server 2008, Windows Server 2008 R2 plus the latest Service Pack
eDirectory™	8.7 or later, plus the latest Support Pack, with LDAP enabled

Memory and disk space requirements are not substantially different than your current GroupWise 6.5 server requirements. There are a few agent components and options that can either be installed by default (for example the document conversion agent at the POA) or additionally (such as the Calendar Publishing Host). Generally speaking, however, you will not need to *upgrade* your current Linux or Windows servers in order to upgrade GroupWise 6.5 or newer systems (although many sites take the opportunity to do so during the GroupWise

upgrade). If you are on a GroupWise system older than GroupWise 6.5, you may need to look at your server requirements based on the age and OS of your servers.

You might have noticed a few interesting items in the table above. Let's talk about a few things to do with the servers:

- 64 bit support is one of those things that is *interesting*. GroupWise is a 32 bit application. In the past, we have generally recommended using 32 bit OSs if the server is dedicated to GroupWise. However, if you are thinking of upgrading your GroupWise server any time soon, it's best to plan for 64 bit OSs. Future versions of GroupWise are likely to require a 64 bit OS. Thus, planning for the future is a good thing! And additionally, it is likely that OES 11 will also only be available in 64 bit, so the time is coming to move!
- For Linux, GroupWise 2012 is supported on SLES 10 and SLES 11, which also means OES 2 and OES 11.
- NetWare is no longer an available for GroupWise 2012 server OS.

Administration Requirements

GroupWise 2012 requires ConsoleOne 1.3.6h or later, with LDAP snapins enabled. This is included in the GroupWise 2012 media kit. You will also need to have Java Virtual Machine (JVM) 1.5.11 or later installed.

If you are running ConsoleOne on Windows, you also need to have version 4.91 SP3 or later of the Novell Client. On Linux, ConsoleOne also requires the X Window System, version X11R6 or later.

Most of the commands that we indicate to run on Linux will need to be run as the root user.

WebAccess/Monitor/Calendar Publishing Host Requirements

For the Web Server running the WebAccess Application, Monitor Application, or the Calendar Publishing Host you will need one of the following:

SLES 10/OES 2

Apache 2.2 plus:

- Tomcat 5.0 or later
- JRE 5 or later
- ModProxy Module

SLES 11/OES11

Apache 2.2 plus:

- Tomcat 6.0 or later (installed via YaST for SLES, or during GroupWise installation for OES11)
- JRE 5 or later
- ModProxy Module

Windows Server 2003/2003 R2

Microsoft Internet Information Server (IIS) 6 or later plus:

- Tomcat 6 or later
- JRE 5 or later
- Jakarta Connector 1.2 or later

Windows Server 2008/2008 R2

Microsoft Internet Information Server (IIS) 7 or later plus:

- Tomcat 6 or later
- JRE 5 or later
- Jakarta Connector 1.2 or later

GroupWise Client Requirements

For the GroupWise client, a few things have changed that are important.

Windows

GroupWise 8 was no longer supported on Windows 2000 machines. In fact, for many sites who have tested it, even installing on Windows 2000 has failed. If you still have PCs in your environment running Windows 2000, you should use the GroupWise 7 client. Here are the specifics for the 2012 client:

- Windows XP on a 300 MHz or higher workstation with at least 128 MB of RAM
- Windows 2003 on a 350 MHz or higher workstation with at least 256 MB of RAM
- Windows 2003 R2 on a 350 MHz or higher workstation with at least 256 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 is recommended to install the Windows client.

It is VERY important that you notice that Windows 2000 is no longer supported. The installation will no longer even run on a Windows 2000 machine.

Linux

Novell has not updated the Linux client for GroupWise. You can use the GroupWise 8 Linux client. The only supported platform is SuSE Linux Enterprise Desktop 10. We have tested the client on various OpenSUSE versions, and it seems to perform properly. That said, however, remember that the only supported platform is SLED 10. The client will run with either KDE or GNOME.

Mac

Again, Novell has not updated the GroupWise Mac client with GroupWise 2012. You can continue to use the GroupWise 8 Mac client. Interestingly, the Mac client seems to run on the

most diverse versions of the operating system than either Windows or Linux! You can run the GroupWise 8 Mac client on:

- Mac OS 10.4 through OS 10.7 Lion

Software Distribution Directory

Most sites will want at least one location where all of the installation files for the GroupWise 2012 system reside. When we reference the “Software Distribution Directory” (SDD) in this guide, we are referring to such a generic location for all files rather than talking about a true SDD as defined by Novell. In our experience, very few sites truly use the SDD in the way it is intended by Novell (i.e., a location available to both the POA and all GroupWise users for software rollout). If you do create SDDs for your post offices, do not copy over your existing SDD. Create a new one as we discuss later in [Upgrading Your GroupWise Clients](#). Regardless of how you use the SDD, you will need approximately 500 MB for all GroupWise components in one language. If you add additional language files, your SDD could be as large as 900 MB (for all languages).

A Quick Health Check

We hesitate to insist that major GroupWise maintenance be performed on your GroupWise system prior to the upgrade, not because you should not ensure that your GroupWise system is in good working order, but because we feel that this should be done routinely anyway, and should not be left until the week of your upgrade! That said, there are a few things that you can do to make your GroupWise upgrade less stressful.

- Make sure that your eDirectory tree is in good health. Some minimal steps you can take to ensure that your tree is healthy are to do a “check synchronization status” in dsrepair from the root partition server and/or check the agent health in iMonitor.
- Clean up your GroupWise system. Quite honestly, there is no real technical reason to get rid of old users, empty trash and implement cleanup options, but it’s a perfect time to do so if you need to. Users are typically much more open to making cleanup changes when an upgrade is pending, simply because they accept that “changes” are coming and that might mean they need to help make the upgrade a smooth operation. For sites moving from NetWare to Linux or Windows, you can make a good case that cleaning up will speed up the migration, thus making for a smoother upgrade all around.
- Run some basic GWCHECK procedures. We know that you are running routine structure and contents checks on your post offices, but it’s a good time to make sure that your routines are running properly, that there are no oddities in the logs, and that you are ready to upgrade!

WebAccess Changes

Before you begin your migration and upgrade, you need to understand some very fundamental changes to WebAccess. Prior to GroupWise 2012, WebAccess has always consisted of two components: The WebAccess Agent, and the WebAccess Application. The WebAccess Agent (GWINTER) was a WebAccess component that acted as a GroupWise client which gathered information from the POA and supplied the information to the WebAccess Application (the web server component). GroupWise 2012 has eliminated the WebAccess Agent altogether. The GroupWise 2012 WebAccess Application speaks directly to the POA via the SOAP protocol.

Because of these changes, a GroupWise 2012 WebAccess installation cannot talk directly to older GroupWise Post Office Agents. Only a GroupWise 2012 POA “speaks” the proper SOAP language that the WebAccess Application will understand. This poses some challenges to sites with many post offices that will be upgraded over an extended period of time. If you will not be upgrading all of your post offices within a short time frame (perhaps a long weekend when you can indicate that WebAccess will be largely unavailable to users), you will need to either leave your WebAccess installation at your current GroupWise version, or you will need to provide for two separate web servers to serve as WebAccess applications for your current GroupWise version and for GroupWise 2012. There are settings for the GroupWise 2012 WebAccess Application that will allow it to serve as the default WebAccess entry point into your system, and then redirect older users to the appropriate web server hosting the GroupWise WebAccess Application for your current GroupWise version.

The GroupWise 2012 WebAccess does not include the WebPublisher functionality. If you need WebPublisher, you must retain a WebAccess installation for your existing GroupWise version to continue to provide the services of WebPublisher.

We will go over the details in [Upgrading Your GroupWise WebAccess](#) later in this guide.

The Migration and Upgrade Overview

In this guide, we will essentially be moving your GroupWise system from NetWare to either Linux or Windows, and then installing and configuring GroupWise 2012, which will allow us to upgrade the system on the new server without first installing your older version of GroupWise. While we often caution customers about doing a migration and upgrade at the same time, the retiring of NetWare as a GroupWise server OS forces us to just move forward!

Occasionally we are asked about the idea of creating a new domain on Linux or Windows and moving users from the NetWare server. Depending on the size of your system, this may be a reasonable method of moving from NetWare, especially if you are wanting to reorganize your system at the same time. While moving individual users has some hazards of its own, it is possible.

In the past, we have discussed another possible strategy in moving from NetWare to Linux or Windows by moving some of the “system components” like WebAccess and the GWIA to start with. This is especially useful for sites moving to Linux, if the IT staff is not as familiar with Linux as it could be. However, this is not as easy in our situation. As we discussed earlier, the GWIA and WebAccess can only be upgraded early if you will be providing an older POP3/IMAP4 GWIA and WebAccess for GroupWise users not yet upgraded to GroupWise 2012.

Let’s look at a few scenarios for our migration and upgrade.

Small, Single Server System

First of all, we always recommend that you have at least two GroupWise domains for redundancy. So, if your single server system only has one domain, during your migration and upgrade you might consider creating a new domain for your GWIA and/or WebAccess on a separate server to satisfy this recommendation. If you truly can only dedicate one server to your GroupWise system, you can run two MTAs on the same server to allow for a second domain. This, of course, does not give you the same type of redundancy, but can provide a backup of your domain in case of database corruption that cannot be otherwise restored. Another option is to put a second domain on a Windows workstation. Yes, you read that correctly! While this is not a typical method of providing for a secondary domain, the GroupWise MTA can run on almost any version of Windows, and can be used as a stopgap method of locating a second GroupWise domain in your system.

In any event, if your GroupWise system is contained all on a single server, you will need to plan to perform your entire upgrade (except for the clients) in a single sitting. It is vital that all components of the GroupWise system that reside on the same server be upgraded at the same time. Thus, if you have a small system, you would go through the steps of:

- [Moving a Domain](#)
- [Moving a GroupWise Post Office](#)
- [Upgrading Your GroupWise Internet Agent](#)
- [Upgrading Your GroupWise WebAccess](#)
- [Upgrading Your GroupWise Monitor](#)
- [Upgrading Your GroupWise Clients](#)

Of course, you may not have all of those components in your system, but this is the order of installation that we recommend.

Small, Multiple Server System

If your GroupWise system is fairly small (perhaps even a single post office with primary domain and gateways on another server), you have some options. Your first step of course will be to deal with upgrading your primary domain.

However, once you upgrade your GWIA and/or WebAccess, you will need to proceed quickly to your post office, so we recommend that you upgrade the post office(s) before you go to the GWIA and WebAccess if at all possible. Again, if you only have one domain, it would be a perfect time to create a second domain on one of your servers to provide redundancy, and perhaps allow you to upgrade your primary domain and post office well in advance of having to upgrade your GWIA and/or WebAccess.

Complex GroupWise System on Multiple Servers

If you have a very complex GroupWise system, you need to consider a few things that will crop up with the inevitability of not being able to upgrade all of your post offices at the same time. Here are the most important “gotchas” of a gradual upgrade:

- GroupWise 2012 clients cannot access older post offices. Thus, you cannot begin your client rollout before you actually perform the post office upgrade. This also means that GroupWise 2012 clients cannot proxy to an older GroupWise post office. If you have users on your GroupWise 2012 post offices that need to proxy to a older GroupWise post office, that particular GroupWise 2012 user will need to continue to use the older GroupWise client.
- If you use your GWIA for POP3/IMAP4 access, you will not be able to upgrade your GWIA to GroupWise 2012 until all of your post offices that service such users have been upgraded. In other words, a GroupWise 2012 GWIA running as a POP3 or IMAP4 server is a GroupWise “client” and cannot access older GroupWise post offices. We will discuss this in more detail in [Upgrading Your GroupWise Internet Agent](#). You may need to provide for an older GroupWise GWIA for your users on older post offices, and a GroupWise 2012 GWIA for the new post office users. If you are accessing through IMAP4, you might consider allowing your GroupWise Post Office Agents to serve as IMAP4 servers for your GroupWise 6 and newer users, thus allowing you to upgrade the GWIA to GroupWise 2012 right away. There are actually very few good reasons to keep POP3 around (one of them being external processes that cannot use IMAP4). If you can

convert all of your external access to IMAP4, moving the IMAP access to your POAs would definitely solve your migration issues.

- Web Access is also a “client”, and as such a GroupWise 2012 WebAccess Agent cannot access an older GroupWise post office. If you can provide for only one WebAccess Application server, you will need to wait until all post offices are upgraded to GroupWise 2012 before you upgrade your WebAccess. If you can provide two WebAccess Application servers, you can, however, create a new WebAccess for GroupWise 2012, and even use it as your “default” WebAccess location. If a user for an older GroupWise version connects to the GroupWise 2012 WebAccess, the user is redirected to the older WebAccess version. We will discuss this in more detail when we get to [Upgrading Your GroupWise WebAccess](#) later in the book.

The following chapters should get you there with minimal pain and downtime!

Our Example System

As we move through this Upgrade Guide, we will be using a fairly simple GroupWise system with just a few domains and post offices. [Figure 2-1](#) shows a snapshot of the system in question.

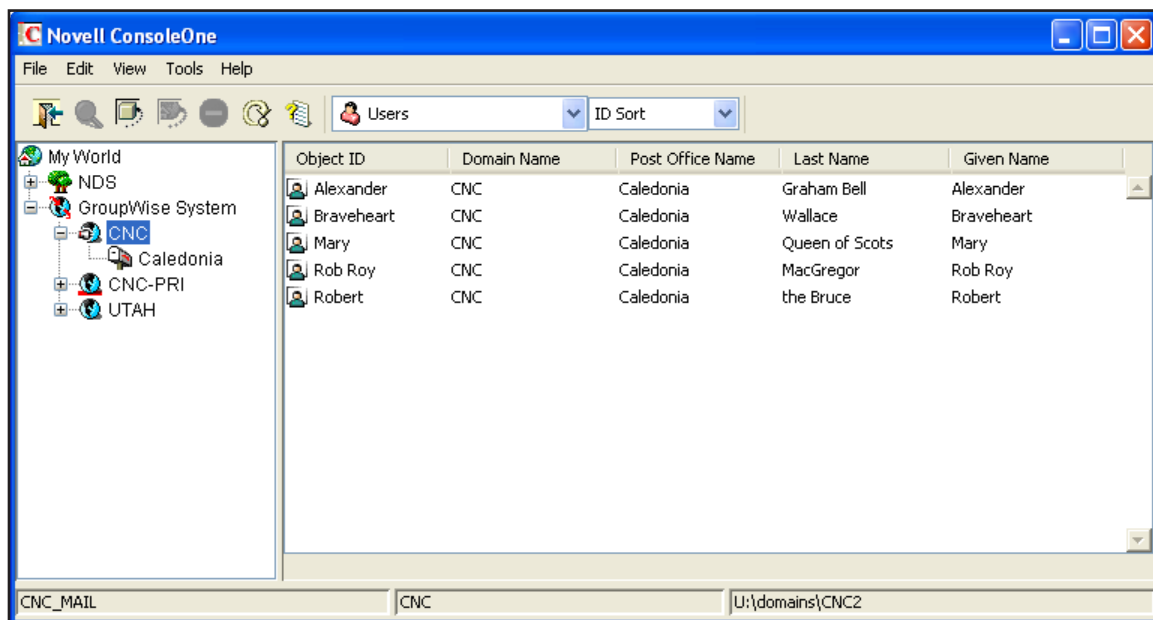


Figure 2-1: Our GroupWise System

We are upgrading from GroupWise 8, but this guide is relevant to all versions of GroupWise 5.0 through 8.0. Any time there is a version specific process to be dealt with, that will be noted. We will upgrade our primary domain, our CNC secondary domain, and our Caledonia post office in this guide. Additionally, we will upgrade our GroupWise Internet Agent, WebAccess, GroupWise Monitor and a couple of clients to usher you on your way.

A Few Important Conventions

In writing this book, we've endeavored to be as consistent as possible with formatting and naming. Here are a few of the key things to keep in mind:

- URLs are shown in all lowercase.
- Filenames and locations are shown all in lowercase and in this format: **filename.ext**. Since this book now must take into account Linux case sensitivity, we have opted to show all commands and file names in lowercase to help avoid confusion for administrators working with multiple OSs. If, however, a Linux process is in mixed case (like running **/usr/ConsoleOne/bin/ConsoleOne**), we will of course show the case requirements for the command.
- Information you must type, or commands you must execute will be formatted like this: **setup.exe**.
- PDF hyperlinks that take you to another part of the book will be in blue and underscored, like this: please see the section entitled [“A Few Important Conventions”](#).
- GroupWise 2012 will be referred to as GroupWise 2012 in this book, with the version number typically listed as merely 12.
- Since GroupWise Linux files always have the build number included in the file name (for example **novell-groupwise-admin-12.0.0-97810.i586.rpm**), the names we show in this book might not have the same build number as your software. Substitute your build number in any commands we list in the guide.

So, it's time to get started. We would recommend that you read this entire book before you begin your upgrade. We will discuss issues throughout the book that can influence your upgrade plan, and it's best to look at all of the options before beginning.

Why Move to Linux?

There are really two components to the “why” of running GroupWise on Linux. One is the technical (i.e., how does running GroupWise on Linux benefit us from an IT perspective), and the other is more political or even emotional.

The Case for Linux

There are many reasons why Linux enthusiasts, consultants, Novell, and even IT departments tout Linux over Windows. Here are a few that are most often cited:

- **Improved stability:** Linux typically has fewer operating system faults of its own, and individual applications generally do not bring an entire Linux server down. Whereas on NetWare, an administrator could choose to run a particular application in its own address space to minimize the overall impact that an errant application might have on the server, Linux applications run this way by default. So if a particular application on Linux crashes, it is unlikely to bring the entire system down with it.
- **Better application fault handling and recovery:** GroupWise agents restart in seconds on Linux. So, if you do have a post office agent or such crash, the high availability agent (or other script) can bring it back up quickly.
- **Core files are generated very quickly as well.** Each application on a Linux server can be set to generate a core file if you are having problems, and you can be back up and running within minutes (Novell says seconds, but we all know that humans also only work so fast!), and deal with getting the core file to Novell after everyone is back working in GroupWise.
- **Database stability:** According to Novell IS&T, they see far fewer database corruption issues in GroupWise databases due to hardware crashes or power problems. For whatever reason, Linux seems to manage “closing” GroupWise files more effectively during routine operation, and thus fewer files are left open to cause issues.
- **Automation:** While certainly some scripting can be used on Windows to provide ease of administration, this cannot come close to the flexibility of Linux to design management scripts, health check scripts, code deployment scripts, coredump management scripts, backup scripts and the like.

So, as you can see, there are many good reasons to move to Linux from a purely technical standpoint. However, the political and organizational reasons why a company moves to Linux are often more intangible.

The question of “why” an organization moves to Linux is very important, but often not given nearly enough thought in our experience. It’s a given that we have to move somewhere. NetWare is no longer a supported platform for GroupWise agent components.

GroupWise is and has always been a somewhat rare exception to the Novell application offerings. GroupWise has always been available as a multi-platform product, and has been less tied to NetWare than any other Novell product (there are some other exceptions as well, but we aren’t going to get into those!!). eDirectory is also available on multiple platforms, but it seems to always be less for its own sake than to allow things like GroupWise and other Novell applications to exist on other platforms. For example, while eDirectory runs on Windows, we know of very few sites who use eDirectory as the primary directory for their Windows only networks. When eDirectory appears on a Windows server, it’s almost always to support something like GroupWise without needing a NetWare server in the mix.

There is no doubt that Linux is the true present and future of Novell products. That said, small companies where there is little or no Linux administrative experience should think good

and hard about making this move before they are really ready. When customers ask us if they should move GroupWise to Linux, we have two important questions:

- Who in your organization knows Linux well enough to administer GroupWise on that platform?
- Why do you see moving to Linux as an important business decision?

Here are some of the most common responses:

- We can't run GroupWise 2012 on Netware, so we must move. It doesn't matter that we have no Linux experience at all, our salesperson says it just needs to be done, and we'll be able to deal with it. Our secretary who knows how to reboot the NetWare server when we're having trouble will be able to do the same with the Linux server, won't she?
- With the changes in GroupWise 2012, it's time to move on, and Linux seems the obvious choice. We're looking at moving things over slowly, perhaps putting a GWIA or WebAccess on Linux first, and getting our feet wet before we move our post offices to Linux. Our administrators are working with Linux in a testing environment, and we should be in a good position with our Linux knowledge by the time we complete our migration.
- We have a comprehensive plan to move all of our mission critical operations to Linux. We have a lot of experience in the area. We have other applications and processes running on Linux now, so adding GroupWise to Linux will be easy for the Linux administrators. Hopefully the GroupWise administrators will not have too many problems, but we have a good set of people to support them if there are issues.
- We have to do something. We don't want to move to Windows, we have to move GroupWise to something. We don't have much choice here, and I think we'll send the GroupWise administrators to a couple of Linux classes and then plan to get everything moved over during the upcoming long weekend about two months from now.

While you might think that the first scenario above is the most scary for us, it's really not as frightening a situation as you might think. Certainly, we have small GroupWise customers who have no network administrators or GroupWise administrators on site, and rely on consultants to handle all of their networking needs just like the customer in the first scenario. For those, generally NetWare is just as foreign a concept as Linux. They don't know Fat32 from NSS from NTFS; eDirectory from Active Directory. In many ways, for those customers, moving to Linux is all about the expertise of their consultants. If the consultant understands Linux, and can get to the office quickly when there is a problem, then the situation is not much different than with the current NetWare servers.

The second scenario is one that we like to see. For sites that currently have no Linux, bringing up a Linux server and installing WebAccess or a GWIA is very good practice, and gives the administrator something to cut his/her teeth on without having to worry about that all important post office with those databases full of information that we all need! Since WebAccess and the GWIA are essentially "pass through" processes, there is very little catastrophic that can happen by moving them to a Linux server. Certainly, a site could experience some downtime of WebAccess or Internet e-mail if that new Linux server isn't well understood, but actual data loss is unlikely. Of course, if you wish to put WebAccess or a POP3/IMAP4 GWIA on Linux before you upgrade all of your post offices, you will need to leave your current POP3/IMAP4 GWIA and WebAccess in place to service those GroupWise 8 post offices until after the upgrade is complete.

Perhaps the most appealing and frustrating things about a move to Linux for folks in the second scenario is that like NetWare, once you get the Linux server installed and working to your satisfaction, it just seems to run. This is very appealing, because you don't worry that much about whether or not the system is working. It's also very frustrating though, because this also means that there is very little opportunity to learn by doing over and over again! Years

ago, when we first began our work with GroupWise on Linux, it took us months to remember things as simple as how to install an RPM! Danita had to write everything down, and look at her notes constantly in the beginning, because it was often weeks, if not months between times that she needed to truly “fix” something on the Linux servers. She ended up formatting her laptop hard drive and installing Linux on it, with VMWare for Windows, so that she would have to be confronted with Linux every day in order to learn it. Not everyone will be as ambitious as that in order to learn Linux, but we have to say, it really worked!

The third scenario is more common for large networks. We occasionally find a small to mid-sized company that has a good deal of Linux experience, but the typical organization that will have a lot of Linux experience on-site is a bit larger. The general downside with these installations is that the Linux administrator has a lot of Linux experience, but does not understand GroupWise, and the GroupWise administrator has a lot of GroupWise experience, but does not understand Linux. This can result in a lot of confusion in and of itself. So while this is generally a “happier” situation than some, it does not ensure clear sailing for the GroupWise migration. It will be necessary for the GroupWise administrator to learn some Linux in order to deal with management of the server, but it’s a nice warm feeling to know that someone in the organization will be able to help with critical issues (and maybe even just some hand holding).

The last scenario seems to be the most disconcerting though. There are many sites that are feeling a “push” to do something. They have enough Novell enthusiasts on the team to avoid a move to Exchange, and feel like moving GroupWise to Windows would be a “step down” or maybe even opening a door to a future move to Exchange. They are accustomed to the ease of managing GroupWise, and somehow feel like it should just be a “breeze” to get to Linux. It’s likely that no one in their office has ever touched Linux. While the perfect solution would be to hire a Linux administrator and bring him/her up to speed on GroupWise, that is threatening to the current administrators, and they are often willing to just say “I know I can do that” and then try to cram in as much Linux experience as they can in the next two months in order to avoid risking their authority in the department, or even their very jobs, by bringing in a new “Linux expert”.

In these scenarios, we always recommend a step back, and an assessment of just what can be done in order to bring the situation under control. If there is truly good management support to bring in Linux, then we try to slow down the push for the ultimate move and recommend a graduated solution such as the second scenario above. In some cases, we will flat out recommend that the customer move GroupWise to Windows if the Linux skills of the organization seem minimal, with little likelihood of changing in the near future.

Now, let’s be clear: We at Caledonia think that Linux is really the way to go for GroupWise. That said, however, there are some situations where a move to Linux just does not seem to make sense or even be prudent. In those cases, we caution customers against making rash decisions for the “big move” based on what “everyone else is doing”. After all, we didn’t all move to Exchange just because “everyone else is doing it”. And indeed, if moving GroupWise to Windows seems more reasonable for a customer, we have a section in this book for that as well!

Developing Linux Skills

The primary purpose of this Section of our book is to assist you in moving your GroupWise system to Linux. It is beyond the scope of this book to teach you everything there is to know about Linux! That said, there were be times when we give you hints about how to facilitate Linux commands, expound upon the differences between Linux mount points and mapped drives and drive letters, case sensitivity and other sundries. We will try our best to cover all of the

“gotchas” of moving to Linux. You will need to bring a certain level of Linux expertise to this party though.

In our discussion above of the move to Linux, one of the major considerations was the Linux expertise of those in your organization who will be managing the GroupWise system. Unless you fall into scenario #1 above, having someone on your staff who really understands Linux is crucial. If you fall into either scenario #2 or #4 above, it’s important to find ways to improve the Linux skills in your office. There are various ways to do this.

Using Linux to Learn It

As mentioned before, hands on use of Linux is by far the best way to learn Linux. Here are a few ideas about how to learn Linux better:

- **Put Linux on your workstation:** We know this seems to be the most drastic of any of the possibilities, but it certainly gets the job done. We have found that with Linux in a virtual machine on an administrator’s Windows workstation, the administrator is rarely forced to use Linux. On the other hand, with Linux as the primary desktop OS, there isn’t much choice but to learn to install RPMs frequently, learn Linux command line utilities, etc. Linux at the desktop is really the “fast track” to learning about Linux on a daily basis.
- **Put Linux in a virtual machine on your workstation:** You can either put a desktop version of Linux in a VM and try out things like the GroupWise client for Linux, OpenOffice for writing reports, etc, or you could install a Linux server product into the VM and learn to install web server components, play with user permissions and the like.
- **Set up a full blown Linux test lab:** Some mid-sized to larger companies will not even consider their move to Linux for GroupWise without a full test lab. This is a very good way to get to know GroupWise on Linux before you actually make the move. If you have External Document Storage Locations for GroupWise Document Management, we highly recommend that you build a test lab and model your current system. As you will see when we get to the moving of Document Storage Locations, this is probably the most time consuming and difficult part of moving to Linux.

Studying Linux

There are many excellent resources for Linux available. We can’t even begin to list them all. Novell has some wonderful self-study kits; there are many good Internet resources; books galore. Find something that makes sense to you and have good reference materials at hand so that you can look up issues when they pop up. And don’t forget the folks at <http://forums.novell.com> to help with both GroupWise and Linux issues.

Special Considerations for Linux

Before we start, we will outline some of the special concerns about moving to Linux, and then we will start moving.

Here are a few things to consider before and during your move to Linux:

- You have two general options for GroupWise on Linux. You can choose SuSE Linux Enterprise Server (SLES) or Open Enterprise Server (OES). There are benefits to each, which will be discussed below. While some sites have done workarounds to make GroupWise run on Redhat, for example, we do not feel that it is in your best business interests to try to force this issue, especially since you essentially have SLES for free (see our discussion on server OS below).

- Linux has many more options for file systems, and depending on the version of Linux you use (SuSE Linux Enterprise Server or Open Enterprise Server) you will have different possibilities for file systems. We will discuss file systems in detail below.
- Linux is case-sensitive. GroupWise on Linux will expect all file names and directories to be all lower case. We will discuss options for getting there later in this chapter.
- Linux isn't always easily accessible, at least not in the way you've become accustomed to with NetWare. What that means is that perhaps not all of your administrators will have access to ConsoleOne running in the GUI on your Linux server. As you move your primary domain to Linux, make sure you grant rights to all administrators necessary to administer the primary domain.
- Post Offices with DMS have three important issues to deal with:
 - Document Storage Locations need to be redefined when you move them. You must make sure to indicate not only the UNC value for the document storage location, but also the "Linux" location for the documents. (Some sites prefer to move their documents under the post office before making a move to Linux, and quite honestly, if this is at all possible, it is our preference at this time. We will discuss the pros and cons of this as well when we discuss moving GW DMS to Linux).
 - There is no Document Properties Maintenance applet available for ConsoleOne on Linux. Thus, you will need to enable Samba and access the post office via ConsoleOne on Windows to make changes to your document properties. If you are on OES, you can use NCP for access to the GroupWise databases.
 - There is no GroupWise "Import/Export" applet for ConsoleOne on Linux. Many DMS sites use this tool for importing documents, fixing document number issues and the like. As above, you would need to run ConsoleOne on Windows in order to use this applet.

Once you have chosen your Linux distribution, you will need to make sure that a few items are installed when you install the server. While we do not intend to go through all of the steps of installing and configuring your Linux server, we will point out a few requirements and recommendations for the Linux server.

For OES, make sure that the following options are installed:

- NCP™ server
- eDirectory™
- Linux user management (if you wish to LUM enable your administrators for easy access to the GroupWise directories)
- GUI libraries (GroupWise dependencies)
- ncpfs to move your GroupWise domain from NetWare

For SLES, make sure the following options are installed:

- GUI libraries (GroupWise dependencies)
- Samba Server if you intend to manage your system later via ConsoleOne on Windows
- ncpfs to move your GroupWise domain from NetWare

The Great Linux File System Debate

When moving to Linux from NetWare or Windows, perhaps the most confusing issue is which file system to use. While both Windows and NetWare have multiple file systems (NSS vs. Traditional, NTFS vs. FAT), it has become fairly common for sites to simply use NSS on NetWare and NTFS on Windows without much thought about it. Linux has many file systems. Here are some of the file systems you will hear about:

- EXT2
- EXT3
- ReiserFS
- XFS
- NSS

Let's talk about each of these in more detail.

- **EXT2:** This is essentially the second generation of the “Extended File System” for Linux, and was the default file system for many distributions until EXT3 came along. It is still often used for boot partitions and places where journalling isn't terribly important.
- **EXT3:** This is the third generation of the “Extended File System” and includes journalling (i.e., changes are logged to a journal so that they can be replayed in case of a power outage or other failure, thus helping to prevent corruption in such cases). EXT3 is very popular and stable. It is, however, somewhat slow, especially when dealing with a lot of very small files (which is a common situation for GroupWise). That said, EXT3 is Novell's stated recommendation for GroupWise 2012 systems.
- **EXT3 with HTree:** EXT3 has an optional function that creates additional indexes for the system, which can speed up the access of files tremendously. This would seem to be a very useful function for GroupWise. However, the nature of how these indexes are written worries the GroupWise developers greatly. While some smaller sites have enabled HTree without incident, there is a real possibility of data truncation when HTree is used on EXT3. For this reason, Novell obviously discourages the use of HTree on GroupWise systems. We defer to the engineers on this one. Caledonia does not wish to be the “source of authority” that promotes HTree only to later find out that indeed it causes even one customer to lose vital GroupWise data! Use something else. It is important to note that EXT3 has HTree turned off by default, so you would have to consciously enable it in order to sustain this risk. EXT4 enables HTree by default. EXT4 is, however, not yet widely used.
- **XFS:** XFS is a robust file system that provides for very fast access for large file systems and large files. While it seems like a very good choice for GroupWise on initial consideration, it also uses 64 bit calls that worry some of the GroupWise engineers. We do not know of any large test scenarios for GroupWise that have used XFS, so indeed we are also leery of this particular file system for GroupWise. In the future, if Novell releases some testbed benchmarks for XFS that remove some of these worries, XFS might be a good alternative file system. For now, we stay away from it.
- **ReiserFS:** Reiser is a very popular file system, and was the recommended file system on Linux for GroupWise for quite awhile. Reiser is still quite popular among Linux administrators. But as loved as Reiser is, it also has its detractors. Reiser seems more “fragile” than EXT3 when there is a problem. And of course, with the original developer of Reiser no longer available, no one really knows what the future holds for this file system.
- **NSS:** Technically, NSS is only available on OES Linux (we say technically, because there are of course possible ways of compiling SLES to allow for NSS, but when we

speak of NSS we typically expect that you are running OES). While NSS on OES1 posed some problems, not only for GroupWise, OES2 NSS seems quite stable for GroupWise systems. Some sites will be very tempted to use NSS if for no other reason than their current NSS partitions can easily be converted over to their new Linux system without having to actually “move” the data (i.e., the Linux server will simply read the NSS drive that was on NetWare before). That said, “converted” NSS volumes will suffer many performance problems that a new NSS volume, configured with GroupWise in mind would not have.

Technically, while Novell Clustering Services is available for all supported file systems on OES 2, NSS will be the fastest for GroupWise in a cluster.

Perhaps the one reason why we would love NSS is the option of salvage. However, Novell recommends that if you use NSS for GroupWise, you turn off salvage!

Our recommendation for the file system depends in good part on where the GroupWise data will reside, and which Linux OS you choose. Here are, then, our recommendation:

- NSS for OES
- EXT3 on SLES
- What about ReiserFS?

NSS for OES

Our testing has shown that the following NSS setup is the best configuration for GroupWise:

- create a new NSS volume
- disable salvage at create time so no salvageable files will ever have existed on the volume
- change the default name space (again so none ever existed any other way) to UNIX
- enable the noatime option for your volume in /etc/fstab
- **volname vol_mountpoint nssvol noauto,rw,name=volname,noatime 0 0**

Our friends at NDS8 (<http://www.nds8.co.uk>) have seen as much as a 50% performance increase with this configuration over a “reused” NetWare NSS volume. So, while it is very convenient for sites moving from NetWare to Linux to not “move” the data, the very rich NSS features are largely unneeded for GroupWise, and there will be tradeoffs that might outweigh the initial time savings on the migration of data.

If you do choose to keep your current NSS volume, make sure that you do the following:

- Files and directories should be converted to all lowercase
- Turn off salvage completely
- enable the /noatime command in NSSCON

The conversion to lowercase can be done fairly quickly with free or shareware Windows utilities, or Linux scripts that change the case. We prefer a simple Windows utility called Change Case. It can be found at many download sites with a quick “google”.

Even knowing that we recommend against it, some sites will choose to “reuse” their current GroupWise NSS volume to avoid the downtime of a copy of the data. It is beyond the scope of this book to cover all aspects of moving an NSS pool/volume from a NetWare server to a Linux server. There is ample documentation for this process found on the Novell documentation site at http://www.novell.com/documentation/oes2/stor_nss_lx_nw/data/bt8gbxo.html.

There is of course one other reason to put GroupWise on NSS on your Linux server, and that is simply “comfort level”. Most NetWare administrators who are unfamiliar with Linux have a certain sense of security leaving their GroupWise systems on NSS. We are not going to argue with that!

All in all, NSS seems to be the best choice for GroupWise if you have it available, especially for clustering. It will be fast and stable. It will not, however, behave exactly as you are accustomed to on NetWare, especially if you take the recommendations to heart to pare down the NSS options for your GroupWise volume.

EXT3 for SLES

EXT3 is becoming the preferred file system for GroupWise on Linux when NSS is not available. It certainly has some speed issues, but we are not convinced that the benchmarks comparing EXT3 and Reiser are that noticeable in daily usage on GroupWise. Indeed, EXT3 is the default file system on OES 2/SLES 10 for native Linux partitions, and it is likely that this will remain the case for some time. There is one huge caveat that you must remember though: as tempting as the idea of HTree on EXT3 might seem, do not risk your GroupWise system to this indexing method. In the future, this could change, but as of the time of this writing, we cannot stress enough that this is a dangerous combination.

NOTE: Remember that HTree is not enabled by default, so a standard installation of SLES 10 or OES 2 will not turn this on without your knowledge.

What About ReiserFS?

ReiserFS is a popular file system for many Linux administrators. Certainly there is no immediate problem with using ReiserFS. That said, any administrator who has lost an entire ReiserFS partition and been forced to restore from the most recent backup will probably have been burned badly enough to not use ReiserFS again. But perhaps the biggest issue with ReiserFS is that there is no guarantee of the future of the file system. This one is still a “wait and see” situation. If you like ReiserFS and want to use it, we won’t object. Just know that future versions of OES or Linux may eventually deprecate or even stop supporting this file system. For now though, if it works for you, Reiser is still a very fast and useful file system for GroupWise.

Understanding Linux Mount Points

As we discussed above, we are not going to “teach you Linux” in this book. There are, however, various Linux concepts and ideas that we will expound upon and Linux Mount Points is one of those concepts.

If you wish to copy data directly from a NetWare server to the Linux server (which we will want to do!), you need to be able to see the data on the NetWare server from the Linux server.

In the NetWare world, for a NetWare server to access a volume on another server, everything is done via UNC paths (**\\server\volume\path**), or NetWare pathing (such as **SERVER/VOLUME:Path**). Windows can also use UNC paths for the connection, or map a drive letter to the remote location.

Linux doesn't really use UNC paths for anything. In order for Linux to access a file system on another server, Linux simply "mounts" that file system into its own file system hierarchy. In some ways, this is similar to how a Windows server (or workstation) might assign a drive letter

to a volume on another server. If you mount **\\gwserver\gwwollgwdata** to **g:** you now know that you can bypass entering all of the path to the server, and simply go to “**g:**” to access the GroupWise data volume.

Likewise, in Linux, a “mount point” is created for the `\\gwserver\gwwol\gwdata` location, and then you simply navigate to that directory on your Linux server and you see all of the files on the NetWare volume that you have mounted.

Traditionally, Linux puts all of the “external mount points” into the directory structure under /mnt. There is no technical requirement for putting your mount points in /mnt, but it is a nice, standardized location for them, so we will use that for our examples.

So, let's say that we wanted to be able to see all volumes on our NetWare server where the current GroupWise system resides. We could create a `/mnt/netware` directory for the structure, or we might prefer to create directories by server name. If we were to choose the latter, we might create a directory called `/mnt/gw1` for a NetWare server called "gw1". Indeed, ConsoleOne expects you to use the `/mnt/servername` format to mount your GroupWise servers when administering a multi-domain GroupWise system from Linux.

The following are instructions on how to mount volumes from a NetWare server into the Linux file system.

To mount the NetWare volumes into our Linux file system, we would perform the following steps:

- On the Linux server, open up a terminal window.
- **"su root"** to become root for this session.
- Create a directory structure for your mount point. For our purposes, we have created **/mnt/gw1** as the mount point for our NetWare server.
- We have chosen to connect to our NetWare server via ncpfs. To mount the NetWare server via ncpfs, issue the following command

```
ncpmount -S server -A 123.123.123.123 -U userid -P password /mnt/gw1
```

replacing your server name for “server” and your server’s IP address for 123.123.123.123. For example

```
ncpmount -S gw1 -A 192.168.100.200 -U danita.cnc -P password /mnt/gw1
```

NOTE: You might wonder about the “user.context” vs. “.user.context” in this example. While “.user.context” works on some versions of Linux, it fails on others. In our testing, “user.context” has always worked on all versions. You might keep this in mind if you experience any problems authenticating with ncpmount.

This will actually mount all volumes from the NetWare server to this location. So, if we `cd` to `/mnt/gw1` we will see a directory called `SYS`, one called `GWDATA`, and any other volumes that are on that server.

Dealing with Linux Case Sensitivity

If you look at your current GroupWise domain and post office directories, you will notice that many files and directories are in all uppercase, and many are all lowercase. It is important to know that while both NetWare and Windows “respect case” during the “save” process, neither of them “discriminate case” upon reading. Now, this might be a long way around saying they are not “case-sensitive,” but it’s an important concept to understand. Let’s take an example. If a

- Use Samba on SLES to access the GroupWise databases from ConsoleOne on Windows.
- Use NCP on OES2 to access the GroupWise databases from ConsoleOne on Windows.

Running your GroupWise Agents as Linux Daemons/Windows Services

Perhaps one of the most difficult transitions for GroupWise Administrators (especially those running GroupWise on NetWare), is getting used to the idea that you will no longer have a GUI console for your agents. While many Windows administrators are accustomed to running their agents as services with no console screens, this is a very foreign concept to GroupWise Administrators who run GroupWise on NetWare. This is something that you simply must accept. No amount of arguing or begging will change the fact that while there are GUI Consoles on Linux and Windows that can be used for testing, you should rarely (we'd rather say never) use the GUI Console for the agents in production on a Linux or Windows server. In order to use the GUI Consoles, the user running the GroupWise agents must always be logged into the Linux or Windows server. This is not something that is recommended by Novell or Caledonia, and it is definitely seen as a taboo by both Windows and Linux administrators. You will need to learn to love the HTTP Monitors for the GroupWise agents. If you have never used the HTTP monitors before, we'll walk through enabling them, and looking at their features.

The GroupWise Server Migration Utility

Novell has a utility called the GroupWise Server Migration Utility. The purpose of the utility is to facilitate the move of GroupWise systems from NetWare to Linux or Windows. In this book partly because we wish to avoid installing an "older" version of GroupWise on your new Linux server, and partly because we think understanding the move is important, we will teach you how to move your GroupWise system to Linux entirely by hand. We think this is the best way to approach the move. That said, however, there are people who just like to have a GUI and a Utility to assist them through such moves. While we will not use the GroupWise Server Migration Utility in this book, we will not be hurt if you decide to use the utility for your move. The knowledge about what happens "behind the scenes" in a move to Linux that you will gain from this book will help you should anything go wrong during the use of the migration utility. So, if when the time comes to do the move you decide to use the migration utility, hopefully you will be able to approach the migration tasks with increased confidence in your abilities and better understanding of the processes behind the migration. Understand though, that the Migration Utility will not perform a move and an upgrade simultaneously. The only way to use the Migration Utility is to migrate at your current version of GroupWise to Linux, and then after the system is running on Linux, perform an upgrade.

Novell Client

You will need to install the Novell Client for Windows on any Windows server that will install and run GroupWise agents. If you do not have the Novell Client installed on your server, you can download it from <http://download.novell.com>.

Extracting Your Software

Once you receive your GroupWise 2012 media (typically as a download from your Customer Portal), you will of course be very anxious to get started! For the Windows version, if you download the software it will most likely be in a self-extracting EXE file or a ZIP file. You can unzip it with your program of choice into your new Master SDD location. If you are downloading the Linux files, they will be in a tar.gz file. Use **tar -xzf** to extract it. For example, in the directory where you wish to make your Master SDD (perhaps **/grpwise/gw12soft**):

```
tar -xzf gw12.0.0-97810_full_linux_en.tar.gz
```

Most sites will want to place the GroupWise software in an accessible location out on the network. Where you put it is up to you, but it must be accessible from the Linux or Windows server where you will install GroupWise.

Install DBcopy

The most important part of our installation for the migration needs to be installed before we proceed. That component is the GroupWise DBcopy application. DBcopy is a utility that was originally developed by Novell as a backup tool. DBcopy can copy GroupWise databases while they are open, thus ensuring a good backup without worrying about files being skipped because they are open. Over the years, DBcopy has been optimized to also include functionality needed for a move or migration of GroupWise from one location to another.

Windows

If you will be moving a post office to a Windows server, you will want to have access to Novell's DBCopy utility. This is found in the \admin\utility directory of your software distribution. You can copy the DBCopy files to another directory on your Windows server, or simply run the program from the directory in the software distribution.

Linux

In order to install DBCopy, we will need to drop to a terminal window.

1. In the terminal window, change to the directory where your extracted GroupWise distribution files are located. There is an admin directory in this directory structure.
2. Change to the admin directory, and you will notice a number of files, including one for **novell-groupwise-dbcopy**. The remainder of this file name will vary, depending on the version of GroupWise that you are installing.
3. We will now install DBCopy by executing the following command:

```
rpm -Uvh novell-groupwise-dbcopy-8.0.1-88138.i586.rpm
```

Of course the above file name is the one for our distribution. Your file name may vary.

4. Once the rpm has been installed you will be returned to the terminal prompt.
5. You can verify that DBCopy has been installed by typing:

```
ls /opt/novell/groupwise/agents/bin
```

With the initial server preparation done, we can now start our GroupWise components move. We will begin with a domain move in the next chapter.

4 Moving a Domain

This chapter will help you move any domain from a NetWare server to a Linux or Windows server. Remember that since we are also upgrading at the same time, you must move/upgrade your primary domain before you move any secondary domains.

If you have post offices that reside on the same NetWare server, those post offices can continue to be accessible while you move the domain.

In the previous chapter, we installed the DBCopy utility that we use to migrate the data from the source server to the new Linux or Windows server. Additionally, during the setup of your Linux server, you installed ncpfs, which allows us to attach to a NetWare server via NCP copy the data. The steps we will take are as follows:

- Create a mount point on Linux for the NetWare server, or map a drive from Windows to the NetWare server.
- Unload the existing Message Transfer Agent (MTA) for the domain you are moving. We will need exclusive access to the domain database, so no gateways should be loaded.
- Unload any gateways associated with this domain.
- Rename the domain directory to avoid any accidental access while we are relocating the domain.
- Ensure that all file and directory names for the domain are lowercase if you are moving to Linux.
- Copy the domain directory structure from its current location to the new Linux or Windows server using DBCopy.

After these steps, we will proceed to the chapter on *Upgrading Your GroupWise Domain*.

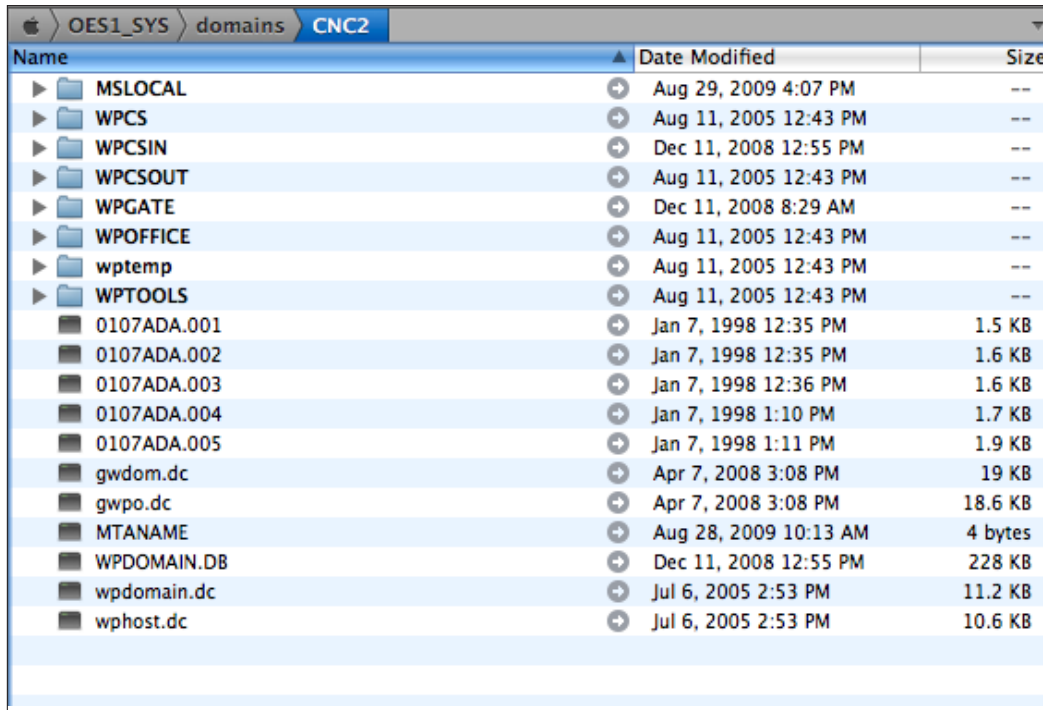
So, let's see how this all works.

Attach to Your NetWare Server

Linux - Create a Mount Point for the NetWare Server

In order to move your domain from NetWare, you need to attach to the NetWare server from your new Linux server. To mount the NetWare volumes into your Linux file system, perform the following steps:

1. On the new Linux server, open up a terminal window.
2. “**su root**” to become root for this session.
3. Create a directory structure for your mount point. For our purposes, we have created **/mnt/gw1** as the mount point for our NetWare server that is named **gw1**. It is suggested that you replace **gw1** with the actual name of your NetWare server for ease of recognition later.
4. We have chosen to connect to our NetWare server via ncpfs. To mount the NetWare server via ncpfs, issue the following command



Name	Date Modified	Size
▶ MSLOCAL	Aug 29, 2009 4:07 PM	--
▶ WPCS	Aug 11, 2005 12:43 PM	--
▶ WPC SIN	Dec 11, 2008 12:55 PM	--
▶ WPCSOUT	Aug 11, 2005 12:43 PM	--
▶ WPGATE	Dec 11, 2008 8:29 AM	--
▶ WPOFFICE	Aug 11, 2005 12:43 PM	--
▶ wptemp	Aug 11, 2005 12:43 PM	--
▶ WPTOOLS	Aug 11, 2005 12:43 PM	--
0107ADA.001	Jan 7, 1998 12:35 PM	1.5 KB
0107ADA.002	Jan 7, 1998 12:35 PM	1.6 KB
0107ADA.003	Jan 7, 1998 12:36 PM	1.6 KB
0107ADA.004	Jan 7, 1998 1:10 PM	1.7 KB
0107ADA.005	Jan 7, 1998 1:11 PM	1.9 KB
gwdom.dc	Apr 7, 2008 3:08 PM	19 KB
gwpo.dc	Apr 7, 2008 3:08 PM	18.6 KB
MTANAME	Aug 28, 2009 10:13 AM	4 bytes
WPDOMAIN.DB	Dec 11, 2008 12:55 PM	228 KB
wpdomain.dc	Jul 6, 2005 2:53 PM	11.2 KB
wphost.dc	Jul 6, 2005 2:53 PM	10.6 KB

Figure 4-1: Domain Directory Structure

All files and directories for the domain and post office on Linux must be all lowercase, otherwise the agents will simply not see the “proper” file and will fail to load. Prior to loading the MTA on our new Linux server, we will need to change the case of all files and directories for the domain. We will use DBCopy for this purpose.

DBCopY makes no changes to the original files in the domain directory. If needed, you could simply rename your domain directory back to its original name and load your MTA back up on the source server.

To Linux

When running dbcopy, you will find that DBCopY on the Linux server does not run well from any directory other than `/opt/novell/groupwise/agents/bin` so we will `cd` to that location to run the utility. Run DBCopY to copy your files from the source server to the Linux location like this:

```
./dbcopy -m -d <source> <destination>
```

so for our situation it would be

```
./dbcopy -m -d /mnt/gw1/GWDATA/domains/cnc2.old /grpwise/domains/cnc2
```

This will copy all needed data from the old domain directory into the directory structure that we’ve indicated for the destination. In our case, we have chosen to locate our domain in `/grpwise/domains/cnc2`.

The `-m` switch copies the files over in all lower case. The `-d` switch tells DBCopY that it is migrating a domain. Generally this will not take long at all to perform the copy. Unless you have many files in your existing MTA queues, there is not really much to copy!

5 Upgrading Your GroupWise Domain

In the previous chapter, we discussed moving your domain either alone, or with gateways. This chapter will upgrade your domain, regardless of whether it was moved by itself, or holds gateways. After you upgrade the domain, you may need to proceed to the chapters on *Upgrading Your GroupWise Internet Agent* or *Upgrading Your GroupWise WebAccess* to continue.

How Does the Upgrade Work?

At the domain level, a GroupWise upgrade is really just a database conversion from one version to another. The former GroupWise domain database (version 5.0 through 8.0 works the same), is RECOVERED by the MTA's administrative thread and CONVERTED to the new version. For a primary domain, this requires two simple components:

- The Message Transfer Agent software must be at GroupWise version 2012
- The dc (dictionary files) in the domain directory must be at version 2012

For a secondary domain, a further prerequisite is that the primary domain must have been upgraded, and the secondary domain must have received the notification from the primary domain that it is now a GroupWise 2012 domain and the secondary is allowed to upgrade

We realize that this sounds simplistic, but it really is that simple. When you upgrade your domain, you are simply recreating your domain database to be a GroupWise 2012 database. This update then triggers a message to be sent to any post offices that might be owned by the domain,. If you are upgrading the primary domain, the message is also sent to any Secondary Domains that are in the system. This message updates the post offices and secondary domain databases with the information that the primary domain is now a GroupWise 2012 domain. Unless this message is properly delivered (MTAs are down, POAs are down, etc.), the other domains and post offices will not upgrade, even though they may be running the GroupWise 2012 software for their agents. We'll discuss this more as we walk through this upgrade.

Installing ConsoleOne

Of course, you can't really do much of anything without the latest version of ConsoleOne and the GroupWise 2012 snapins for ConsoleOne, so that's the first order of business. As mentioned in [Chapter 2](#), GroupWise 2012 requires ConsoleOne® 1.3.6h or later. This is included in the GroupWise 2012 media. This also requires Java Virtual Machine (JVM) 1.5.11 or later, which is installed along with ConsoleOne. It is very important that you upgrade ConsoleOne to this version. The GroupWise 2012 snapins will not function with older versions of ConsoleOne.

If you do not have at least ConsoleOne 1.3.6h installed on your administration workstation, you should install it now. While there is an installation routine in the GroupWise setup that allows you to install ConsoleOne and the snapins during the installation of your agent software, we want to go ahead and check the schema of your eDirectory tree before we jump into the actual upgrade. If you already have ConsoleOne 1.3.6h or greater installed, you can skip to [“Updating Your ConsoleOne Snapins”](#) below.

Locations for Administering GroupWise

For those of us who are long time GroupWise on NetWare administrators, the question of where to place ConsoleOne seems very straightforward. We run it from our workstations of course! And certainly since you will have GroupWise 2012 on Windows servers or Linux servers you can continue to administer GroupWise directly from your workstation, provided that you have direct file access to the server housing GroupWise. For Windows of course this would mean that you must have file access from your workstation to your Windows server. For Linux the same thing applies, but can be much more confusing. If you are running GroupWise on OES2 Linux, you can serve up your GroupWise volume as an NCP volume (regardless of the file system you are using), and map that drive just as you would a NetWare drive. If you are running GroupWise on SLES, you would need to load SAMBA and mount the drive from your Windows workstation as though you were accessing a Windows server. **UNDER NO CIRCUMSTANCES** should you serve up your GroupWise volumes under Linux as an NFS mount. This can cause serious file locking issues, and ensuing corruption of your GroupWise databases.

Even though it is possible to administer your GroupWise system on Windows or Linux from your local Windows workstation, many administrators choose to run ConsoleOne directly on the GroupWise server itself. To install ConsoleOne on your Windows server, install ConsoleOne and the snapins on the Windows server the same way as you do your Windows PC. Instructions for installing ConsoleOne on both Windows and Linux follow.

Windows

In your Master SDD created above, you will find a directory called “**ConsoleOne**”. Run the **install.exe** program in this directory to install ConsoleOne on your administration server/PC. By default this is **c:\novell\consoleone1.2**. If you have located this somewhere else on your PC (for example on **d:**), the installation routine should detect this. It is a good idea to double check this during installation to avoid having two separate versions of ConsoleOne on your server/PC unless you wish to have two versions for some special purpose. The installation will create a shortcut to ConsoleOne if this does not already exist.

Linux

In your Master SDD created above, you will find a directory called “**consoleone**” and a subdirectory called “**Linux**”. From a Linux terminal prompt, change to your Master SDD (in our example below **/grpwise/gw12soft**) and perform the following commands:

```
cd /grpwise/gw12soft/consoleone/Linux
./c1-install
```

You will now go through the installation routine for ConsoleOne on your Linux server. ConsoleOne on Linux is launched by running **/usr/ConsoleOne/bin/ConsoleOne**.

Updating Your ConsoleOne Snapins

Once your version of ConsoleOne is at 1.3.6h or greater, you also need to update your ConsoleOne snapins for GroupWise 2012. You can do this during your initial domain software installation (see “[Installing your Agent Software](#)” below), or you can do it manually from your SDD. Whenever you receive new GroupWise software, it is not really necessary to run the installation routine to update your GroupWise snapins. While it is convenient to do so if you

are in the midst of installing the GroupWise agents anyway, if you need to roll out the snapins to multiple PCs, you can simply follow these steps:

Windows

In your Master SDD under the Admin directory, there is a **C1ADMIN** directory. Under there you will see directories such as **bin**, **snapins**, etc. The “simple” way to update your ConsoleOne snapins is to copy all of these directories into the **c:\novell\consoleone\1.2** directory (assuming that is where you have installed ConsoleOne). Under that directory are also directories called **bin**, **snapins**, etc., and you will be prompted if you should overwrite those directories. Answering in the affirmative will copy the new snapins into the ConsoleOne structure and you will be ready to go!

NOTE: Some manual updates of the snapins might fail due to missing VS2005 runtimes. If you run into a problem with ConsoleOne after manually copying the snapins, run <SDD>\gwinst\vc_redist_x86.exe.

Linux

For the most part, it is easiest in Linux to just run the install routine and choose to install the GroupWise Administration. However, this will frequently force you to upgrade all other GroupWise components on that server, so we’ll show you how to update the snapins manually. From a Linux terminal prompt, as root change to the installation directory for the snapins as follows:

```
cd /grpwise/gw12soft/admin
rpm -Uvh NOVLc1Linuxjre-1.5.0-11.i586.rpm
rpm -Uvh novell-groupwise-admin-12.0.0-97810.i586.rpm
```

This will install your ConsoleOne snapins. Please note that the file names above are the file names as currently listed in the GroupWise 2012 download. These will change with new versions of GroupWise as they are made available via download. Substitute the versions of these files as necessary. If you receive an error that there are dependency problems when upgrading your snapins, you should add the --force switch to the command. For example:

```
rpm -Uvh --force novell-groupwise-admin-12.0.0-97810.i586.rpm
```

NOTE: Sometimes people ask us when they should install the GroupWise 2012 snapins in preparation for an upgrade. We usually recommend that you install the snapins when you are ready to upgrade any domain that you administer. For example, if you are on an distributed system, and there are many administrators, upgrade the snapins for the administrators as domains they manage are upgraded. While it is safe to use GroupWise 2012 snapins on older systems, you may find that the snapins for some functions will change. For example, the GWIA snapins do not check to see if you are using a GroupWise 2012 GWIA and will show you options that might not be available for a GroupWise 8 or earlier GWIA. It is just less confusing to wait until you need the GroupWise 2012 snapins to install them. That said, however, once you upgrade your primary domain to GroupWise 2012, you should use those snapins any time you access a GroupWise 2012 domain, so it will be necessary to roll these snapins out to all locations that might access the GroupWise 2012 domain.

Edit Important information in ConsoleOne

Now that your domain directory has been migrated to the new Linux or Windows server, we need to edit the location of the domain directory and fix some information in the agent's network address configuration.

First we will load up ConsoleOne on the server. On a Windows server, you load ConsoleOne just like on your workstation. When you first load ConsoleOne it should ask you for your domain location (since we renamed the directory, even if you are mounted to the NetWare server, the domain will not be found). Put in the location for the domain on your Windows server. For example, d:\grpwise\domain.

For Linux, the process is a little different, and we'll tackle that next.

1. When we installed ConsoleOne earlier, the installation routine should have created a shortcut to the application on your Linux server desktop. If you cannot find this shortcut, we can load the application by hand simply by running **/usr/ConsoleOne/bin/Consoleone**.

NOTE: If you receive a java error when loading ConsoleOne, you may need to edit the /usr/ConsoleOne/bin/Consoleone script to include an additional path statement. Edit the script in your favorite text editor, and look for the line that starts with LD_LIBRARY_PATH= and add /usr/ConsoleOne/bin: near the beginning of the line as part of the path.

2. The first time you launch ConsoleOne for Linux with GroupWise snapins, you will be presented with a screen like [Figure 5-1](#).

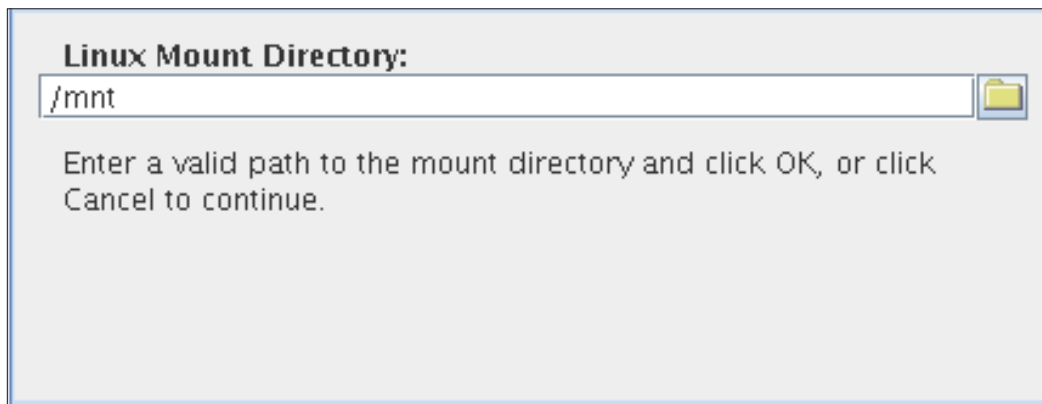


Figure 5-1: Linux Mount Directory

3. Assuming you wish to have your GroupWise server mount points in /mnt, leave the setting as it is and click okay. You can find out more about the importance of the mount points in our blog post at <http://www.caledonia.net/blog/?p=143>
4. You should now be presented with a login prompt. If for some reason the login prompt does not appear, click on NDS under My World, and then click on the tree icon in the toolbar. Log into your tree as you normally would if this were a Windows workstation. Note, however, that if you cannot find the tree, putting the IP address of one of the eDirectory servers in the tree field should help you with that. On our systems, sometimes the login box seems to not allow us to click in the password field to enter a password. If that happens, simply attempt to login with no password. You will receive an error that the password is incorrect, but then the login box will refresh and correct itself.

Extending your eDirectory Schema

In [Chapter 2](#), we discussed the importance of making sure your eDirectory tree is in good health. GroupWise 2012 may need to extend your eDirectory schema, and you certainly do not want to attempt any changes to your eDirectory schema if anything is pending or problematic in the tree.

WARNING: Some of the worst “GroupWise” issues we’ve been called in to salvage had little to do with GroupWise itself, but were to fix problems that arose from making changes in the system that required modifying an unhappy eDirectory tree! While schema extensions will not likely cause any great harm to your tree if it is out of whack, it’s best to make sure that everything is replicating properly before you begin.

NOTE: Some minimal steps you can take to ensure that your tree is healthy are to do a “check synchronization status” in dsrepair from the root partition server and/or check the agent health in iMonitor.

If your tree is happy and healthy, you will need to check and possibly extend the schema (or have a more powerful admin do so if you are unauthorized to access the root of the tree). In order to extend the eDirectory schema for GroupWise 2012, you must use ConsoleOne with GroupWise 2012 snapins. In ConsoleOne, click on your eDirectory tree name (not the GroupWise “system” icon), and under Tools choose GroupWise Utilities|Check eDirectory Schema. You will be instructed to extend your tree’s schema, if necessary. Just click next and let the schema update. If you are upgrading from GroupWise 8 you should not see any extension upgrade prompt. It does not hurt to test this though!

Enabling the HTTP Monitor for Your Agent

We have found that there are many GroupWise sites where the HTTP (Web) Monitor is not in use. Especially with GroupWise 8 and later, these HTTP Monitors have become more and more important. If you define a userid and password for the HTTP Monitors, you can perform all of the functions that you used to perform at the GUI Consoles for your agents, as well as new functions that were not available on the GUI Consoles. If you do not have your HTTP Monitor enabled, now is a good time to do so.

In ConsoleOne, click on the GroupWise System Globe, and perform the following steps:

1. In the dropdown list that shows “Users”, change the setting to “Message Transfer Agents.”
2. Find the MTA for your domain, right-click and choose Properties.
3. Now click on the triangle in the GroupWise tab and change to Network Address.
4. Make special note of the HTTP port that is defined for this agent. By default, the HTTP port for the MTA is 7180.
5. If there is nothing in the HTTP port field, put 7180 (or another port of your choosing).
6. Now, on the GroupWise tab, change to the Agent Settings screen. Scroll down to the HTTP Monitor settings. If you have never enabled the HTTP monitors for your agents, you will need to decide on a good userid and password for the HTTP monitors. Please note that this is neither an eDirectory user nor a GroupWise user. This is an entirely made up user and password solely for the use of the HTTP monitors. If all administrators in your organization will have rights to use the HTTP monitors, then it is a good idea to have the same userid and

password for all agents. If you need to limit rights to some agents to various groups, set up a userid and password for each group of agents that will be monitored. Enter the userid and password that you have decided on here in this screen.

- ## 7. Save your changes.

Prepare The Domain

When you are ready to continue your upgrade, we will first check the domain to make sure that it is ready to upgrade. First, in ConsoleOne, select the domain object and choose **Tools|GroupWise Utilities|System Maintenance|Validate Database**. If your database shows as valid, you can proceed. If for some reason the database does NOT validate, you should rebuild it. Since we have not installed the agents yet, there is nothing loaded to prevent exclusive access to the domain. In ConsoleOne choose **Tools|GroupWise Utilities|System Maintenance**, and this time choose **Rebuild Database**.

The Domain Upgrade Overview

With GroupWise 8, Novell created a brand new installation routine geared towards helping newer GroupWise administrators to create a GroupWise system with all of the components necessary to get GroupWise up and running. This has continued with GroupWise 2012. For example, the installation routine allows you to install not only ConsoleOne and the GroupWise Agents, but also the GWIA. This will allow a brand new GroupWise Administrator to create a new GroupWise system, including the GWIA, in one sitting, and get up and running more quickly. However, in changing the installation routine to streamline the work for a new administrator, some of our familiar installation routines have been removed, and we will have to rely more on the wizard than we might have in the past. But don't despair! We will veer away from the wizard often enough to please the purists in the crowd!

NOTE: If Windows administrators look under the AGENTS directory, or the INTERNET/GWIA directory you will find that there are no longer any installation programs for the agents or the GWIA individually. These components must all be installed from the setup.exe file found at the root of your SDD.

Depending on your setup, you may be simply upgrading your domain during this sitting, or you may be doing more than that. If any other GroupWise components exist on the same server as your domain, you need to upgrade them now too. Let's look at the possible scenarios.

- Simple single server – you need to do everything. You will install the MTA and POA software, upgrade the domain and then the post office, and then move to upgrading your GWIA, WebAccess, etc.
- MTA & POA on same server – one installation run will get you ready, and then we will perform the upgrade steps for both the domain and the post office on this server, and you're done with this server.
- MTA on its own server – run the installation to install the software, and perform the steps to upgrade and verify.
- MTA with gateways such as the GWIA and WebAccess on the same server - upgrade the domain and then move to the GWIA and WebAccess upgrade

So, let's get down to it.

Installing your Agent Software

Windows

If you are running your agents on Windows, you must run this installation directly on the Windows server, rather than from a workstation attached to the Windows server.

In the root of the Master SDD, you will see the **setup.exe** program that will be used for this upgrade. When you run this program, you see the Window in [Figure 5-2](#).

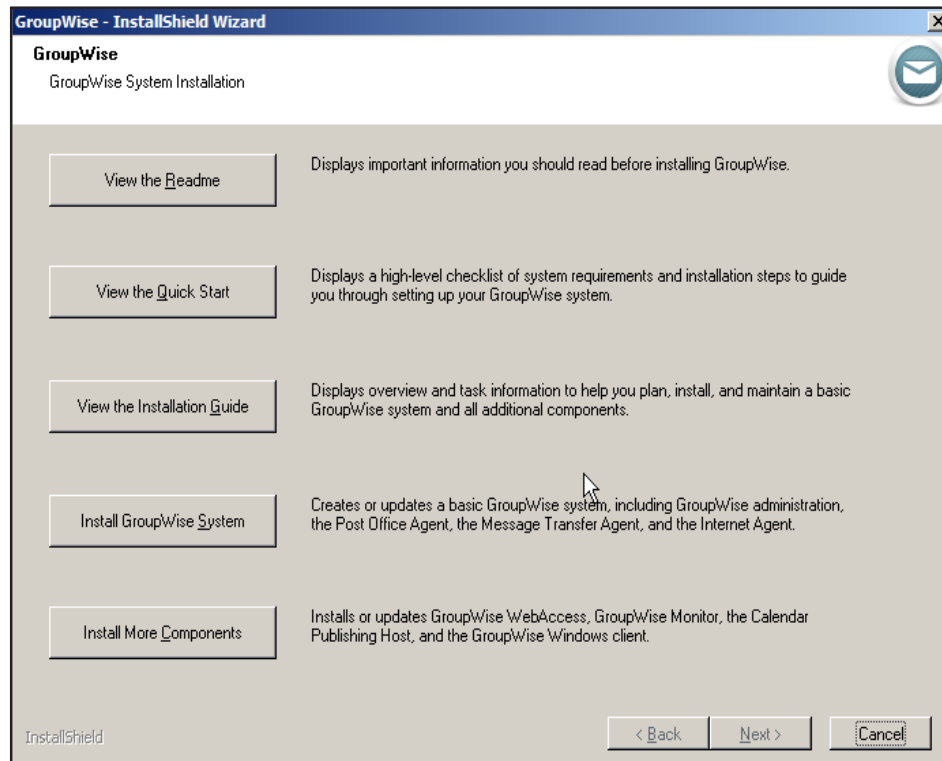


Figure 5-2: The main installation screen

1. Click on Install GroupWise System.
2. Click Yes on the next screen to accept the license agreement.
3. Click Next on the next screen to do a standard install. You will see the window in [Figure 5-3](#).

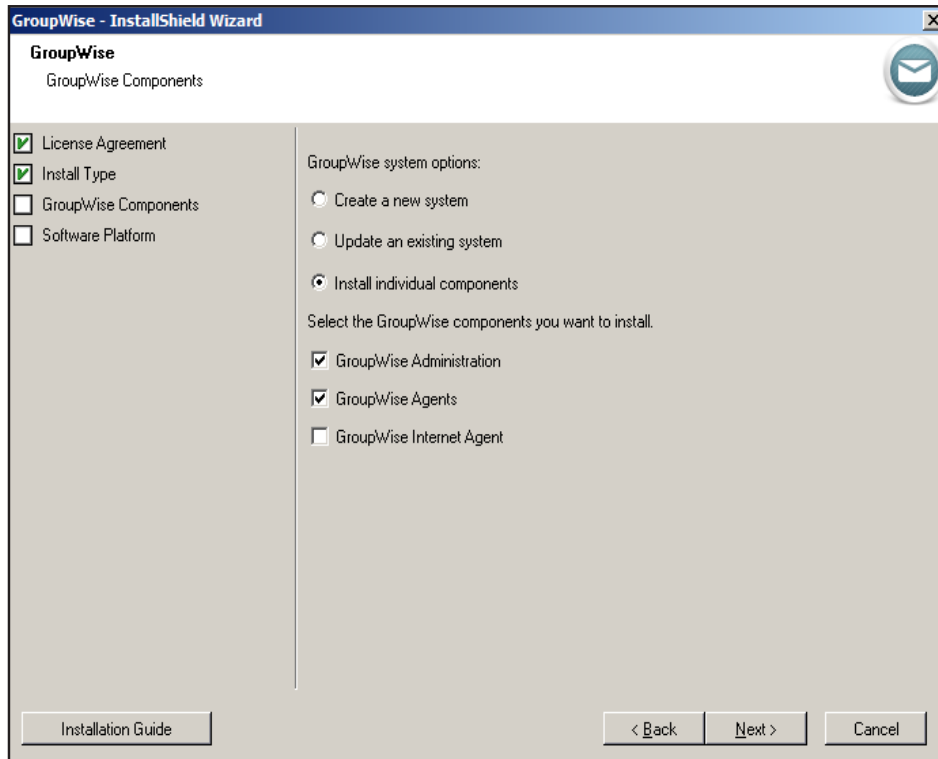


Figure 5-3: Install Wizard - GroupWise Components

4. You will notice on this screen that we have many options. For our purposes, we will choose “Install Individual Components”.
5. If you did not update your ConsoleOne and GroupWise snapins on this server earlier as listed above, you can choose this option here now.
6. Choose GroupWise Agents as an option to install.
You will notice that at this point you could also choose to install the GWIA files as well if you needed them on this server, but we prefer to do this in a separate step, so keep this option unchecked for now.
7. The next screen seems to be a holdover from the combined Windows and NetWare installation routines of the past, and has a single radio button for Windows. Just click next.
8. If you checked the box in step 5 above to install GroupWise Administration, you will see the screen in [Figure 5-4](#). We are going to create our SDDs manually, so leave only the Install administration files option checked. If you did not choose to install GroupWise Administration, jump to Step 10 below.

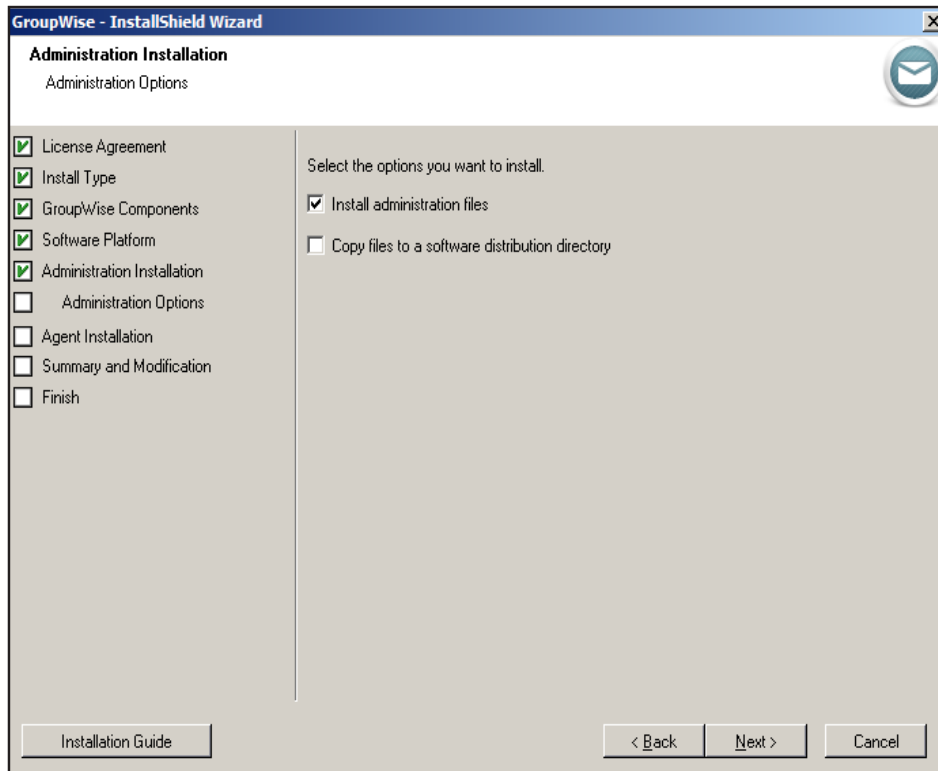


Figure 5-4: Administration Installation Screen

9. At the next screen you will be prompted to verify the location of ConsoleOne. This should show the actual location of ConsoleOne as installed on the Windows Server where you are running the installation program.
10. The next screen will give you the option of where to install your files on your Windows server, and options for the installation.

We'll now show the Linux folks how to do their installation, and then continue on with *Configuration of your Agents during installation* below.

Linux

Running the Linux installation routine is a bit different, in that you are not allowed to pick and choose what you install when running this installation script. The script will detect what GroupWise components are already installed on this server, and it will insist that they all be updated at the same time.

In your Master Linux SDD (in our case **/grpwise/gw12soft**), run the install script as root. For example:

```
gwlinux:/grpwise # ./install
```

You will see the screen in [Figure 5-5](#).

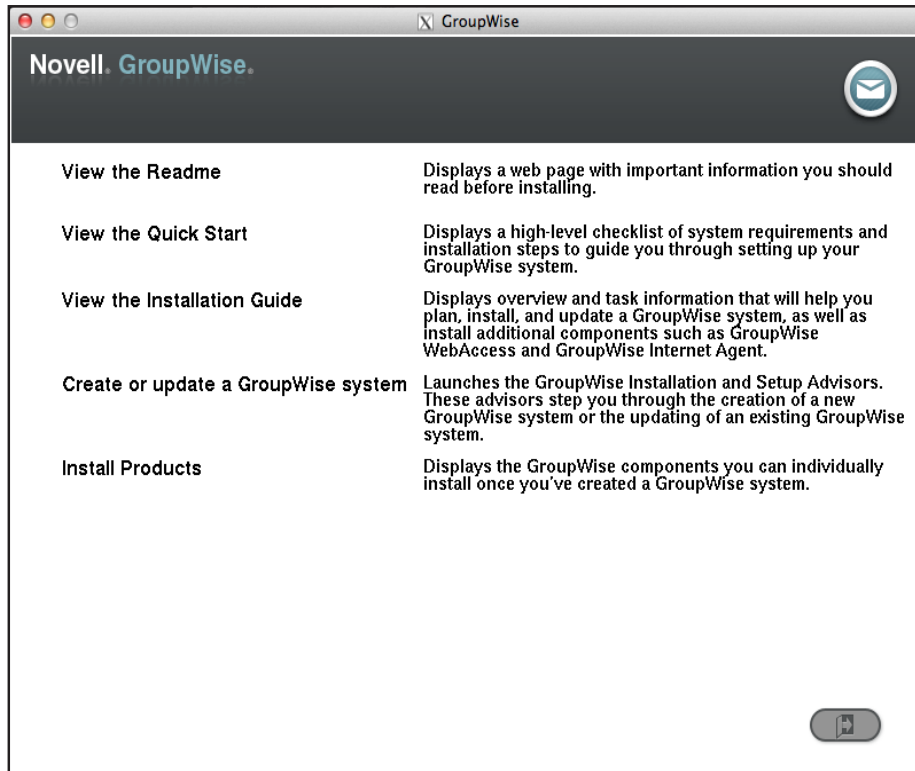


Figure 5-5: The Linux Install Screen.

1. Choose install products.
2. Choose GroupWise Agents. We will take this opportunity to point out that in the Linux installation routine there are separate “install” and “configure” steps for each agent.

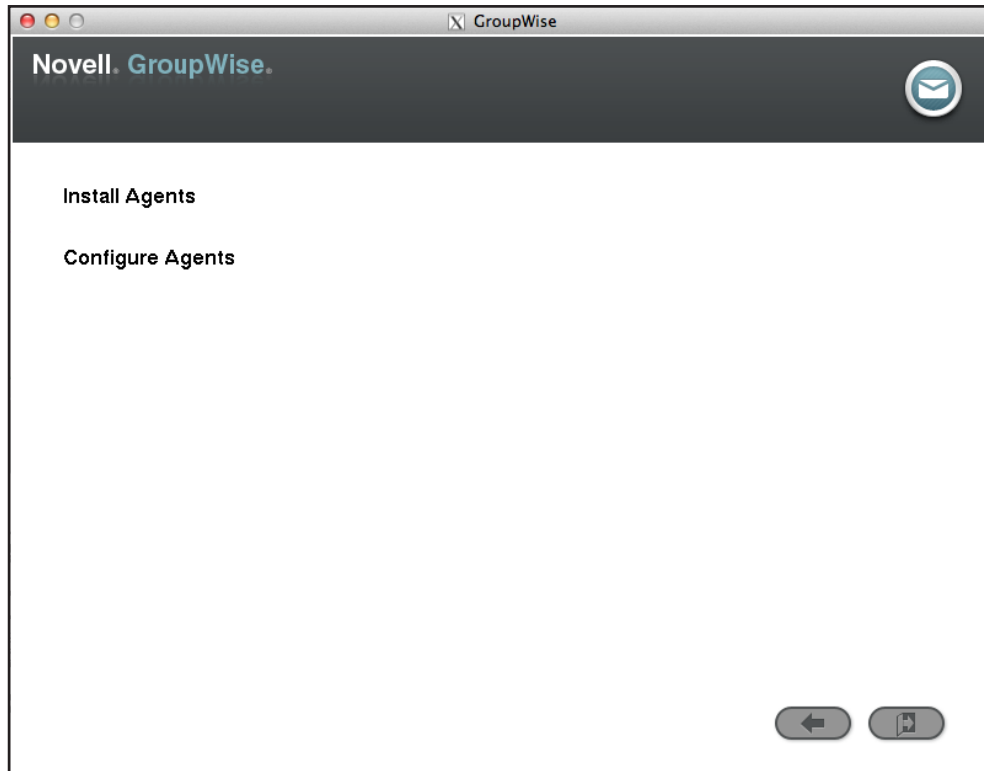


Figure 5-6: Install and Configure Screen

3. Choose Install Agents.

Configuration of your Agents during installation

Windows

When you reached step 10 above in installing your agents, there was a checkbox that said “Install but do not configure agents”. Make sure that you have not checked this box. When you click Next you have the option to “Install and Configure SNMP for GroupWise Agents” and “Install as Windows services”.

Install and Configure SNMP for GroupWise Agents

If you have SNMP installed on your GroupWise server, you can configure SNMP for the agents on this server.

Install as Windows services

It is highly recommended that you install your GroupWise agents as services on your Windows server. If you do not, you must log into the Windows server and launch the agents on startup. Otherwise the agents cannot launch and users will not be able to access GroupWise until the login takes place.

After you choose the options on this screen you will click next and be presented with the window in [Figure 5-7](#).

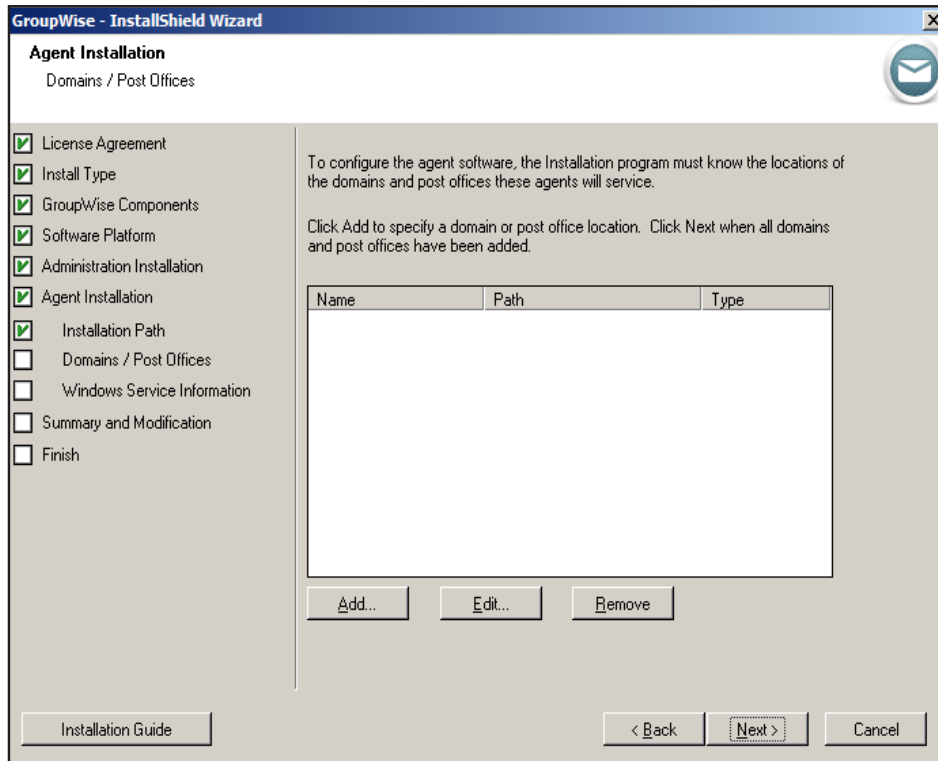


Figure 5-7: Configuring the GroupWise Agents

While we are looking at this screen, we should explain its usage so that it's more easily understood the next time you encounter it. There are a few misconceptions about what is done here, and what you need to put in this location, so we will try to clear those up.

First, this screen is a template for creating new agent startup files (for example the **primary.mta** file), and for configuring your Windows services or Windows shortcuts. Let's take the example of our groupwise system. Our primary domain is called CNC-PRI. If we want to create a new startup file for the CNC-PRI domain, and configure Windows services and shortcuts, we would click the Add button as shown in [Figure 5-8](#) and enter the information for our domain.

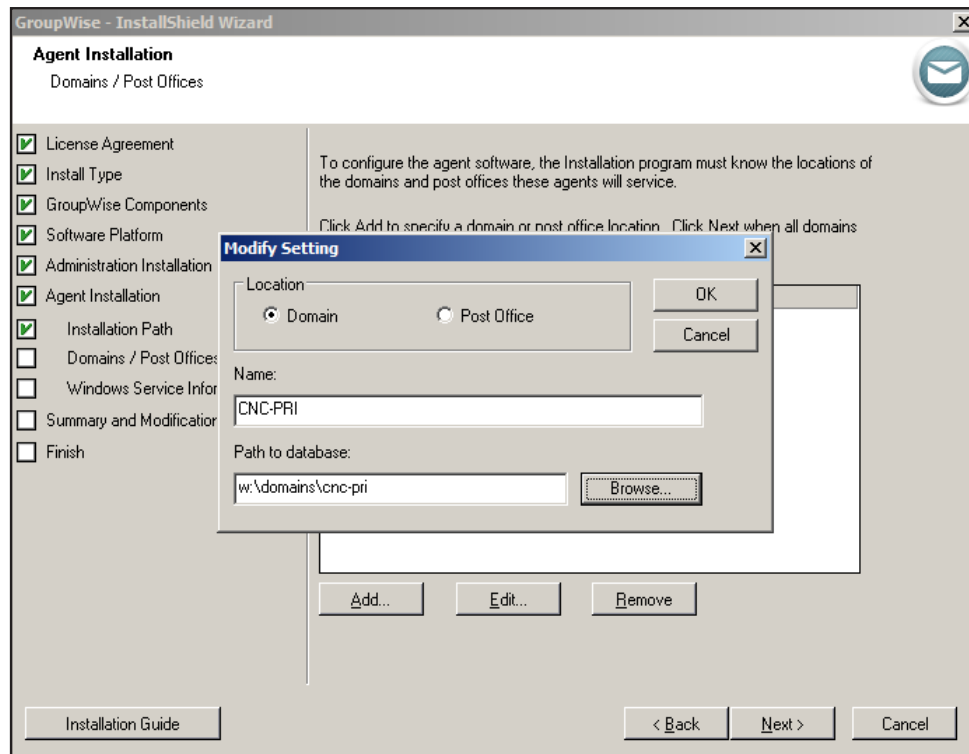


Figure 5-8: Adding a domain for configuration

By entering this information, we are instructing the installation routine to create us a startup file called **cnc-pri.mta** with a /home switch of “**w:\domains\cnc-pri**”, place it in the location of our startup files that we indicated in [_](#) above, and optionally configure a Windows service for the MTA or create a Windows shortcut.

This screen will validate the location you specify and warn you if you are putting in an invalid location (for example, if you put in **m:\domains\cnc-pri** and that location does not contain a domain database it will complain). Interestingly enough though, if you “cancel” at this point, it will still put **m:\domains\cnc-pri** in the setup and will complain that the path is invalid when you click “Next” to continue the setup. You will be required to fix this to point to a valid domain location before you can complete the setup. The installation does not validate the “name” you put here and indeed, you can name things here anything you like. For example, rather than naming my startup file “**cnc-pri.mta**” as shown above, I could just as easily type “primary” in the name field, and the name of the file would instead be **primary.mta**. If you put in a name that has more than eight characters (for example Caledonia), the file name will be truncated to eight characters. So, if indeed I were to put “Caledonia” in the name of my domain field, I would have a startup file called “**caledoni.mta**”. If a “**caledoni.mta**” file already exists, I will now have a “**caledoni.mt1**” file in that directory.

If the domain you are configuring is the only domain on this server, and there are no post offices on this server, you are finished adding agents. If you also have a post office on this server, you can click add again, change the type to Post Office and enter the information here for your post office.

Linux

To configure the Linux agents, the steps are similar, but you approach the process somewhat differently. In [Figure 5-6](#) you were shown how all of the Linux installation screens have both an “install” and a “configure” option. To configure a Linux agent, click on the Configure Agents

option. Click next on the introduction screen and accept the license agreement. You will be presented with a window similar to [Figure 5-7](#) (just a bit more “Linux-like”).

This screen is a template for creating new agent startup files (for example the **primary.mta** file), and for configuring your Windows services or Windows shortcuts. Let’s take the example of our groupwise system. Our primary domain is called CNC-PRI. If we want to create a new startup file for the CNC-PRI domain, and configure the **grpwise** script (provided that we checked the option above to “Launch the GroupWise agents on system startup”), we would click the Add button as shown in [Figure 5-8](#) and enter the information for our domain.

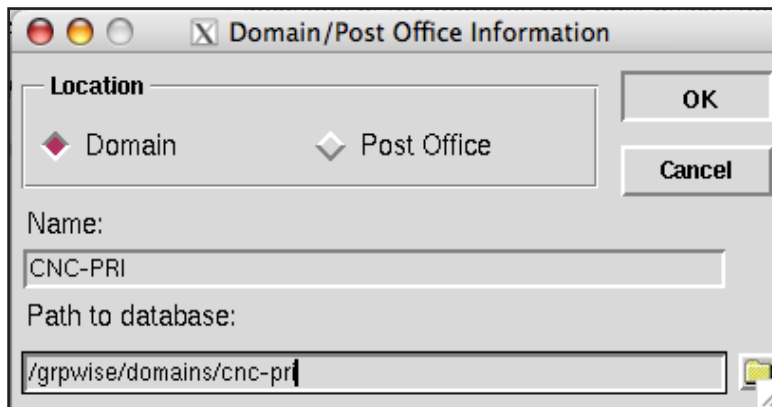


Figure 5-9: Adding a domain for configuration on Linux

By entering this information, we are instructing the installation routine to create us a startup file called **cnc-pri.mta** with a /home switch of “**/grpwise/domains/cni-pri**”, place it in the **/opt/novell/groupwise/agents/bin** directory, and add the information into the **gwha.conf** file that will be loaded by the **grpwise** script on startup.

This screen will validate the location you specify and warn you if you are putting in an invalid location (for example, if you put in **/groupwise/domains/cnc-pri** and that location does not contain a domain database it will complain). The installation does not validate the “name” you put here and indeed, you can name things here anything you like. For example, rather than naming my startup file “**cnc-pri.mta**” as shown above, I could just as easily type “primary” in the name field, and the name of the file would instead be **primary.mta**.

If the domain you are configuring is the only domain on this server, and there are no post offices on this server, you are finished adding agents. If you also have a post office on this server, you can click add again, change the type to Post Office and enter the information here for your post office.

Performing the Domain Upgrade

At this point, you have installed the software required to take your domain to GroupWise 2012, but your domain has not actually upgraded. This will not happen until you load the new software, under the proper conditions. Earlier in this chapter we saw an option on the installation routine that said “Update an Existing System” and we chose to skip that. Novell’s installation routine has improved quite a bit with GroupWise 2012, but it still expects certain aspects of every GroupWise system to be uniform, and we find that more times than not, GroupWise systems simply are not! This causes inconsistencies in the upgrade process, and it is easier for us (and you) to do these steps manually to ensure that they are done correctly in every single upgrade. This makes just for one or two fewer things to have to troubleshoot if there are problems. In order to continue our upgrade, do the following:

1. In your Master SDD, there is a directory called domain. In that directory are four dc files. Copy those dc files into your domain directory (overwrite existing files if asked).
2. Next in your Master SDD there is a directory called po. Copy these three dc files into the **wppoffice** directory under your domain, creating that directory if necessary.
3. Now we will launch the MTA so that your domain can upgrade.

Windows: Even if your agents normally launch as services, it is useful to launch the MTA to the GUI console the first time, just to see that everything launches correctly. At the command prompt:

c:\grpwise\gwmnta @domain.mta

Of course, use the location of your installed agents as well as the name of your own startup file in this command.

Linux: For all Linux installations, the agents are installed to run as daemons. You can launch them under X-Windows to the GUI console during the upgrade just to see that everything loads okay. From a terminal prompt:

/opt/novell/groupwise/agents/bin/gwmnta --show @domain.mta &

Your MTA should load up on your server. If you receive any errors during loading, check what the error is and see what can be done to resolve it.

When the GroupWise 2012 MTA for the domain loads, it looks for the dc file that says it is *time* to upgrade. The dc file is essentially a text file that contains the database schema for creating a GroupWise 2012 database. The **gwdom.dc** shows the version number at the very top line as **#VERSION=1200**. This version number at the top of the file verifies that you have the GroupWise 2012 dc file in your domain directory. If this is the primary domain, once the MTA sees the GroupWise 2012 dc file and notes that the domain is the primary domain, the MTA will launch a recovery of the database, effectively converting the domain to GroupWise 2012. If you are quick (on a small domain – not so quick on a larger one), you will be able to see the Admin Status of the Domain change to “Recovering” to show that the domain is being converted ([Figure 5-10](#)).

If you are upgrading a secondary domain, assuming the domain database has received information that the primary has been upgraded, it will also launch the recovery mechanism.

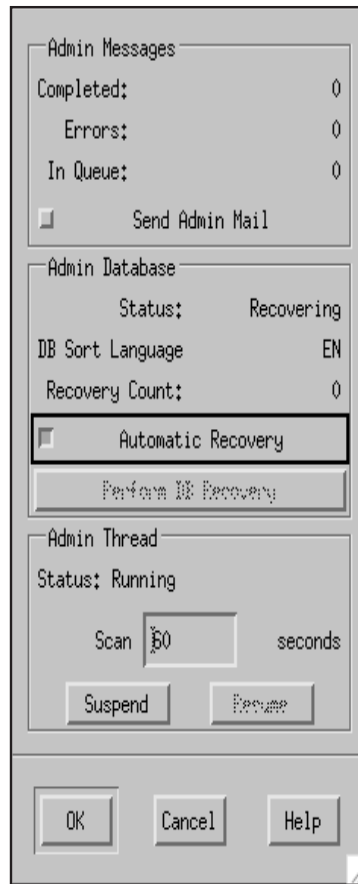


Figure 5-10: Database Recovering

Once the status returns to “Normal” you should be able to look at the properties of the domain in ConsoleOne and see that the version is GroupWise 2012. Once the primary domain has been converted to GroupWise 2012 you can continue to upgrade the rest of your system according to your upgrade plan.

To verify that the domain is indeed version 12, you can go into ConsoleOne, right-click on the domain, look at the properties and verify that the version shows as “12”.

Troubleshooting

There are very few things that can go wrong during a domain upgrade. If you find that your domain refuses to show as a GroupWise 2012 domain in ConsoleOne, do a couple of things:

- Verify that you have GroupWise 2012 snapins installed. You can get odd results in the version field of a domain if you are looking at a GroupWise 2012 domain with older GroupWise snapins.
- Double-check that you got the dc files copied into the domain directory. Open the gwdom.dc file with a text editor to verify that it is indeed the GroupWise 2012 file.
- If this is a secondary domain, verify that the secondary domain KNOWS that the primary domain is a GroupWise 2012 domain. You can do this by connecting to the secondary domain in ConsoleOne and looking at the properties of the primary domain. It should show as version 12. If the primary does NOT show as a GroupWise 2012 domain when viewed from the perspective of the secondary domain, you will need to connect to the primary domain and verify that it shows as a GroupWise 2012 domain (look in the

properties of the primary). Once you have confirmed that the primary is GroupWise 2012, rebuild the secondary domain database by highlighting the secondary domain and choosing Tools|GroupWise Utilities|System Maintenance and then select “Rebuild Database”.

- Manually set off a recover of the domain database at the MTA under Options|Admin Thread|Perform DB Recovery Now? and indicate Yes.

Truthfully, this domain move probably would take no longer than it took for you to read this chapter! Moving a domain to a Linux server is a fairly painless process.

If this domain owns a GWIA, you should upgrade that now. Proceed to the chapter on *Upgrading Your GroupWise Internet Agent*. Or it might be time to visit the chapter on *Moving a GroupWise Post Office*.

6

Upgrading Your GroupWise Internet Agent

Upgrading your GroupWise Internet Agent is a fairly simple process. However, there are some challenges that are presented if you intend to have a “mixed” system (i.e., GroupWise 2012 AND older post offices) for any length of time. Here are the issues at hand:

- Your GWIA cannot be upgraded to GroupWise 2012 until the domain that owns it is upgraded to GroupWise 2012.
- When using the GWIA as a POP3 or IMAP4 “client”, it is indeed a client. You cannot access a GroupWise 8 or earlier post office with the GWIA via IMAP4 or POP3. If it is attempted, you will see a “login failed: D058” in your GWIA log.
- On the other hand, if the GWIA is being used only for SMTP services, there are no issues with a mixed system.

So, as you can see, it’s a good idea to get your post offices upgraded to GroupWise 2012 on a scheduled roll-out so that you are not surprised by any of the possible issues with mixed post offices. That said, many sites operate in a “mixed” system quite nicely for an extended period of time. You must simply make sure that your plans take the above caveats into account. If you need to have POP3 services for all users in your system, you might consider having two GWIAs - one for the GroupWise 2012 users, and one for your older post office users. If you are using IMAP4, you might consider opening up IMAP4 directly from the post office agent, rather than using the GWIA if you have a mixed system (versions 6.0 and later of GroupWise allow for IMAP4 at the post office agent).

Preparing for the Upgrade

Before you can install the new software for the GWIA, you must shut down any and all agents on your server. Since this is a GWIA, you most likely at least have an MTA for the GWIA’s domain on the same server. Shut down any GroupWise components on this server before we proceed. Since we have just moved our domain during this process, it’s unlikely that you have any GroupWise components other than the MTA loaded. We will, however, go through all of the shutdown procedure for you just in case.

Linux

On Linux, you must upgrade all GroupWise components at the same time, so you need to stop all processes that are GroupWise related. This includes all GroupWise agents and gateways and GroupWise Monitor. We are assuming that you are running your agents as daemons. If, however, you are running them with their GUI consoles, unload all of the agents by shutting down the GUI consoles. Close the GroupWise Linux client if it is running on the server. Finally, to be certain that all agents and gateways are closed, type the following commands at a terminal prompt:

```
/etc/init.d/grpwise stop
```

```
/etc/init.d/grpwise-wa stop
```

/etc/init.d/grpwise-ma stop

You may receive errors if you are not using the **grpwise-ma** or **grpwise-wa** scripts, but it does not hurt to attempt to stop them even if you do not have these scripts installed.

After all GroupWise components have been shut down, type the following into the terminal prompt to verify that no GroupWise components are running:

ps -A | grep gw

If at this point you still see GroupWise components loaded you can kill them individually, either by pid or name – for example:

kill 9860

(if you show a GroupWise component with the pid 9860 running)

or

killall gwia

Windows

For Windows, you must also shut down all of your agents that access the domain database. If you are running the agents as services, go into the services console from the Control Panel, right click on the GroupWise agents, and choose stop (see [Figure 6-1](#)). If you are not running the agents as services, go to the agent consoles and exit via F7 or from the agent menus.

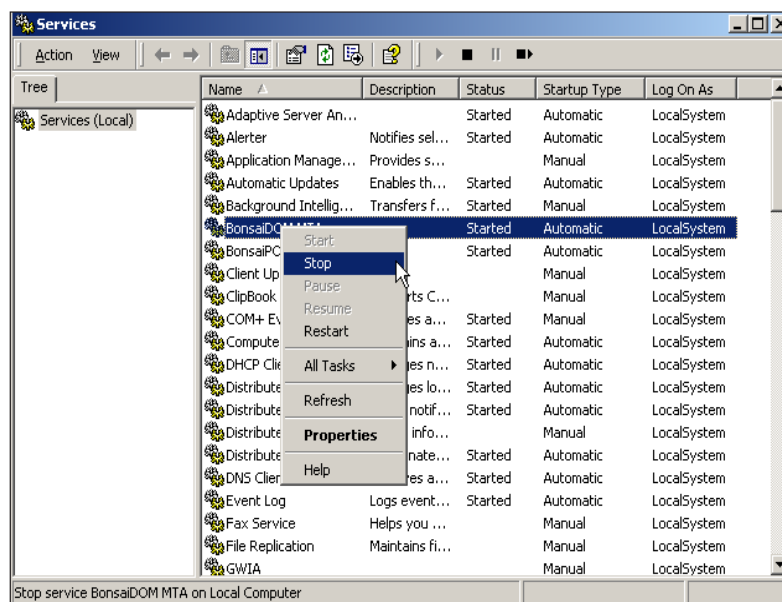


Figure 6-1: Stopping a Windows service

After your agents are shut down, leave them down until you are instructed to reload them below.

Installing your Agent Software

For a GroupWise Internet Agent, *upgrading* is essentially just installing the new software and reconfiguring the GWIA for your new server. For the Windows installation, those administrators who have been around awhile will notice something different right away. Under the **SDD/INTERNET/GWIA** directory there is no longer an **install.exe** program. Instead, we will use the **setup.exe** found at the root of the SDD.

Windows

In the root of the Master SDD, you will see the **setup.exe** program that will be used for this upgrade. If you are installing the GWIA on a Windows server, you must run the installation routine on that server.

When you run this program, you see the Window in [Figure 6-2](#).

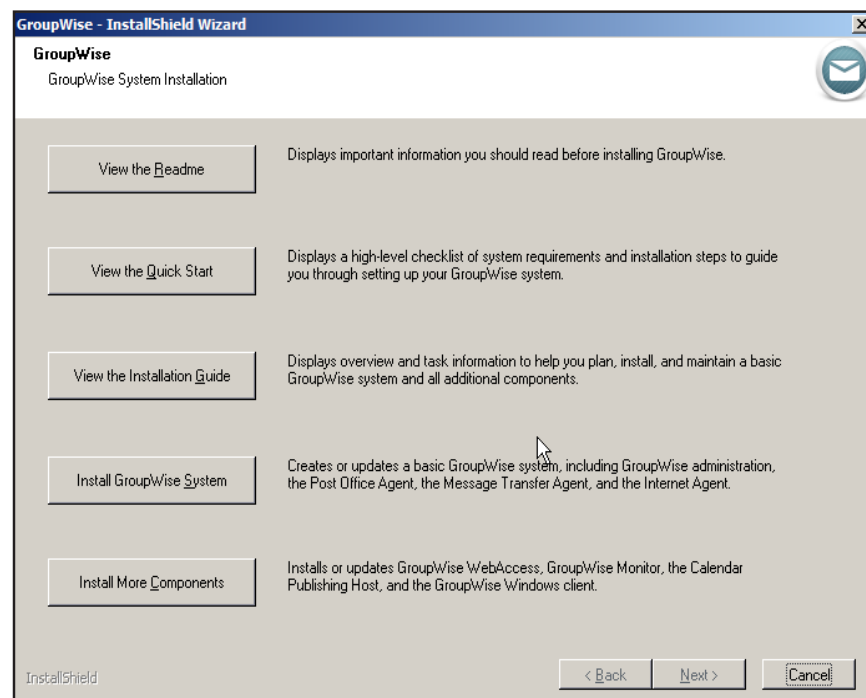


Figure 6-2: The main installation screen

1. Click on Install GroupWise System.
2. Click Yes on the next screen to accept the license agreement.
3. Click Next on the next screen to do a standard install. You will see the window in [Figure 6-3](#).

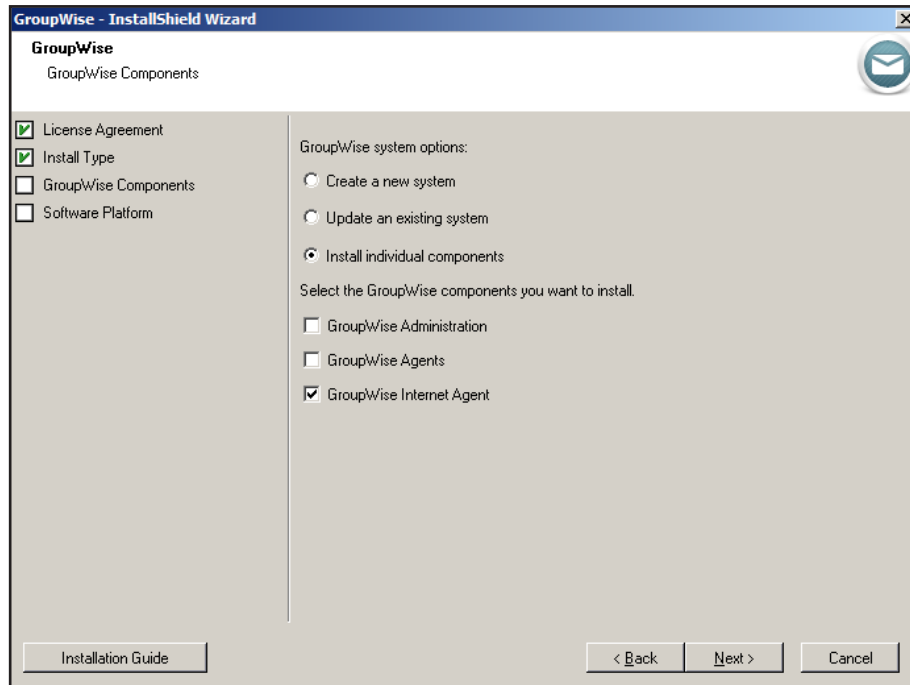


Figure 6-3: Install Wizard - GroupWise Components

4. Choose Install individual components, and then uncheck everything except GroupWise Internet Agent.
5. The next screen seems to be a holdover from the combined Windows and NetWare installation routines of the past, and has a single radio button for Windows. Just click next.
6. The next screen will give you the option of where to install your files on your Windows server, and options for the installation. Notice that in our example in [Figure 6-4](#) we have chosen the option to “Install the software files, but do not configure the Internet Agent”. This will avoid a lot of questions that we do not need to answer during this move.
7. When prompted, enter the path to your domain, and the name of the directory for your GWIA.
8. Next you will be presented with a summary screen showing your choices for the install, and the installation will proceed.
9. When the installation has completed, do not launch the agent yet. We need to do a few things.
10. Copy the **gwia.cfg** from your source server to both the `\domain\wpgate\gwia` directory, and the location where you installed your GWIA files, as determined in [Step 7](#) above. Edit the **gwia.cfg** and change the `/home` and `/dhome` directory to point to the location of the domain on the new server.
11. If you have special Access Control Rules defined, these are located in the `gwac.db` file. If you have moved your GWIA to this server, then these rules will have moved with you.

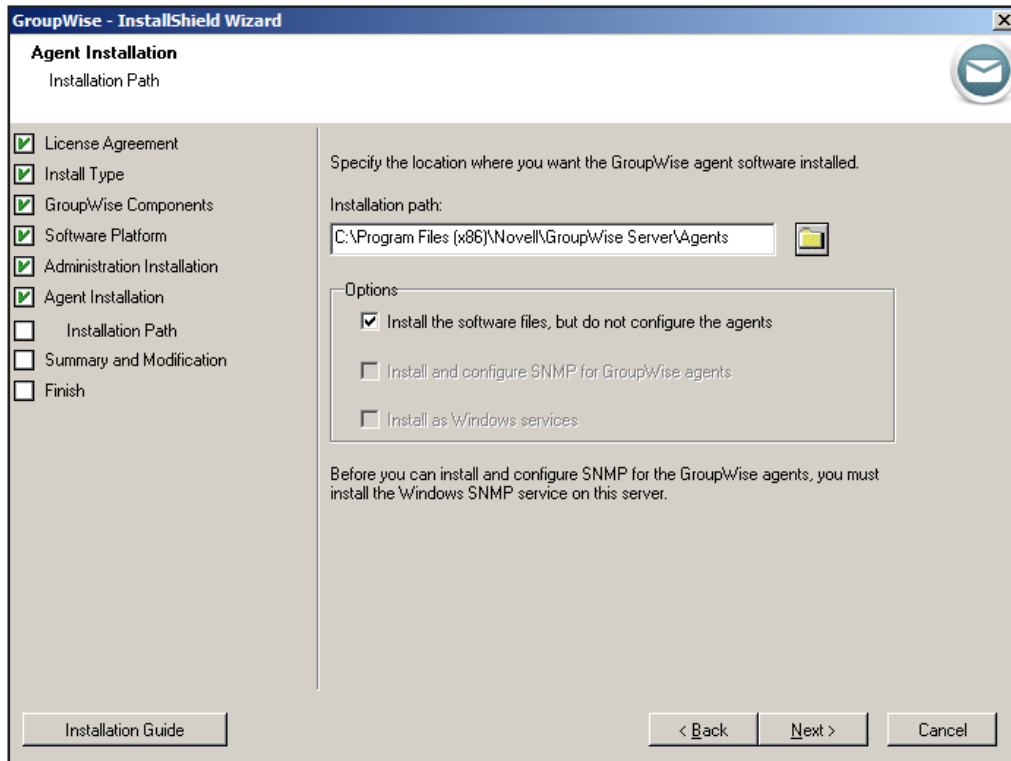


Figure 6-4: Install Wizard - Installation Path Screen

Load the GWIA on the Windows Server

If you installed your GWIA as a service, you load it by going to the Services panel, right-clicking on the GWIA service, and choosing “Start”. If you did not choose to load the GWIA as a service, there will be an icon for the application in your Programs menu.

Linux

Running the Linux installation routine is a bit different, in that you are not allowed to pick and choose what you install when running this installation script. The script will detect what GroupWise components are already installed on this server, and it will insist that they all be updated at the same time.

In your Master Linux SDD (in our case **/grpwise/gw12soft**), run the install script. For example:

```
gwlinux:/grpwise # ./install
```

After choosing your installation language, you will see the screen in [Figure 6-5](#).

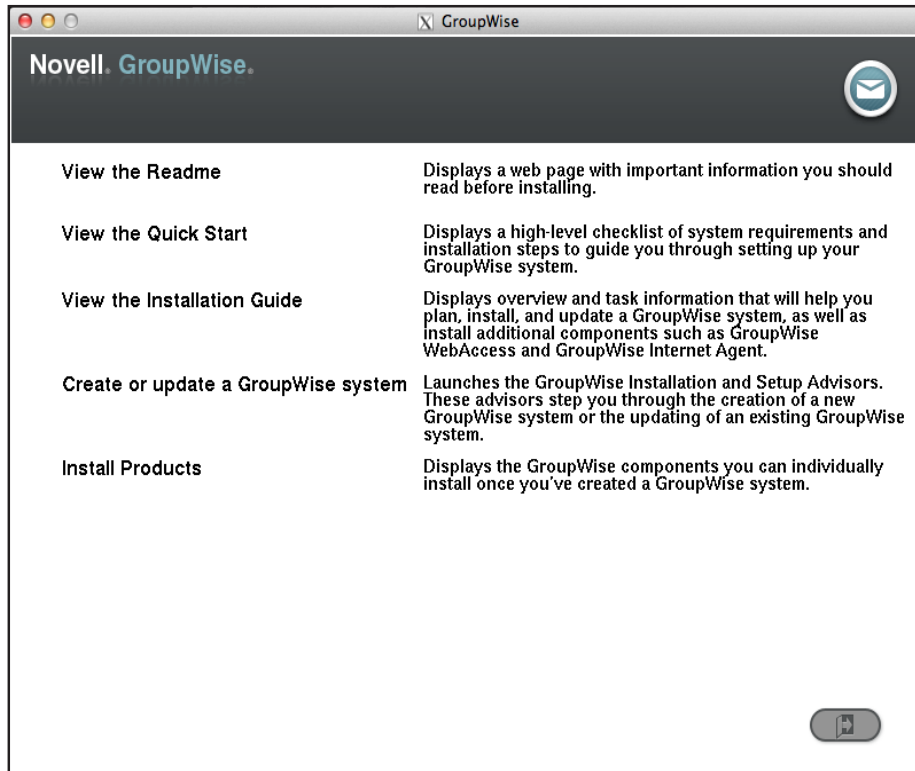


Figure 6-5: The Linux Install Screen.

1. Choose install products.
2. Choose GroupWise Internet Agent
3. Choose Install Internet Agent. If you have more than one GroupWise object on this server, you should see a screen similar to [Figure 6-6](#). This screen will show all components on this particular Linux server that must be upgraded.

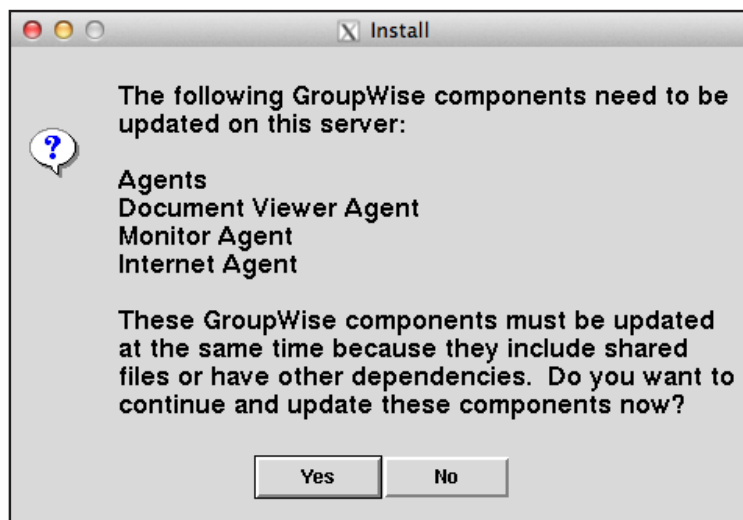


Figure 6-6: Components to Upgrade on Linux

NOTE: [Figure 6-6](#) shows a number of agents installed on this server. If you have a simple, single server system, you may see all of these. If you have multiple servers, you will only see the agents required for the particular server being upgraded. With the changes to WebAccess, not only do you not see the WebAccess Agent listed (as it is now obsolete), but you do not see the WebAccess Application either. You will be required to do a separate installation for WebAccess if it is on the same server.

4. You must choose Yes for this option, otherwise the installation will simply close. Choosing Yes starts the update of all agents required on this server. If there are a number of agents, this can take awhile. Once the agents are installed, choose Configure Internet Agent.
5. When prompted, accept the License agreement
6. At the server information enter the information for your GWIA (See [Figure 6-7](#)). Note the Message Transfer Port. This is the port that the GWIA would listen on if you were talking IP to the MTA. The only reason you would enter this information is if you have multiple GWIAs and are providing for failover. Most sites will leave this at 0. In no case should you put 25 in this port field. Otherwise your GWIA will not work at all! You must also put in the DNS host name of your GWIA here.

Figure 6-7: GWIA Server Information Screen

7. At the relay host screen indicate whether you send directly to the internet, or put in the information for your relay host.
8. At the Internet Domain Name screen, put in your domain name. For example, caledonia.net. You can also choose to enter this later in ConsoleOne, but since you know the information it's quicker to do it here.
9. At the Domain Directory screen, put in the local Linux path location for your domain. Also verify the directory name for your GWIA. This is typically just "gwia".

10. Next you must authenticate to your eDirectory tree via LDAP. This is necessary even if you are already logged into eDirectory in ConsoleOne. It is easier if your LDAP server allows for clear-text passwords. Otherwise you must check the “Use SSL” box and have your certificate available to this server.

TIP: If you need to temporarily allow access to your LDAP server without SSL, edit the LDAP Group for the LDAP server in ConsoleOne and uncheck the box that says “Require TLS for simply binds with password”. You can turn it back on afterwards. Of course, if you have easy access to the SSL Certificate on your Linux server, you will not need to bother with this.

11. At the Gateway screen, you will see the name of your GWIA (typically just GWIA), and you will be asked to enter the LDAP context for your GroupWise domain. You can browse for this if you like. See [Figure 6-8](#).

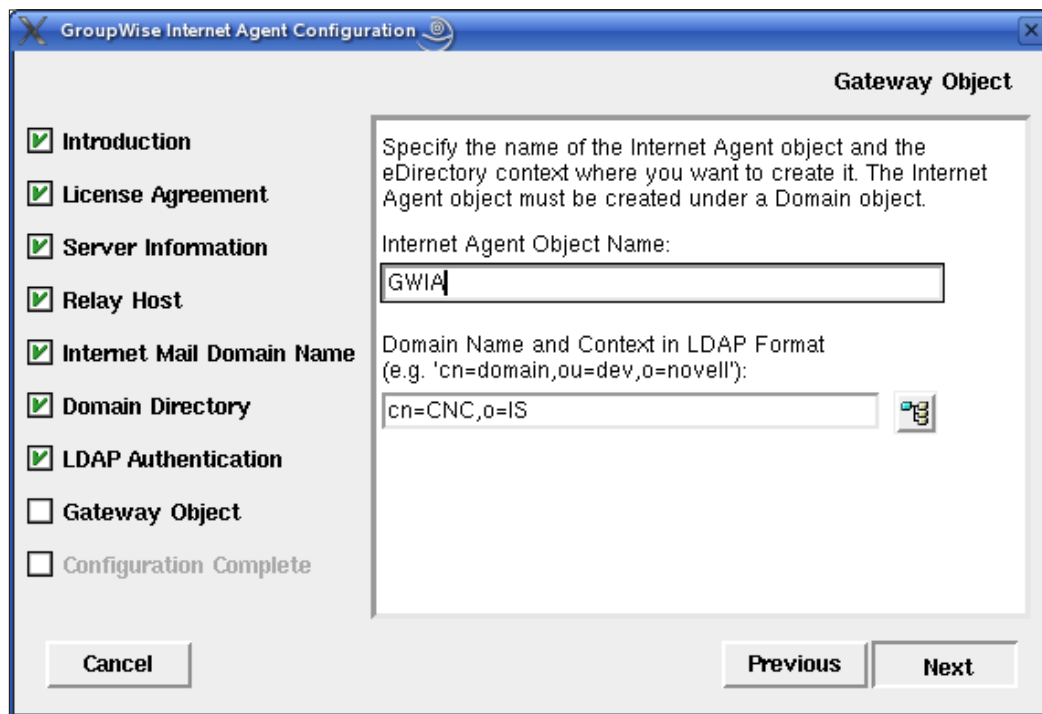


Figure 6-8: Gateway Object Configuration

12. Now, indicate that you want the GWIA to load at startup, and click Exit, and then exit from the GroupWise installation application.
13. Compare the **gwia.cfg** from your source server to the new **gwia.cfg** in the **/opt/novell/groupwise/agents/share** directory to ensure that all of the settings are as you desire. Note that whereas on NetWare the gwia.cfg used switches starting with a slash (/home, /dhome, etc.) on Linux these start with a double-dash (--home, --dhome, etc.).
14. If you have special Access Control Rules defined, these are located in the gwac.db file. These settings should have moved with you. If you have any trouble with these settings, you can always copy the gwac.db file from your NetWare server to the Linux server, ensuring that the file name is all lowercase.

As with the MTA, the first time we start a new GWIA on a Linux server, we like to start it with a GUI console to test that everything is working properly. It's important to know that you will not

run your GWIA with the GUI console as standard practice. We will load our GWIA up for the first time with the GUI console solely to verify that there are no problems with our installation.

The easiest way to start the GUI agent is as follows:

From a terminal window, change to the **/opt/novell/groupwise/agents/bin** directory. From here, type the following:

./gwia --show @gwia.cfg &

This should bring up the agent screen as shown in [Figure 6-9](#).

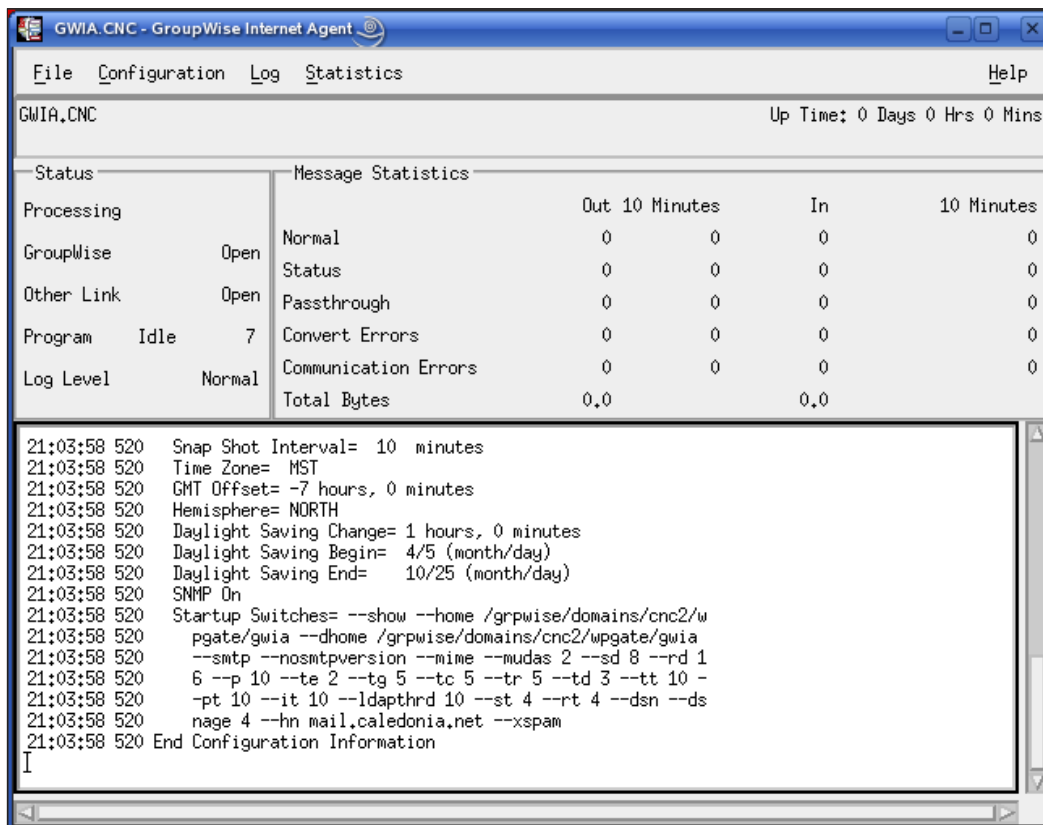


Figure 6-9: GWIA GUI Console on Linux

As long as the GWIA looks okay, we can unload both the GWIA and the MTA (which is still loaded in GUI mode above) by pressing F7 and the console windows, and reload them as daemons.

Cleaning Up

A few things to remember about moving a GWIA.

- You may need to change your MX records if the public IP address for your GWIA will change due to the move to the new server. Otherwise, you may have to change the natting at your firewall, or change the IP address that an anti-spam appliance or other GWIA front-end sends to.
- You may need to change the firewall settings for outbound SMTP if you limit the IP addresses on your network that are allow to sent mail on port 25.

- If your outbound IP address will change for your GWIA, you should also have your PTR (reverse dns lookup) changed to reflect this, as well as any SPF records that are maintained for your domain.

Troubleshooting

There are very few things that can go wrong during a GWIA upgrade. The only problems we typically see have to do with the following:

- You attempt to upgrade the GWIA before upgrading your Domain
- You change the location of the GWIA installation files during the installation (either accidentally, or on purpose) and then do not reconfigure the agent to update the startup files for the server.

New Options of Note

Delayed Message Notification

Beginning with GroupWise 8, when mail going out the GWIA is delayed, the GWIA generates a “transfer delayed” status that is entered into the properties of the senders sent item. GroupWise 2012 will allow you to configure your GWIA to send a “delayed message notification” to the inbox of the sender. This setting is found on the SMTP/MIME tab of the GWIA configuration in ConsoleOne. Check the box that says “Return Notification to Sender When a Message Is Delayed”.

Rule-Generated Messages

As with GroupWise 8, you can now configure the GWIA to block either rule generated replies, rule generated forwards, or both.

Internet Agent Web Console

As with the other agent Web Consoles, you can now control most GWIA settings directly from the Web Console. This makes it more important to put a user and password on your GWIA Web Console.

Once you are ready to continue, just turn to the next chapter in your upgrade plan.

7 Upgrading Your GroupWise WebAccess

Of all of the components of GroupWise 2012, WebAccess has been redesigned the most. There is no longer a GWINTER (WebAccess Agent) for GroupWise WebAccess. Rather than having the WebAccess Application (web server) speak to the WebAccess Application to gather information for the user, the WebAccess Application speaks directly to the POA via SOAP.

Also, the eDirectory objects for the WebAccess Application are no longer used. If you have read our books on manually configuring GroupWise WebAccess on Apache, you will know that these agents were always “optional” and were essentially just a GUI interface for editing the web server and WebAccess configuration files. From here on out, you will need to make configuration changes directly to the **webacc.cfg** file if you wish to modify your WebAccess Application settings. We will go over some of those settings later in this chapter.

And finally, the GroupWise 2012 WebAccess cannot service users on post offices that have not been upgraded to GroupWise 2012. In other words, if you will not upgrade all of your post offices rapidly (perhaps over a weekend or other “off” time such as a long holiday), you will either need to leave your WebAccess at your current GroupWise version, or have two separate WebAccess installations to provide for both your older post offices and your new GroupWise 2012 post offices.

GroupWise 7 and GroupWise 8 WebAccess installations can access a GroupWise 2012 post office with no major downsides. Of course, your users will not be able to utilize any of the new features of the GroupWise 2012 WebAccess, but the users will be able to log into the upgraded PO through a GroupWise 7 or GroupWise 8 WebAccess installation.

Preparing For The Upgrade To GroupWise 2012 WebAccess

For the Web Server running the WebAccess Application you will need one of the following:

SLES 10/OES 2

Apache 2.2 plus:

- Tomcat 5.0 or later
- JRE 5 or later
- ModProxy Module

SLES 11/OES 11

Apache 2.2 plus:

- Tomcat 6.0 or later (installed via YaST for SLES, or during GroupWise installation for OES11)
- JRE 5 or later
- ModProxy Module

Windows Server 2003/2003 R2

Microsoft Internet Information Server (IIS) 6 or later plus:

- Tomcat 6 or later
- JRE 5 or later
- Jakarta Connector 1.2 or later

Windows Server 2008/2008 R2

Microsoft Internet Information Server (IIS) 7 or later plus:

- Tomcat 6 or later
- JRE 5 or later
- Jakarta Connector 1.2 or later

Upgrading WebAccess

Windows WebAccess Installation

Because there is no longer a GWINTER, there is also no requirement that you be connected to a domain directory on your WebAccess server. You can use any web server in your organization that meets the server requirements above to serve as the GroupWise WebAccess Application. Also, the WebPublisher feature has been removed from the GroupWise 2012 WebAccess. If your organization requires WebPublisher functionality, you will need to leave an older WebAccess Installation accessible for this purpose.

In the **internet/webaccess** directory of your Master SDD you will find the **setup.exe** installation program for WebAccess. If you are upgrading your WebAccess Application on Linux, please see the section below entitled “Linux WebAccess Installation”.

1. Run **setup.exe** in the **/INTERNET/WEBACCES** directory.
2. Proceed past the license screen.
3. You will next be prompted to choose the destination web site for WebAccess. Any web sites currently running in IIS will be shown, and you can choose the site for WebAccess. In many cases only one site is shown, so just select the appropriate site and choose Next.
4. You will next be instructed to enter the IP address for a post office agent in your system that has SOAP enabled (remember that all POAs with users who need access to WebAccess will need SOAP enabled). While you can only enter one Post Office Agent address during the installation, you can add more to the **webacc.cfg** file after installation. We will show various **webacc.cfg** modifications at the end of this chapter.

5. Next you will be asked for the location of your Document Viewer Agent. When you configured your Post Office Agent in [Chapter 9](#), the Document Viewer Agent was defined for you. You really weren't asked about this, and probably didn't even know it was occurring. Thus, the question about where the DVA is located, and the port it is listening on are a bit of a surprise! That's okay. Just put in the IP address of the same Post Office Agent you used above, and the default port of 8301 should remain.
6. You are now at the summary screen, and choosing Install will install the software.
7. If you have not stopped the service for IIS, the installation will offer to stop it for you. Allow the installation to stop the service and continue on.
8. If needed, Java will be installed during the installation of your WebAccess. The installation will install and configure all necessary components.
9. At the installation summary, you can choose to have the install routine restart your web server.

And that's it! For long time GroupWise administrators, I'm sure you will be amazed at how quick and easy this really was. You can continue on with ["Configuration Options"](#) below.

Linux WebAccess Installation

In all of the other chapters in this guide, we have pointed out that the Linux installation is a bit different, in that you are not allowed to pick and choose what you install when running this installation script. The script will detect what GroupWise components are already installed on this server, and it will insist that they all be updated at the same time. GroupWise 2012 WebAccess, however, has no dependencies on other GroupWise components, and is thus not included in the "all-inclusive" upgrade process. You will be required to run a separate installation for WebAccess, even if it resides on a server that has other GroupWise components already upgraded.

In your Master Linux SDD (in our case **/grpwise/gw12soft**), run the install script as root. For example:

```
gwlinux:/grpwise # ./install
```

You will see the screen in [Figure 7-1](#).

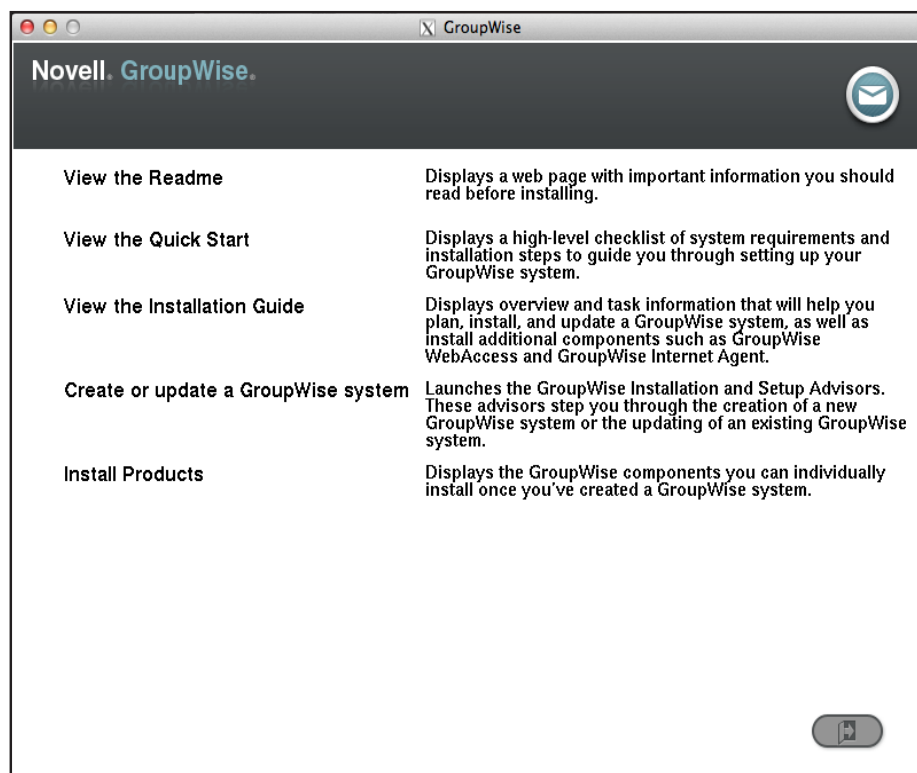


Figure 7-1: The Linux Install Screen.

1. Choose install products.
2. Choose GroupWise WebAccess.
3. Here we have two options. We first install WebAccess, and then we configure the WebAccess Application. Clicking on Install WebAccess will simply copy files out to the server, and end very quickly.

Next we will configure the WebAccess Application

1. From the Install GroupWise WebAccess window, choose Configure WebAccess
2. Click Next at the Information screen.
3. Accept the license agreement.
4. Next you will enter the IP address of a GroupWise Post Office Agent. While you can only enter one Post Office Agent address during the installation, you can add more to the **webacc.cfg** file after installation. We will show various **webacc.cfg** modifications at the end of this chapter.
5. Next you will be asked for the location of your Document Viewer Agent. When you configured your Post Office Agent in [Chapter 9](#), the Document Viewer Agent was defined for you. You really weren't asked about this, and probably didn't even know it was occurring. Thus, the question about where the DVA is located, and the port it is listening on are a bit of a surprise! That's okay. Just put in the IP address of the same Post Office Agent you used above, and the default port of 8301 should remain.
6. The next window will verify the location of your Apache 2 location and your Tomcat installation. The defaults are **/etc/apache2/conf.d** and **/usr/share/tomcat6/webapps**.
7. You will see the final screen, and your WebAccess installation is complete.

Loading the GroupWise WebAccess Application

Linux

The commands for loading the Apache web server and Tomcat on OES Linux are as follows:

/etc/init.d/apache2 start

and

/etc/init.d/tomcat5 start (SLES 10/OES2)

or

/etc/init.d/tomcat6 start (SLES 11/OES11)

You can also check status, stop and restart using these scripts. For example:

/etc/init.d/apache2 restart

Microsoft Windows Server

The GroupWise WebAccess Application is designed to start when the Microsoft IIS Service and Web Server is started. The Microsoft IIS Web server is designed to start with the Microsoft Internet Information Server service is started.

Configuration Options

The majority of WebAccess optimizations are done through the **webacc.cfg** file. This file is found in the following locations:

Linux: **/var/opt/novell/groupwise/webaccess**

Windows: **c:\Novell\GroupWise\WebAccess on the Web server**

The original webacc.cfg file on a particular server will be very orderly, and broken into distinct sections. As you patch and update your server over time, new settings will be saved to the bottom of the file in a section called “Values added by install to update config file”. If you change information in the file, make sure to look at the end to ensure that you do not have conflicting values, as the final value will win!

There are many interesting options in the webacc.cfg. We encourage you to look through the file to see what might interest you.

Following are some important configurations options pertaining to the upgrade that you should know more about. After any changes, restart Apache and Tomcat (see the section above for [“Loading the GroupWise WebAccess Application”](#) for instructions on restarting these processes.

Configuring Additional Post Office Agents

The GroupWise WebAccess Application talks directly to post office agents in your GroupWise system to gather the information necessary to show in WebAccess. During installation, you can only supply one post office agent address. However, you can supply as many POA designations

as you like, and the WebAccess Application will attempt them in order until it finds a POA that responds. If the user does not belong to the POA in question, the redirection table will send the WebAccess Application to the proper location.

In the webacc.cfg, search for Provider.SOAP.1.ip - for example:

Provider.SOAP.1.ip=192.168.110.237

Provider.SOAP.1.port=7191

Copy these two lines and change the “1” to a “2” in each line, and modify the IP address and port.

Provider.SOAP.2.ip=192.168.110.238

Provider.SOAP.2.port=7191

Do this as many times as necessary, making sure to have two lines for each SOAP provider number you add.

Configuring Additional Document Viewer Agents

As with the Post Office Agent, you can only configure one instance during installation. Modify the following information to add additional DVAs to your webacc.cfg:

In the webacc.cfg, search for Provider.DVA.1.ip - for example:

Provider.DVA.1.ip=192.168.110.237

Provider.DVA.1.port=8301

Copy these two lines and change the “1” to a “2” in each line, and modify the IP address and port.

Provider.DVA.2.ip=192.168.110.238

Provider.DVA.2.port=8301

Do this as many times as necessary, making sure to have two lines for each SOAP provider number you add.

Configuring HTTP Monitor for WebAccess

Like the other GroupWise Agents, you can configure a web based monitor for WebAccess administration activity. The **webacc.cfg** file contains the following lines:

```
#####
# Application Administration Tool
# Invoked on the URL
# (e.g. http://<server>/gw/webacc?action=Admin.Open)
#####
Admin.WebConsole.enable=true
Admin.WebConsole.username=user
Admin.WebConsole.password=secret
Admin.WebConsole.helpPath=/gw/webaccess/$(Build.date)/help/
webconsole/en/
```

You can turn this on or off. By going to your server at the URL specified, you can log in and view logged in users, configuration and log files.

Novell GroupWise WebAccess Application							Saturday - November 12, 2011 16:50
Status Configuration Log Files Refresh Help							
Up Time: 0 Days 0 Hours 24 Minutes							
User Information - 3 Active User(s)							
User Id	Logged In	Last Access	Interface	Domain	Post Office	Language	Client IP
danita@caledonia.net	11/12/11 16:37	11/12/11 16:37	css	Beta	Ascot	en	192.168.110.153
danita@caledonia.net	11/12/11 16:45	11/12/11 16:45	simple	Beta	Ascot	en	192.168.110.150
danita@caledonia.net	11/12/11 16:49	11/12/11 16:50	mobile	Beta	Ascot	en	192.168.110.228
Total Active Users: 3							

Setting the GroupWise 2012 WebAccess as Your Default

If your system will have more than one version of WebAccess in order to accommodate older GroupWise post offices, you can choose to have a single entry point for all of your users. For example, you may already have **https://mail.yourdomain.com/gw/webacc** pointing to your GroupWise 8 WebAccess. Rather than having to direct users to multiple locations, you can continue to have **https://mail.yourdomain.com/gw/webacc** as the entry point for all users, and redirect users on older post offices to **https://gw8.yourdomain.com/gw/webacc**. In order to do this, you must make a change in the **webacc.cfg** file, and of course create an A Record in DNS for your secondary WebAccess server (in our example, **gw8.yourdomain.com**).

This setting is found in the **webacc.cfg** file as:

#Redirect.url=http://gw8.novell.com/gw/webacc

simply remove the pound sign and change the URL to match your desired URL. Once the system is restarted, if a user logs into your **http://mail.yourdomain.com/gw/webacc** location, their POA will indicate it is not a GroupWise 2012 post office and the WebAccess Application will redirect the user to the older GroupWise WebAccess Application.

Security Timeouts

GroupWise 2012 brings a new set of security timeouts to WebAccess. When a user logs into WebAccess, the user has the option on the main login screen to choose whether the computer is public or private. This allows for users who access GroupWise solely via WebAccess, from a private computer at home or at the office to have a longer timeout value set. These values are listed in the **webacc.cfg** as:

Security.timeout=20

Security.Private.timeout=480

Setting the “Private” timeout to a higher value “in minutes” prevents users in a more secure setting from timing out multiple times a day, no doubt reducing their frustration!

Deleting Unneeded eDirectory Objects

In prior versions of GroupWise, when you installed WebAccess, an object representing the WebAccess Agent (Gateway) was created in eDirectory and the GroupWise view. Also, objects for the WebAccess Application were created (most commonly under the GroupWise domain object itself, but realistically they could be anywhere!). These objects are no longer used, and can be removed from eDirectory to avoid confusion. We recommend that you give your system a few days to settle down before you delete them, but once everything is working as you expect you can delete the following items:

- GroupWise WebAccess Agents no longer in use. Make certain you export any access control settings you might need as outlined above before you delete the objects!
- GroupWiseProvider Objects
- LDAPProvider Objects
- GroupWiseWebAccess Object
- NovellSpeller Objects

Once you are ready to continue, just turn to the next chapter in your upgrade plan.

8

Moving a GroupWise Post Office

For most administrators, moving the post office to a new server is the most unsettling part of a move to a new server. While certainly having an MTA or GWIA or WebAccess down can be frustrating, the thought that something might “go wrong” during a post office move causes some sleepless nights.

We won’t say that there are no dangers in the move to a new server. Frankly, any time you do something as major as changing network operating systems there are difficulties. Learning the new operating system is generally the most work for a Linux move. Most NetWare administrators have at least a general knowledge of Windows networking. But getting everything “just right” is what we’re here to help you do!

You should always look at moving all but the very smallest of post offices as a two stage process. The first stage involves preparing the server and making a first pass copy of the post office data. We are often asked why we do a first pass and second pass of the copy of data from the source server to the new server. It’s simple: time. Unless you can afford to have your post office down for the entire time it takes to copy every file in your post office to the new server, you need to do two passes.

To explain this better, we’ll look at how DBCopy works. DBCopy is optimized to only copy files that are new or have changed since the last run of the utility. When you run DBCopy with only the parameters required to do the job, and no additional switches, DBCopy looks at each file that it is asked to copy and checks to see if there is already a file by that name in the target directory. If the file does not exist in the target directory, DBCopy copies the file. If the filename already exists in the target directory, DBCopy checks the timestamp and only copies the file if the source file is newer.

To understand this even better, we will briefly go over how GroupWise stores data. As you know, there are three data directories for a basic GroupWise post office (we aren’t counting document management directories here just yet). There is the **ofuser** directory, the **ofmsg** directory, and the **offiles** directory structure. When GroupWise delivers a piece of mail, a pointer is put into the **ofuser** directory that contains the header information for the message (sender, recipient, subject, message size, etc.). In theory then, the actual message is placed in the **ofmsg** database. This is true, of all message 4KB and smaller. In practice of course, with the increased use of HTML messages, these small messages are becoming fewer and fewer. Any message or attachment that is larger than 4KB is package up in a BLOB file (binary large object) and placed in the **offiles** directory structure. And there it sits, totally unchanged, until it is finally deleted and purged by the sender and all recipients and it can finally be removed from the system.

Thus, if you were to look at your GroupWise post office data, you would find that the vast majority (oftentimes over 90%) of the data in your post office is static information in the **offiles** directories. That information only needs to be copied once to your new server. And if that takes 10 hours, 20 hours, even 40 hours, you can sit back and let it happen a few days or weeks before your final move. Then on the actual “migration day” only files that have been created or modified since the first pass will need to be copied. Novell has actually also added an “incremental” switch that allows you to enter a specific date for the copy, thus even avoiding much of the checking against timestamps and file size. So, for example, if you were to make your first copy on December 30, 2011, and on January 7, 2011 you are doing the actual migration, you could put the “-i 01-06-2011” switch to prevent DBCopy from trying to copy files older than your last copy. And notice that we say “older than your last copy” here. You could

technically run DBCopy multiple times prior to your final migration. For example, run DBCopy on December 30, 2011, then again on January 6, 2012, and on the 7th when it is time for the actual migration, only one day's worth of data would need to be copied again.

- Stage One – this stage can be done as many times prior to your actual migration day as you choose.
 - Create a mount point on Linux for the NetWare server, or map a drive from Windows to the NetWare server.
 - Perform our first pass DBCopy of our post office.
 - Configure the POA on (we won't load it yet, but it just saves us some time on that stressful migration day!).
- Stage Two – Migration Day
 - Unload the POA for the post office
 - Rename the post office directory to avoid any accidental access while we are relocating the post office.
 - Perform our final DBCopy pass.
 - Load ConsoleOne and edit the post office location, agent address and link information if necessary.
 - Verify that the HTTP monitor for the POA is properly enabled.
 - Load the POA for the relocated post office.
 - Log into the post office and verify that all prior data is present.
 - Send a message to a user on the same post office, and verify that it is received.
 - Verify that the POA is communicating with its domain's MTA and force the new MTP settings through the HTTP Monitor if necessary.
 - Send a message to a user on another post office if applicable and verify that it was received
 - Send a message to an external recipient through your GWIA and verify that it was received.
 - Send a message from an external sender to your user through the GWIA and verify that it was received.

Migrating our Post Office - Stage One

Because our post office data store is large, and because we cannot afford to have our e-mail system down for two or three days while we migrate the data, we will make an initial copy of the data while the post office is up and running. Other than some disk I/O increase, our users will not even know we are there!

Stage One can be started quite a long time before the actual migration, but there are a couple of things to keep in mind. The longer in advance you do your first DBCopy, the more “junk” you will have in your offiles directories to try to clean up later. As we noted above when we discussed how DBCopy works, the utility only copies new or newer files to the target location. However, DBCopy does no “reconciliation” of files on the servers. In other words, if you do a first pass copy of your post office on September 1, 2009, and then don't do your actual migration until September 30, 2009, anything in the offiles structure that has been deleted from the live post office in the meantime will still exist on the Linux server. It would be unwise, therefore, to do a first pass copy before instructing users to clean out their mailboxes and purge their trash!

In that case, you would have cleaner databases, but you would still have old files in the offiles directories. And we all know (at least those of us who have been around for any time at all know!) how difficult it is to get rid of old orphaned files in the offiles directories. Thus, it is best to try to have your users clean up before you do your first pass with DBCopy.

Once you have your server prepared and ready for your migration, and you are within your reasonable “migration window” for starting your first pass DBCopy run, it’s time to get down to business.

Attach to Your NetWare Server

Linux - Create a Mount Point for the NetWare Server

In order to move your post office from NetWare, you need to attach to the source server from your new Linux server. To mount the NCP volumes into your Linux file system, perform the following steps:

1. On the Linux server, open up a terminal window.
2. “**su root**” to become root for this session.
3. Create a directory structure for your mount point. For our purposes, we have created **/mnt/gw1** as the mount point for our NetWare or OES2 server that is named **gw1**. It is suggested that you replace **gw1** with the actual name of your source server for ease of recognition later.
4. We have chosen to connect to our NetWare server via ncpfs. To mount the NetWare server via ncpfs, issue the following command

```
ncpmount -S server -A 123.123.123.123 -U userid -P password /mnt/gw1
```

replacing your server name for “server” and your server’s IP address for 123.123.123.123. For example

```
ncpmount -S gw1 -A 192.168.100.200 -U danita.cnc -P password /mnt/gw1
```

NOTE: You might wonder about the “user.context” vs. “.user.context” in this example. While “.user.context” works on some versions of Linux, it fails on others. In my testing, “user.context” has always worked on all versions. You might keep this in mind if you experience any problems authenticating with ncpmount.

This will actually mount all volumes from the NetWare server to this location. So, if we cd to **/mnt/gw1** will see a directory called **SYS**, one called **GWDATA**, one called **GWDOCS** and any other volumes that are on that server.

Windows - Map a Drive to Your NetWare Server

It may be that your login script will automatically map a drive for you from your new Windows server to your NetWare server. Otherwise, map a drive by finding the volume in Windows Explorer, right-clicking the volume, and choosing Map Network Drive.

Performing Our First Pass DBCopy of the Post Office.

Decide where you wish to have your post office located on your server (local partition, SAN, etc.) and make sure that your location is ready to receive your data. It is not necessary to have actually created the post office directory on this partition, as the DBCopy utility will create it for you.

Linux

In our example, our NetWare volume is mounted at **/mnt/gw1/GWDATA/pos/caledoni**. Our new location for our data will be in **/grpwise/pos/caledoni**.

The absolutely most important thing to remember when performing your DBCopy from NetWare to Linux is the **-m** switch. This is the “migrate” switch, and it changes the case for all of the data to lowercase. We can’t stress enough how critical this is. We have been involved in migrations where this switch was forgotten. Especially if you plan on doing more than one “first pass” you must be extremely careful. There is nothing more frustrating than having a DBCopy run for 20 hours the first time, all files dutifully converted to lowercase, and then come back for another pass, forgetting the **-m** switch, and having duplicates of all file names in two different cases! In fact, some of our customers have been so wary of this, that they simply run the Change Case utility that we discussed back in our preparation chapter prior to beginning their migration first pass just to lessen the damage that would be incurred by forgetting the **-m** switch!

If you have an older version of GroupWise, and your **ngwguard.db** file on the NetWare server is not all lowercase, it is advisable to change that prior to starting the DBCopy. You must take down your POA in order to change the case for this file of course. While newer versions of DBCopy should do okay with an uppercase **ngwguard.db** file, we have seen issues with the **-m** switch failing, and it’s just better to be safe than sorry!

So, getting down to business, here’s how we will copy our data.

You will find that DBCopy on the Linux server does not run well from any directory other than **/opt/novell/groupwise/agents/bin** so we will **cd** to that location to run the utility. Run DBCopy to copy your files from the source server to the Linux location like this:

```
./dbcopy -m -p <source> <destination>
```

so for our situation it would be

```
./dbcopy -m -p /mnt/gw1/GWDATA/pos/caledoni /grpwise/pos/caledoni
```

This will copy all needed data from the current post office directory into the directory structure that we have indicated for the destination. In our case, we have chosen to location our post office in **/grpwise/pos/caledoni**. Our post office is named “Caledonia”. While in theory we should be able to have a post office directory of more than 8 characters on Linux, we do not do this for compatibility and consistency sake.

The **-m** switch copies the files over in all lower case. The **-p** switch tells DBCopy that it is migrating a post office. If you are extremely curious and just love watching screens fly by to prove that something is happening (don’t be shy – Danita is just like that herself!), you can also include the **-w** switch. This writes all of the data to the “window” so that you can see each file as it is copied. If you DO enable this switch though, do not expect to be able to really tell where

you are in the copy. DBCopy launches multiple threads (by default 5) to do the copying, and does not seem to always follow any particular order in the directory structure.

Windows

In our example, our current Windows volume is mapped to f: at f:\pos\cal2. Our new location for our data will be in d:\pos\cal2.

So, getting down to business, here's how we will copy our data.

From a command prompt on your Windows workstation, change to the location where you can copied the DBCopy directory. Run the command as follows:

dbcopy.exe /p <source> <destination>

so for our situation it would be

dbcopy.exe /p f:\pos\cal2 e:\pos\cal2

This will copy all needed data from the current post office directory into the directory structure that we have indicated for the destination.

The /p switch tells DBCopy that it is copying a post office. If you are extremely curious and just love watching screens fly by to prove that something is happening (don't be shy – Danita is just like that herself!), you can also include the /w switch. This writes all of the data to the “window” so that you can see each file as it is copied. If you DO enable this switch though, do not expect to be able to really tell where you are in the copy. DBCopy launches multiple threads (by default 5) to do the copying, and does not seem to always follow any particular order in the directory structure.

Go get a cup of coffee. Or dinner. Or watch a movie. Or just go home for the weekend! This can take a long time, and there is almost no way to calculate it for you. The time it takes you to do current backups of your full post office is a start at an estimation. The faster the connection between your new Linux server and the source server the better. And of course, if you are migrating from an ncp server, ncp isn't necessarily the fastest of protocols out there, but it requires no special configuration on your NetWare server, and is Novell's recommended way to copy the data from NetWare to Linux. While on some versions of NetWare you could serve up the post office via CIFS, it probably isn't worth the effort to try to configure this solely for the purpose of this migration. And under no circumstances should you attempt to do any type of NFS mount to your source server. For the vast majority of sites, you will find it easier and safer to just follow the instructions outlined here for using ncdfs for NetWare or cifs for Windows and having the data copy over via DBCopy that way.

Install and Configure the Agent Software

After the first run of DBCopy, it is advisable to go ahead and configure your POA so that it will be ready to load on migration day.

The configuration process will create a new startup file for the POA, and configure the agent to launch upon startup.

Linux

In a terminal window, go back to the location where you extracted your GroupWise distribution above in Preparing Your Server. Run the install script as root. For example:

gwlinux:/sdd/gw12soft # ./install

1. Choose Install Products.
2. Choose GroupWise Agents.
3. Choose Configure Agents.
4. At the License Agreement screen, accept the license.
5. The next screen will look very familiar to GroupWise administrators (see Figure 8-1). This is where we list the agents that will run on this server to create startup files and the startup script for Linux.

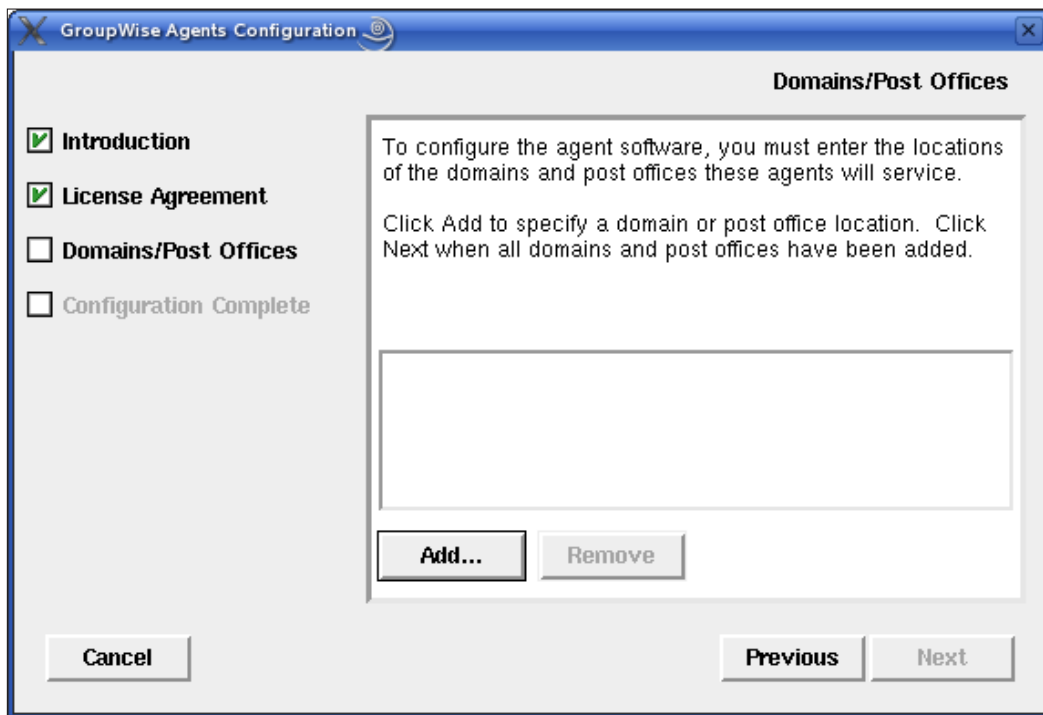


Figure 8-1: GroupWise Agents Configuration

6. Enter the information for your post office, using the local Linux path (see Figure 8-2)

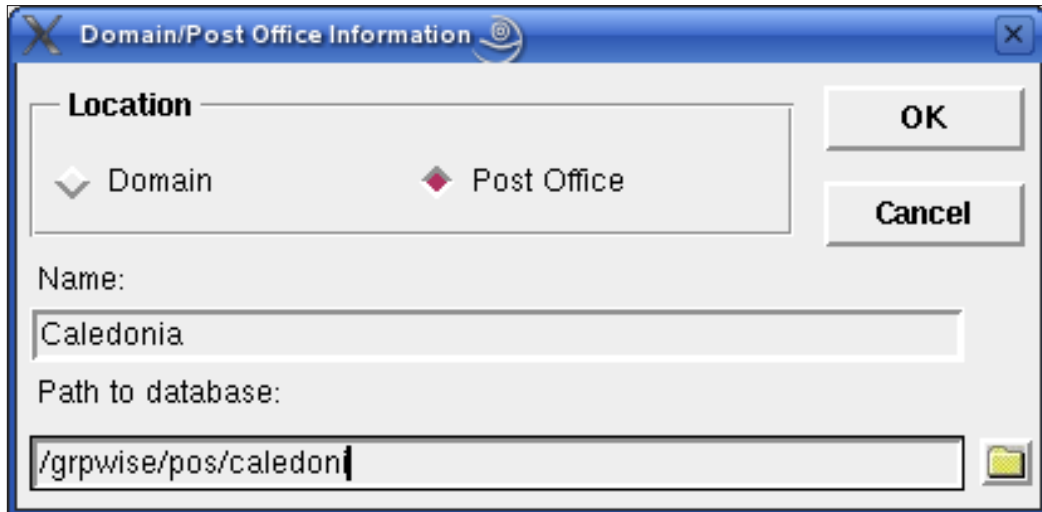


Figure 8-2: Post Office Information

7. After your post office information is entered, click next to move on to the startup screen.
8. You will be asked if you wish for your agent to load on startup. This box is already checked, but really just looks like a red box. You will notice that if you click on the box, it becomes white (unchecked) and clicking again will recheck the box. It is advisable to have your agents load on startup.
9. Click Exit to leave this setup, and then click the Exit icon (at the bottom right of the screen) to leave the GroupWise installation program.

When you perform these tasks, a startup file is created for the post office's POA, and if you chose to launch on startup, symbolic links were created in the proper run level directories to start the agent automatically. Looking at the **/opt/novell/groupwise/agents** directory you will see directories named **bin**, **lib** and **share**. Under **bin** you will see the agent executables, as well as default startup templates. Under the **share** directory are a couple of directories, and the **caledoni.poa** startup file that was created by our installation. Let's run this agent now and see what it looks like.

Windows

To install the software for your agent, you can use your GroupWise CD, Software Distribution Directory, or simply download new software from the Novell downloads site (<http://download.novell.com>).

In the root of the location of your GroupWise software, you will see the **setup.exe** program that will be used for this installation. Our installation here is using GroupWise 8.0. Your agent installation may vary slightly. When you run this program, you see the Window in Figure 8-3.

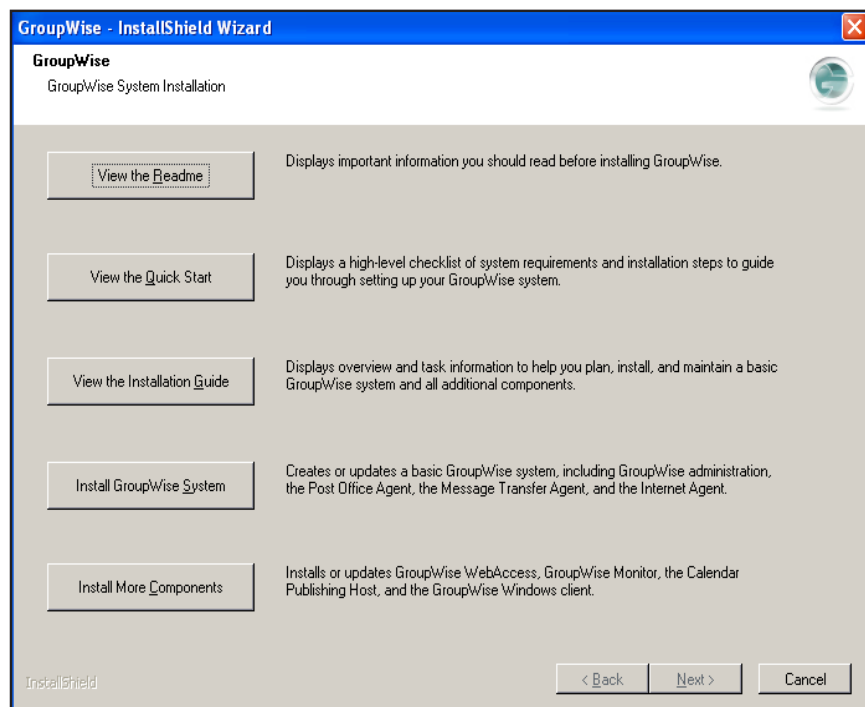


Figure 8-3: The main installation screen

1. Click on Install GroupWise System.
2. Click Yes on the next screen to accept the license agreement.
3. Click Next on the next screen to do a standard install. You will see the window in Figure 8-4.

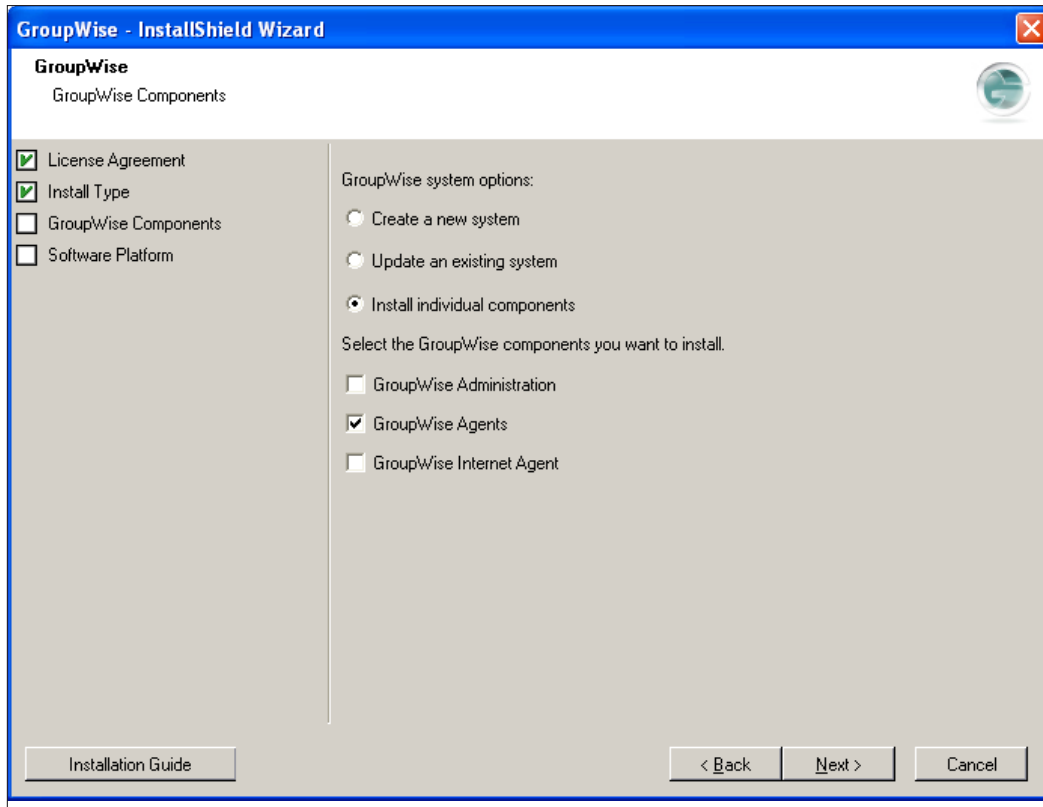


Figure 8-4: Install GroupWise Agents

4. “Install Individual Components”.
5. Choose GroupWise Agents as an option to install.
6. At the next screen you will be prompted if you wish to install on NetWare or Windows. Of course we will choose Windows here.
7. The next screen will give you the option of where to install your files on your Windows server, and options for the installation.
 - Install and configure SNMP for GroupWise Agents: If SNMP is available and installed on your Windows server, you can configure your agents here for SNMP.
 - Install as Windows services: Most Windows sites will configure GroupWise agents as services. Otherwise the server would need to remain logged in in order for the agents to run.
8. After you choose the options on this screen you will click next and be presented with the window in Figure 8-5.

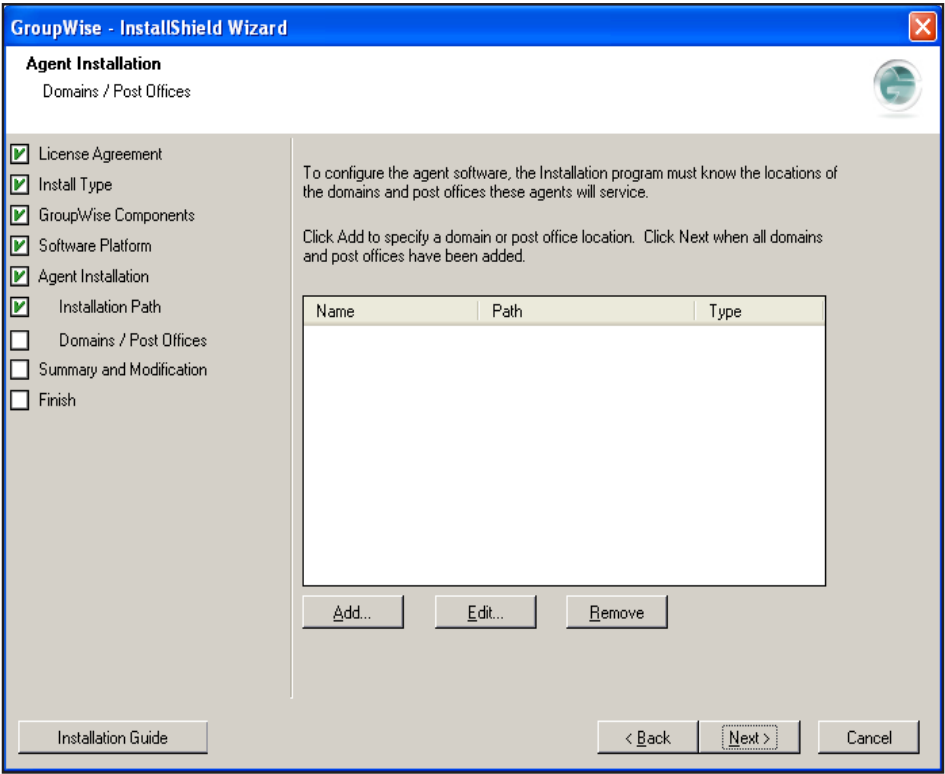


Figure 8-5: Configuring the GroupWise Agents

While we are looking at this screen, we should explain its usage so that it’s more easily understood the next time you encounter it. There are a few misconceptions about what is done here, and what you need to put in this location, so we will try to clear those up.

First, this screen is a template for creating new agent startup files (for example the **caledoni.poa** file), and for configuring your **grpwise.ncf** file. Let’s take the example of our groupwise system. Our domain is called CNC. If we want to create a new startup file for the Caledonia POA, and place it in our **grpwise.ncf** (provided that we checked the option above to “Launch the GroupWise agents on system startup”), we would click the Add button as shown in Figure 8-5 and enter the information for our post office.

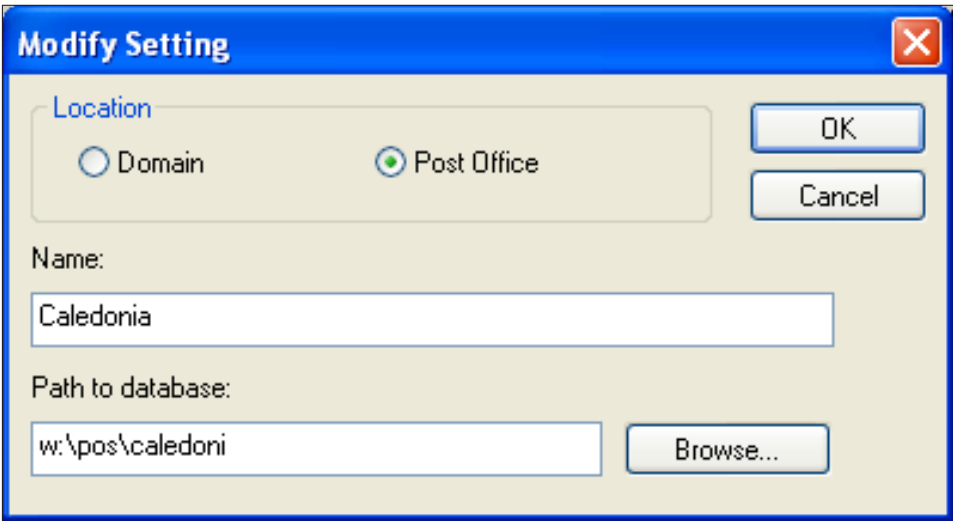


Figure 8-6: Adding a post office for configuration

By entering this information, we are instructing the installation routine to create us a startup file called **caledoni.poa** with a /home switch of “d:\pos\caledoni and create Windows services or icons for the post office agent.

The installation does not validate the “name” you put here and indeed, you can name things here anything you like. For example, rather than naming my startup file “**caledoni.poa**” as shown above, I could just as easily type “cal” in the name field, and the name of the file would instead be **cal.poa**. If you put in a name that has more than eight characters (for example Caledonia), the file name will be truncated to eight characters.

9. Next you will be presented with a summary screen showing your choices for the install, and the installation will proceed.
10. When the installation has completed, choose to launch your agent now.

It is best to try to avoid restarting this server between now and migration day. It would not be a critical problem, except of course that we have configured the server at this point to automatically load the POA on startup. This should not pose any great problems if it were to load unattended, but it would be best to not have to worry about the POA running when it comes time to do our final copy.

As mentioned earlier, you can do a “first run” copy any time you choose between now and the final migration day. It’s usually not that important to do though, unless you want to incrementally reduce the amount of time the copy takes on the final day.

Migration Day

Today’s the day, and we will complete our migration of the post office to our new server. Users have been alerted that the e-mail system will be unavailable for the duration, and we are ready to proceed. Here are the tasks that we will complete in order to accomplish our migration:

- Unload the source server POA for the post office
- Rename the post office directory to avoid any accidental access while we are relocating the post office.
- Perform our final DBCopy pass.
- Load ConsoleOne and edit the post office location, agent address and link information if necessary.
- Verify that the HTTP monitor for the POA is properly enabled.
- Load the POA for the relocated post office.
- Change the ngwnameserver entries in our local DNS if applicable
- Log into the post office and verify that all prior data is present.
- Send a message to a user on the same post office, and verify that it is received.
- Verify that the POA is communicating with its domain’s MTA and force the new MTP settings through the HTTP Monitor if necessary.
- Send a message to a user on another post office if applicable and verify that it was received
- Send a message to an external recipient through your GWIA and verify that it was received.
- Send a message from an external sender to your user through the GWIA and verify that it was received.

It seems like a lot of work, but some of it can be done while the post office is doing its final copy.

Unload the POA

On your NetWare server, press F7 at the agent console to unload the agent

Rename the post office directory

Just to be safe, we always rename the post office directory on the source server to ensure that no one (or no utility) can access the post office while we are making our final copy.

Perform our final DBCopy pass.

Our final DBCopy pass will be very similar to the first. The big differences here are that we will use the “interval” switch to limit what work DBCopy must do, and we will alter the source directory to reflect that we have renamed our post office directory.

Linux

You will find that DBCopy does not run well on the Linux server from any directory other than **/opt/novell/groupwise/agents/bin** so we will cd to that location on the destination server to run the utility. Run DBCopy to copy your files from the source server to the destination Linux server location like this:

```
./dbcopy -m -p -i mm-dd-yyyy <source> <destination>
```

so let's assume that we did our last DBCopy to the Linux server on January 6, 2012. Our command would be

```
./dbcopy -m -p -i 01-05-2012 /mnt/gw1/GWDATA/pos/caledoni.old /grpwise/pos/caledoni
```

We always make the -i switch the day before our last copy just to be safe!

StoreLowerCase on Linux

If all goes well with your DBCopy, a gwcheck with a “storelowercase” option will be issued by the utility at the very end. This tells the **ngwguard.db** that all files in the GroupWise system are now lowercase. The only time you should ever have to run a gwcheck with a “storelowercase” option yourself is if you do not use DBCopy with an -m and -p switch. We bring this up, because there are still some TIDs floating about that recommend that you DO run a “storelowercase”. And while there are instances where you indeed might need to do this manually, it CANNOT BE STRESSED ENOUGH that you should NEVER run a gwcheck with a “storelowercase” while the POA is loaded. Unfortunately, ConsoleOne will actually allow you to request such a thing through Mailbox/Library Maintenance, which of course will have the POA run the gwcheck itself. This can cause no end of suffering. Please do not do this.

Windows

dbcopy.exe /p /i mm-dd-yyyy <source> <destination>

so let's assume that we did our last DBCopy to the new Windows server on January 6, 2012. Our command would be

dbcopy.exe /p /i 01-05-2012 f:\pos\caledoni.old d:\pos\caledoni

We always make the /i switch the day before our last copy just to be safe!

Again, this will take some time. It's difficult to say how long exactly. However, in a recent migration we did, the initial DBCopy of all of the post office files took about 20 hours, and the final DBCopy took two hours.

While this is processing we can continue to do a bit of work that needs completing.

Additional Migration Tasks to Do While the Final Copy Continues

There are a few steps that need to be accomplished before we are finished with our migration.

Edit the Details of the Post Office in ConsoleOne

Load ConsoleOne and if possible connect to the domain that owns this post office. While the changes could be done from any domain location, being connected to the domain that owns the post office aids in getting the changes propagated more efficiently.

- Edit the properties of the post office and change the UNC path of the post office to point to the new location.
- Edit the properties of the POA object, and change the following:
 - On the Identification screen, change the Platform to Linux or Windows
 - On the Agent Settings screen (click the triangle on the GroupWise tab to change to this screen), notice the HTTP Monitor settings. If you have never enabled the HTTP monitors for your agents, you will need to decide on a good userid and password for the HTTP monitors. Please note that this is neither an eDirectory user nor a GroupWise user. This is an entirely made up user and password solely for the use of the HTTP monitors. If all administrators in your organization will have rights to use the HTTP monitors, then it is a good idea to have the same userid and password for all agents. If you need to limit rights to some agents to various groups, set up a userid and password for each group of agents that will be monitored. Enter the userid and password that you have decided on here in this screen.
 - On the Network Address screen, change the IP address of your POA to reflect the IP address of the new server. Make sure that a valid port number is listed in the HTTP Monitor field, and note what that port is.
 - On the Log Settings tab, remove any custom log locations and leave the logging to the default location. Best to make sure the log is also set to verbose!
 - Click OK to save all of the changes.

NGWNameserver

If your site is using an ngwnameserver value in DNS to direct users to the POA, you should change this now to point to the new IP address for your POA. This will ensure that users have no disruption of service after the POA comes back up. The DNS server will simply redirect the users to the proper IP address after the migration.

And now we wait. There really isn't much left to do until the copy is complete!

Now you can continue on with the next chapter to upgrade your post office.

9 Upgrading Your Post Offices

Upgrading your post offices is very similar to upgrading domains. There are just a few things to keep in mind about your upgrade:

- Your post office cannot be upgraded until the domain that owns the post office is at GroupWise 2012.
- You should use the version of GWCheck that is designed for your version of GroupWise. Thus, if you have multiple post offices and will not upgrade them all at the same time, make sure you have not only your GroupWise 2012 GWCheck available, but also that you keep the older standalone versions of GWCheck on hand until you have upgraded those older post offices.
- The GWIA, while an SMTP server, also serves as a client when it is used for IMAP4 and POP3. Once you upgrade your GWIA to GroupWise 2012, you will only be able to use POP3 and IMAP4 to GroupWise 2012 post offices.
- If you upgrade a post office to GroupWise 2012 and that post office owns users who typically proxy to other users on older GroupWise post offices, you will not be able to upgrade those users' clients until all post offices are upgraded.
- If you have multiple post offices, you will need to wait on upgrading WebAccess until all of the post offices have been upgraded, or use two separate WebAccess servers to handle both versions of GroupWise.

So, as you can see, it's a good idea to get your post offices upgraded to GroupWise 2012 on a scheduled roll-out so that you are not surprised by any of the possible issues with mixed post offices. That said, many sites operate in a "mixed" system quite nicely for an extended period of time. You must simply make sure that your plans take the above caveats into account.

How Does the Upgrade Work?

At the post office level, a GroupWise upgrade is really just a database conversion from one version to another. The former GroupWise post office database, is RECOVERED by the MTA's administrative thread and CONVERTED to the new version. This requires three simple components:

- The domain that owns the post office in question must already be upgraded to GroupWise 2012.
- The Post Office Agent software must be at GroupWise version 12
- The dc (dictionary files) in the post office directory must be at version 12

We realize that this sounds simplistic, but it really is quite simple. When you upgrade your post office, you are simply recreating your post office database to be a GroupWise 2012 database.

If you are moving from GroupWise 7 or GroupWise 8 to GroupWise 2012, there are no structural changes outside of the post office database to be concerned with. However, if you are upgrading from GroupWise 6.5 or earlier, you will notice an interesting new feature. Prior to GroupWise 7, GroupWise had 25 message databases in the ofmsg directory structure. These are shared databases that are randomly divided amongst your users, no matter how many users are on a post office. Upon creation, a user is assigned to a message database, and all mail “sent” from that user goes into this database number. In GroupWise 6.5 and earlier, a post office with 50 users ends up with the same number of message databases as a post office with 5000 users!

This was not a huge issue for many years. However, as the usage of e-mail increased over time, these databases grew larger and larger. While GroupWise seemed to handle the bloat of the databases just fine itself, it started to cause issues for backup software, the time it took to perform a GWCHECK, etc., etc. Additionally, FLAIM databases (which all GroupWise user and message databases are) have a limit of 2 GB per database. Thus, it has become more important over time to distribute the data over a larger number of databases to prevent database files from reaching the FLAIM limit.

With GroupWise 7, Novell increased the number of message databases to 255. This allows for better load balancing of the message store. There are some interesting side effects of this change though that are important to know about. If you are upgrading to GroupWise 2012 from GroupWise 6.5 or earlier, users will be reassigned to these new database numbers immediately. For example, Danita’s database went from being number 21 under GroupWise 6.5 to number 91 under GroupWise 7. And as we say, this is an immediate change. As soon as a user logs into the GroupWise 2012 post office (regardless of the client version) and sends a message, that message will be saved into the new database. All previous messages will remain in the former message database. So, in the case of Danita, she now has messages linked in her sent items to both **msg21.db** and **msg91.db**.

While this is mostly a technical discussion, and doesn’t really impact your users in any noticeable way, you should know what happens if you have post offices at a version older than GroupWise 7 that you do not upgrade right away. You will start to see these newer, higher numbered databases appearing even in GroupWise 6.5 or earlier post offices. This is due to how the GroupWise system works. If Danita sends a message to a user on a different post office, the message is placed in **msg91.db** on Danita’s post office. That message is then sent through the MTAs to the second post office, and when it is saved, it is placed in **msg91.db** on THAT post office. This poses no problems. The older post office agents will look into any database that is referenced in a message header. The important thing to remember is that this is normal and you should not be concerned when you see these “oddly” numbered databases in the older post office directories. And be careful not to assume that these files are not needed and get too tidy and delete them!

Enabling SOAP

In the past, SOAP only needed to be enabled if you were running the GroupWise Mobile Server, the DataSynchronizer Mobility Server, or another third party product that requires SOAP access. With GroupWise 2012, it will be a very rare occurrence to not need SOAP enabled for your post offices. Not only do the aforementioned processes require SOAP access, but WebAccess itself will require SOAP to be enabled at the POA in order for WebAccess to function. Thus, it will be important for almost all Post Office Agents to support SOAP. Follow these steps to enable SOAP for all post offices that will have users who access GroupWise via WebAccess:

In ConsoleOne, click on the GroupWise System Globe, and perform the following steps:

1. In the dropdown list that shows “Users”, change the setting to “Post Office Agents.”

2. Find the POA for your post office, right-click and choose Properties.
3. Now click on the triangle in the GroupWise tab and change to Network Address.
4. Make sure that there is a port listed for SOAP for your Post Office Agent. The default SOAP port is 7191.
5. Now, on the GroupWise tab, change to the Agent Settings screen. Verify that SOAP is enabled for the POA.
6. Save your changes.

Enabling the HTTP Monitor for Your Agent

We have found that there are many GroupWise sites where the HTTP (Web) Monitor is not in use. Especially since GroupWise 8, these HTTP Monitors have become more and more important. If you define a userid and password for the HTTP Monitors, you can perform all of the functions that you used to perform at the GUI Consoles for your agents, as well as new functions that were not available on the GUI Consoles. If you do not have your HTTP Monitor enabled, now is a good time to do so.

In ConsoleOne, click on the GroupWise System Globe, and perform the following steps:

1. In the dropdown list that shows “Users”, change the setting to “Post Office Agents.”
2. Find the POA for your post office, right-click and choose Properties.
3. Now click on the triangle in the GroupWise tab and change to Network Address.
4. Make special note of the HTTP port that is defined for this agent. By default, the HTTP port for the POA is 7181.
5. If there is nothing in the HTTP port field, put 7181 (or another port of your choosing).
6. Now, on the GroupWise tab, change to the Agent Settings screen. Notice the HTTP Monitor settings. If you have never enabled the HTTP monitors for your agents, you will need to decide on a good userid and password for the HTTP monitors. Please note that this is neither an eDirectory user nor a GroupWise user. This is an entirely made up user and password solely for the use of the HTTP monitors. If all administrators in your organization will have rights to use the HTTP monitors, then it is a good idea to have the same userid and password for all agents. If you need to limit rights to some agents to various groups, set up a userid and password for each group of agents that will be monitored. Enter the userid and password that you have decided on here in this screen.
7. Save your changes.

Preparing the Post Office Database

When you are ready to continue your upgrade, we will first check the post office database to make sure that it is ready to upgrade. First, in ConsoleOne, select the post office object and choose **Tools|GroupWise Utilities|System Maintenance|Validate Database**. If your database shows as valid, you can proceed. If for some reason the database does NOT validate, you should rebuild it. In order to rebuild the database you must first shut down the POA and make sure that no users can attach to the post office directly. At this point, we are going to shut down the post office agent for the upgrade anyway, so if you need to rebuild your database, first follow the instructions immediately below on shutting down your post office agent. Once

the post office agent is shut down, return to ConsoleOne and choose **Tools|GroupWise Utilities|System Maintenance**, and this time choose Rebuild Database.

Linux

On Linux, you must upgrade all GroupWise components at the same time, so you need to stop all processes that are GroupWise related. This includes GroupWise agents and gateways and GroupWise Monitor. We are assuming that you are running your agents as daemons. If, however, you are running them with their GUI consoles, unload all of the agents by shutting down the GUI consoles. Close the GroupWise client if it is running on the server. Finally, to be certain that all agents and gateways are closed, type the following commands at a terminal prompt:

```
/etc/init.d/grpwise stop  
/etc/init.d/grpwise-wa stop  
/etc/init.d/grpwise-ma stop
```

You may receive errors if you are not using the **grpwise-ma** or **grpwise-wa** scripts, but it does not hurt to attempt to stop them even if you do not have these scripts installed.

After all GroupWise components have been shut down, type the following into the terminal prompt to verify that no GroupWise components are running:

```
ps -A | grep gw
```

If at this point you still see GroupWise components loaded you can kill them individually, either by pid or name – for example:

```
kill 9860
```

(if you show a GroupWise component with the pid 9860 running)

or

```
killall gwpoa
```

Windows

For Windows, you must also shut down your post office agent. If you are running the agents as services, go into the services console from the Control Panel, right click on the GroupWise post office agent, and choose stop (see [Figure 9-1](#)). If you are not running the post office agent as a service, go to the post office agent console and exit via F7 or from the agent menu.

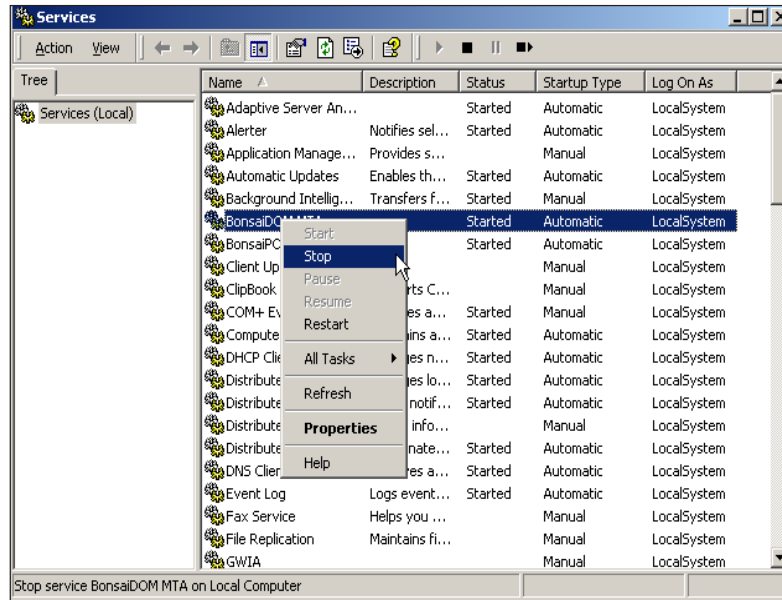


Figure 9-1: Stopping a Windows service

After your post office agent is shut down, leave the agent down until you are instructed to reload it below.

Installing your Agent Software

In the sections above, we shut down the POA on your server. It is important that you have not reloaded the POA since then, or if you did that you go back through the steps to unload your post office agents again. Once the POA is unloaded, look in the root of the Master SDD we created during the upgrade of the domain.

Windows

If you are running your Post Office Agent on Windows, you must run this installation directly on the Windows server, rather than from a workstation attached to the Windows server.

In the root of the Master SDD, you will see the **setup.exe** program that will be used for this upgrade. When you run this program, you see the Window in [Figure 9-2](#).

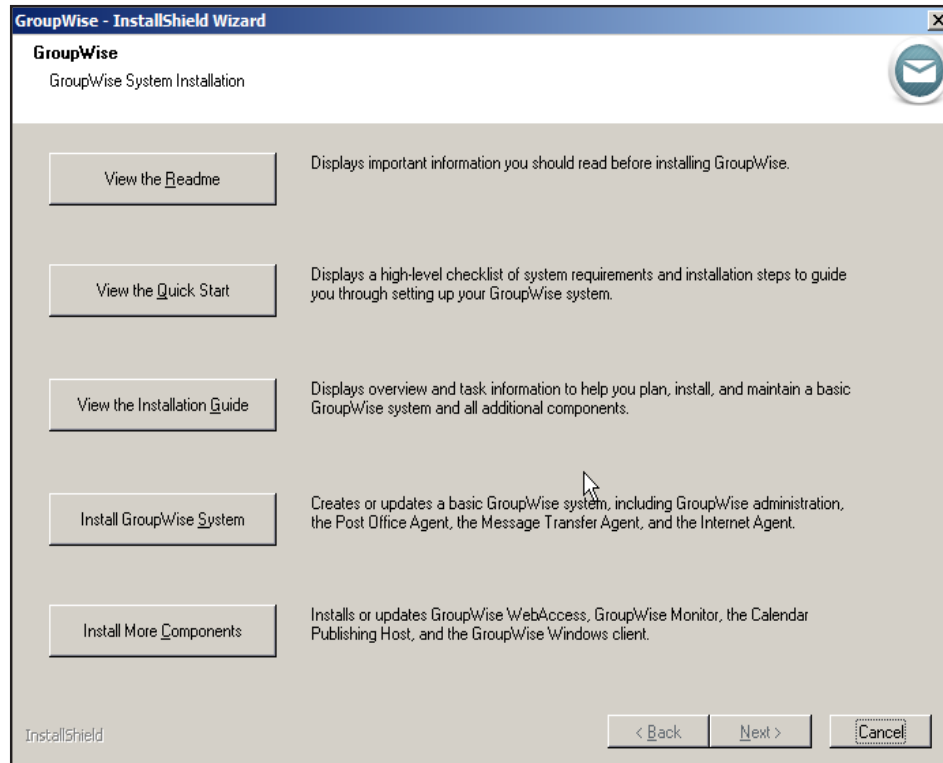


Figure 9-2: The main installation screen

1. Click on Install GroupWise System.
2. Click Yes on the next screen to accept the license agreement.
3. Click Next on the next screen to do a standard install. You will see the window in [Figure 9-3](#).

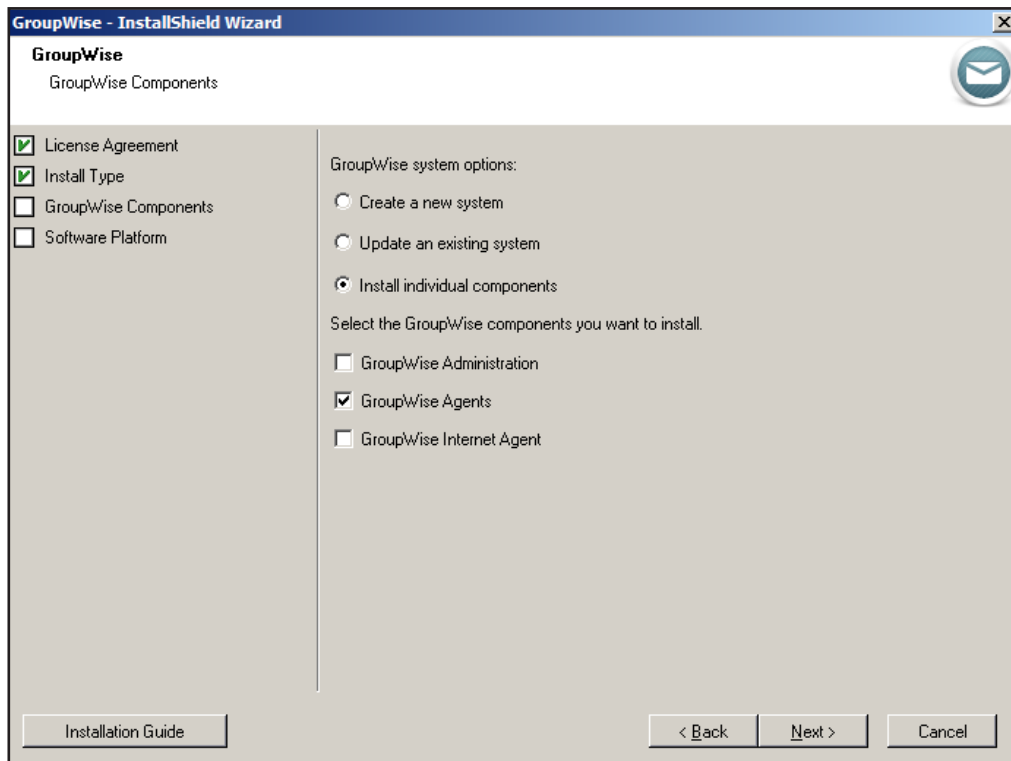


Figure 9-3: Install Wizard - GroupWise Components

4. You will notice on this screen that we have many options. Novell has created an entirely new upgrade routine. However, we still feel like it is best to manage the upgrade manually. Thus, we will choose “Install Individual Components”.
5. Do not check any options other than the GroupWise Agents on this screen.
6. The next screen seems to be a holdover from the combined Windows and NetWare installation routines of the past, and has a single radio button for Windows. Just click next.
7. The next screen will give you the option of where to install your files on your Windows server, and options for the installation.
8. If you have SNMP installed on your GroupWise server, you can configure SNMP for the agents on this server.
9. Here you also have a check box for installing the agents as windows services. It is highly recommended that you install your GroupWise agents as services on your Windows server. If you do not, you must log into the Windows server and launch the agents on startup. Otherwise the agents cannot launch and users will not be able to access GroupWise until the login takes place.

After you choose the options on this screen you will click next and be presented with the window in [Figure 9-4](#).

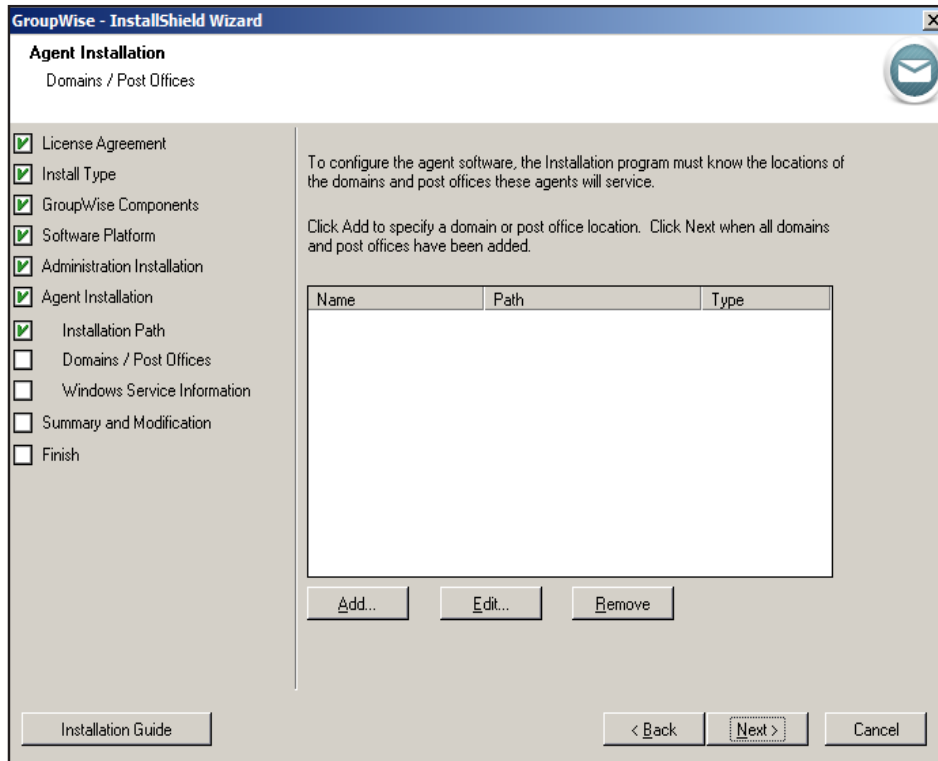


Figure 9-4: Configuring the GroupWise Agents

While we are looking at this screen, we should explain its usage so that it's more easily understood the next time you encounter it. There are a few misconceptions about what is done here, and what you need to put in this location, so we will try to clear those up.

First, this screen is a template for creating new agent startup files (for example the **post1.poa** file), and for configuring your Windows services or Windows shortcuts. Let's take the example of our groupwise system. Our post office is called Caledonia. If we want to create a new startup file for the Caledonia post office, and configure Windows services or shortcuts, we would click the Add button as shown in [Figure 9-5](#) and enter the information for our post office.

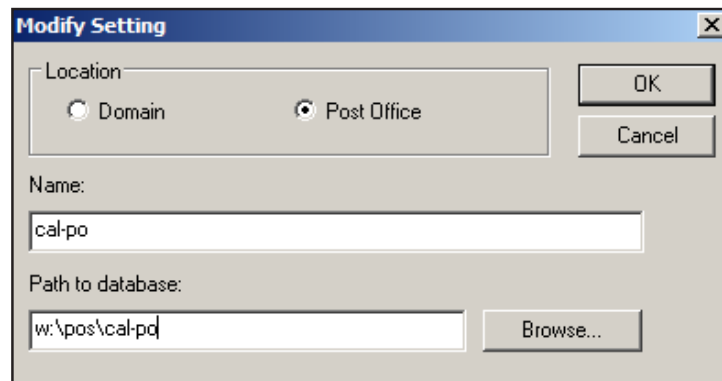


Figure 9-5: Adding a post office for configuration

By entering this information, we are instructing the installation routine to create us a startup file called **Cal-PO.POA** with a /home switch of "**W:\pos\cal-po**", place it in the location of our startup files that we indicated above, and optionally configure a Windows service for the POA or create a Windows shortcut.

This screen will validate the location you specify and warn you if you are putting in an invalid location (for example, if you put in **m:\pos\cal-po** and that location does not contain a post office database it will complain). Interestingly enough though, if you “cancel” at this point, it will still put **m:\pos\cal-po** in the setup and will complain that the path is invalid when you click “Next” to continue the setup. You will be required to fix this to point to a valid post office location before you can complete the setup. The installation does not validate the “name” you put here and indeed, you can name things here anything you like. For example, rather than naming my startup file “**Cal-PO.POA**” as shown above, I could just as easily type “Post1” in the name field, and the name of the file would instead be **Post1.POA**. If you put in a name that has more than eight characters (for example Caledonia), the file name will be truncated to eight characters. So, if indeed I were to put “Caledonia” in the name of my post office field, I would have a startup file called “**Caledoni.POA**”. If a “**Caledoni.POA**” file already exists, I will now have a “**Caledoni.PO1**” file in that directory.

10. You will now be asked how you wish to run the agents. If this post office agent has no need to log into any other servers, choose local system account. If you need to log into other servers, supply a user who has rights to this server as well as the other server in question. Leave the startup type as Automatic.
11. Next you will be presented with a summary screen showing your choices for the install, and the installation will proceed.
12. When the installation has completed, leave both boxes (Save settings for a future installation” and “Launch Agents Now”) unchecked (we do not want to start up our agents yet!), and click “Finish” to close the installation program.

Now that your Windows agent software has been updated, we need to move on to the actual process of upgrading the post office to GroupWise 2012. See “[Upgrading Your Post Office](#)” below.

Linux

Running the Linux installation routine is a bit different, in that you are not allowed to pick and choose what you install when running this installation script. The script will detect what GroupWise components are already installed on this server, and it will insist that they all be updated at the same time.

In your Master Linux SDD (in our case **/grpwise/gw12soft**), run the install script. For example:

```
gwlinux:/grpwise # ./install
```

After choosing your installation language, you will see the screen in [Figure 9-6](#).

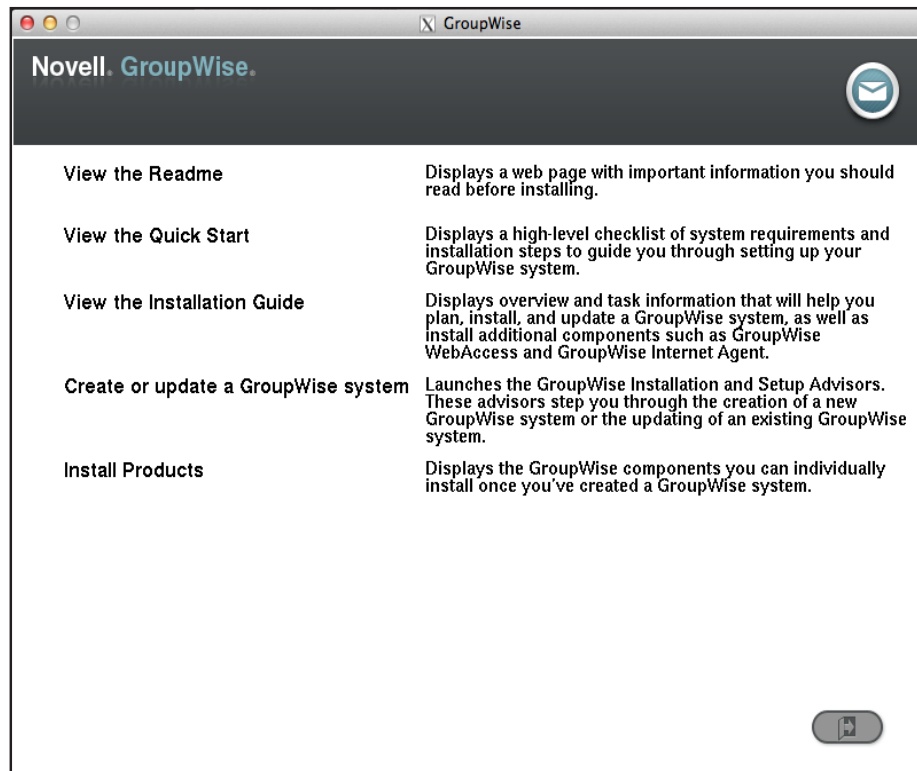


Figure 9-6: The Linux Install Screen.

1. Choose install products.
2. Choose GroupWise Agents. We will take this opportunity to point out that in the Linux installation routine there are separate “install” and “configure” steps for each agent. Since we’re doing an upgrade, and typically do NOT need to configure the agents, we’ll only look at these as we need them.

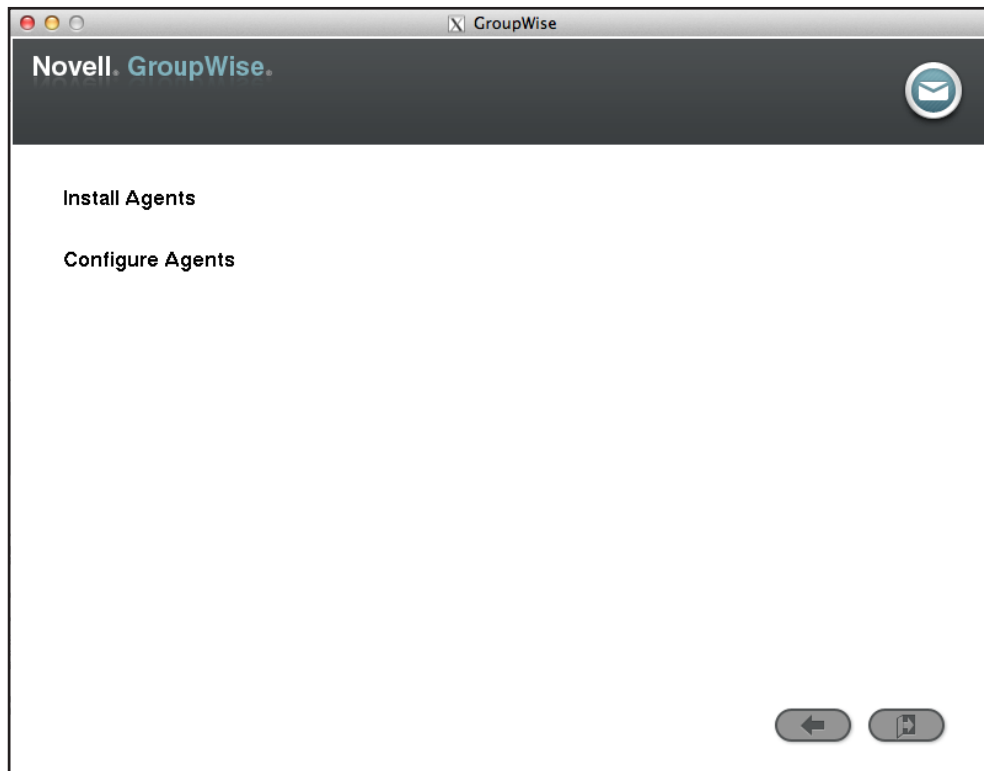


Figure 9-7: Install and Configure Screen

3. Choose Install Agents. You should see a screen similar to [Figure 9-8](#). This screen will show all components on this particular Linux server that must be upgraded.

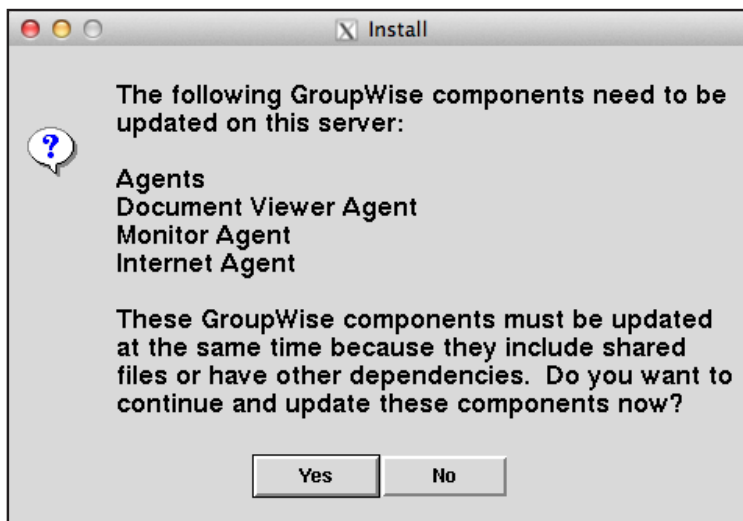


Figure 9-8: Components to Upgrade on Linux

NOTE: [Figure 9-8](#) shows a number of agents installed on this server. If you have a simple, single server system, you may see all of these. If you have multiple servers, you will only see the agents required for the particular server being upgraded. With the changes to WebAccess, not only do you not see the WebAccess Agent listed (as it is now obsolete), but you do not see the WebAccess Application either. You will be required to do a separate installation for WebAccess if it is on the same server.

4. You must choose Yes for this option, otherwise the installation will simply close. Choosing Yes starts the update of all agents required on this server. If there are a number of agents, this can take awhile.
5. Once the agents are installed, choose Configure Agents.
6. Click next on the introduction screen and accept the license agreement. You will be presented with a window similar to [Figure 9-4](#) (just a bit more “Linux-like”). This screen is a template for creating new agent startup files (for example the **post1.poa** file), and for configuring your gwha.conf file to start the agents on Linux. Let’s take the example of our groupwise system. Our post office is called Caledonia. If we want to create a new startup file for the Caledonia post office, and configure the **grpwise** script (provided that we checked the option above to “Launch the GroupWise agents on system startup”), we would click the Add button as shown in [Figure 5-8](#) and enter the information for our post office.

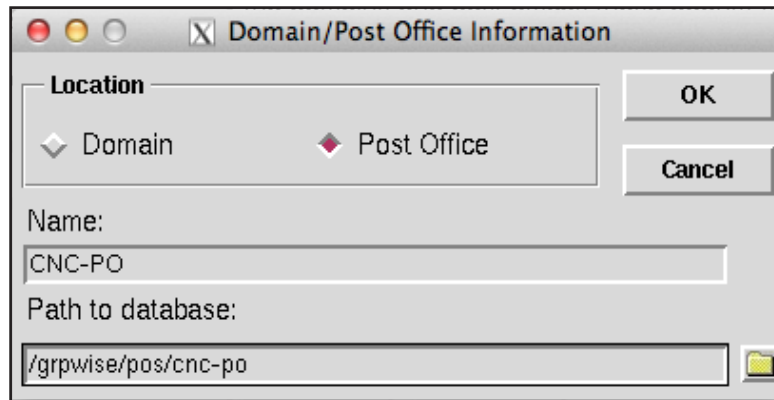


Figure 9-9: Adding a post office for configuration on Linux

By entering this information, we are instructing the installation routine to create us a startup file called **cal-po.poa** with a /home switch of “**/grpwise/pos/cal-po**”, place it in the **/opt/novell/groupwise/agents/bin** directory, and add the information into the **gwha.conf** file that will be loaded by the **grpwise** script on startup.

This screen will validate the location you specify and warn you if you are putting in an invalid location (for example, if you put in **/groupwise/pos/cal-po** and that location does not contain a domain database it will complain). The installation does not validate the “name” you put here and indeed, you can name things here anything you like. For example, rather than naming my startup file “**cal-po.poa**” as shown above, I could just as easily type “post1” in the name field, and the name of the file would instead be **post1.poa**.

If you put in a name that has more than eight characters (for example Caledonia), the file name will be truncated to eight characters. So, if indeed I were to put “Caledonia” in the name of my post office field, I would have a startup file called “**Caledoni.POA**”. If a “**Caledoni.POA**” file already exists, I will now have a “**Caledoni.PO1**” file in that directory.

Upgrading Your Post Office

At this point, you have installed the software required to take your post office to GroupWise 2012, but your post office has not actually upgraded. This will not happen until you load the new software, under the proper conditions. Earlier in this chapter we saw an option on the Novell installation routine that said “Update an Existing System” and we chose to skip that. Novell’s installation routine has improved quite a bit with GroupWise 2012, but it still expects certain aspects of every GroupWise system to be uniform, and we find that more times than not, GroupWise systems simply are not! This causes inconsistencies in the upgrade process, and it is easier for us (and you) to do these steps manually to ensure that they are done correctly in every

single upgrade. This makes just a one or two fewer things to have to troubleshoot if there are problems. In order to continue our upgrade, do the following:

1. In your Master SDD, there is a directory called po. Copy all of the dc files from the po directory directly into the root of your post office directory (i.e., the directory where the **wphost.db** file resides). Overwrite the existing files if asked.
2. Next in your Master SDD under the client/win32 directory there is there is a directory called ofviews. Copy everything in the ofviews directory into the ofviews directory that is in your post office directory. It's really not necessary to make a backup copy of this ofviews directory, but some sites like to do that just in case. Overwrite the existing files if asked, even if prompted that some existing files are newer. Now we will launch the POA so that your post office can upgrade.

Windows: Even if your agents normally launch as services, it is useful to launch the POA to the GUI console the first time, just to see that everything launches correctly. At the command prompt (note we're using c:\grpwise - you may have reinstalled your agents into c:\program files\novell\groupwise server\agents):

```
c:\grpwise\gwpoa @po.poa
```

Linux: For all Linux installations, the agents are installed to run as daemons. You can launch them under X-Windows to the GUI console during the upgrade just to see that everything loads okay. From a terminal prompt:

```
/opt/novell/groupwise/agents/bin/gwpoa --show @po.poa &
```

Your POA should load up on your server. If you receive any errors during loading, check what the error is and see what can be done to resolve it.

When the GroupWise 2012 POA loads, it looks for the dc file that says it is *okay* to upgrade. The dc file is essentially a text file that contains the database schema for creating a GroupWise 2012 database. The **gwpo.dc** shows the version number at the very top line as **#VERSION=1200**. This version number at the top of the file verifies that you have the GroupWise 2012 dc file in your post office directory. Once the POA sees the GroupWise 2012 dc file and sees the flag from it's domain that the post office is allowed to upgrade, the POA will launch a recovery of the database, effectively converting the post office to GroupWise 2012. If you are quick (on a small post office – not so quick on a larger one), you will be able to see the Admin Status of the post office change to “Recovering” to show that the post office is being converted. Once the status returns to “Normal” you should be able to look at the properties of the post office in ConsoleOne and see that the version is GroupWise 2012. Once the post office has been converted to GroupWise 2012 you should log in to the post office as a GroupWise user to ensure that everything looks okay. Try logging in with a GroupWise 2012 client. This will confirm that the post office is indeed version 12. If you attempt to log in to the post office with a GroupWise 2012 client and receive a message that says “The Version of GroupWise you are using cannot access this post office” then your post office has not upgraded properly, and you should see the troubleshooting steps below.

Troubleshooting

There are very few things that can go wrong during a post office upgrade. If you find that your post office refuses to show as a GroupWise 2012 post office in ConsoleOne, do a couple of things:

- Verify that you have GroupWise 2012 snapins installed. You can get odd results in the version field of a post office if you are looking at a GroupWise 2012 post office with older GroupWise snapins.
- Double-check that you got the dc files copied into the post office directory. Open the **gwpo.dc** and **ngwguard.dc** files with a text editor to verify that they are indeed the GroupWise 2012 files.
- Double-check that the domain owning this post office is actually a GroupWise 2012 domain (i.e., it shows as version 12 in ConsoleOne).
- Unload and reload the POA to see if this solves the problem.
- It is possible that communications issues have prevented the post office database from receiving the news that its parent domain is a GroupWise 2012 domain and thus is allowed to upgrade. Remember that just loading the GroupWise 2012 agent software is not enough. If all else fails, rebuild the post office database in ConsoleOne (Tools\GroupWise Utilities\System Maintenance\Rebuild Database).

Checking the MTP Link

Frequently when moving a post office, the message transfer link between the MTA and the POA is broken. For those of you who have never used the HTTP monitors for the agents before, this will be a really good example of “learning to love the HTTP monitor”. Because even though it’s something you have to get used to doing since we are not loading the GUI Consoles for our agents (except in testing situations), the solution that we will show now is not available in any of the GUI Consoles! So the HTTP monitor wins our love and devotion in one simple command.

The first thing we are going to do is log into our POA’s HTTP monitor. Using your favorite browser (we prefer Firefox, but Internet Explorer works as well), go to the IP address and port of your POA’s HTTP monitor. Our location is <http://192.168.100.169:7181> – and unless you changed the default port for your POA, you will also go to 7181. When we enter this address, we are first asked for a userid and password. This is the userid and password we assigned to the HTTP monitor in *“Edit the Details of the Post Office in ConsoleOne”* above.

After authenticating, we are presented with the following screen:

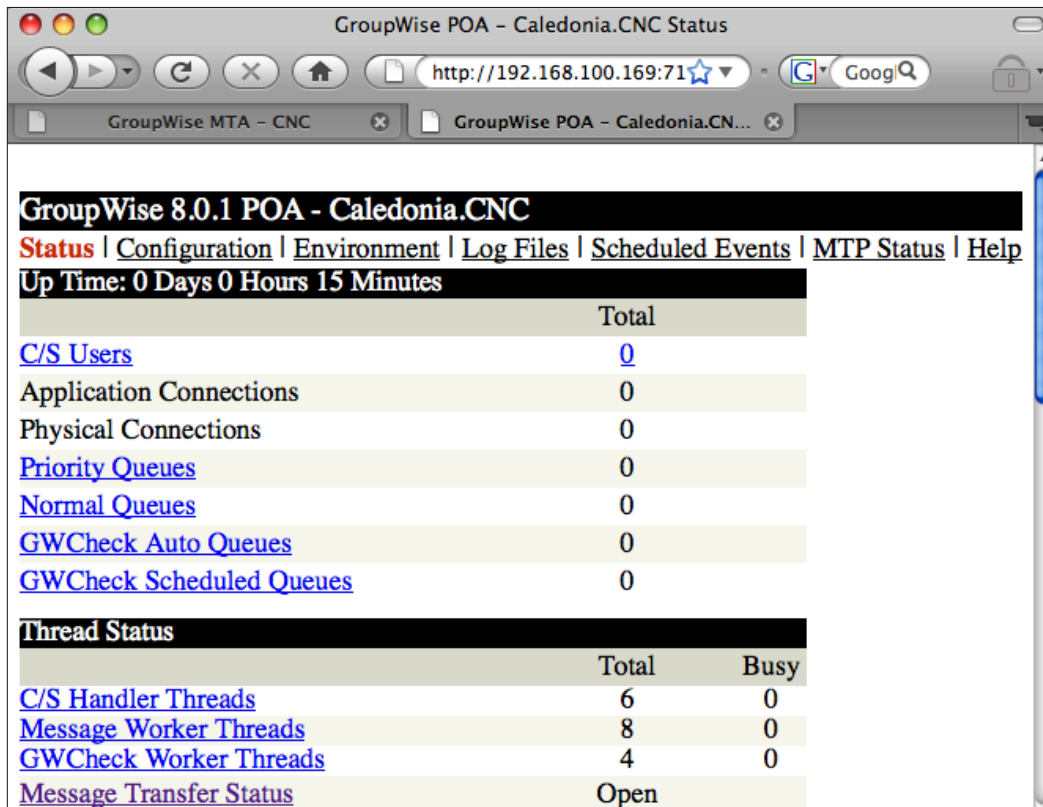


Figure 9-10: The POA HTTP Monitor

*** Need New Graphic

At this point we want to click on the link for MTP Status, and we will see this screen:

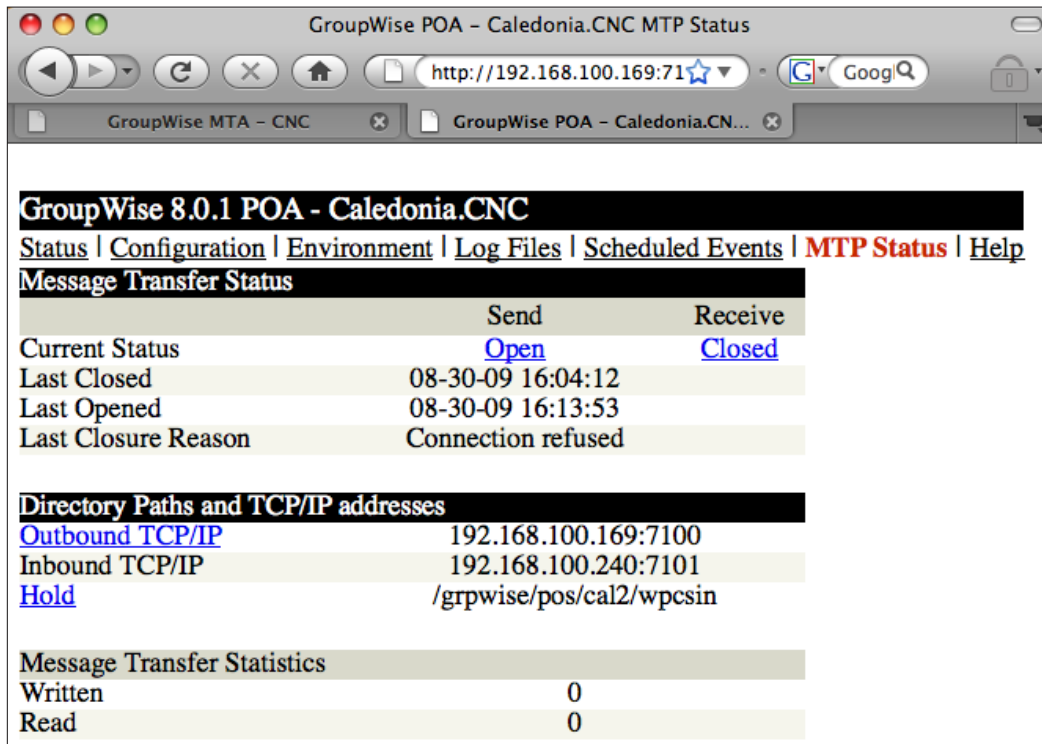


Figure 9-11: The POA MTP Status Screen

You will notice that the Receive Status shows as Closed, and that the Inbound TCP/IP address shows our old IP address. This is due to the simple fact that our POA doesn't know that it has moved! This is easily rectified. Simply click on the Closed link under the word Received, change the IP address to the current IP address of the POA on Linux, click the Start MTP Receive radio button, and click Submit. Now click the MTP Status link again and you will see that the Receive thread shows Open. Your MTA and POA are talking to each other again, and mail can begin flowing.

Log into the POA on the New Server

It's now time to log into your new POA and verify that everything is working as desired. If you use the **ngwnameserver** listing as described above, your GroupWise client will initially try to go to the old server, timeout and then ask for the new entry in DNS. If you do not use **ngwnameserver**, you will likely need to enter the new IP address manually when the login times out.

Once you have logged into your mailbox, there are a few tasks that you should perform to ensure that everything is working properly

- Send a message to yourself. This should pop into your mailbox almost immediately.
- Send a message to a user on the same post office, and verify that it is received.
- Send a message to a user on another post office if applicable and verify that it was received
- Send a message to an external recipient through your GWIA and verify that it was received.

- Send a message from an external sender to your user through the GWIA and verify that it was received.
- If you use GroupWise Document Management and your documents are all stored under the Post Office directory structure, open an existing document and verify that you are able to access it properly.
- Create a new document in GroupWise DMS and verify that it creates and saves properly.

Once all of these tasks are performed successfully, you are DONE. Unless of course you need to move an External Storage Area. In that case, continue on with the next section.

New Options to Explore

There are a few new functions of the Post Office Agent that you should take a look at. They are:

- Calendar publishing: Combined with the new Calendar Publisher Host, the POA will provide access to calendar publishing and free/busy searching features in the Windows and WebAccess clients for all calendars, including the main GroupWise calendar for a user.
- Beginning with GroupWise 8, the new Document Conversion Agent that is launched by the POA provides indexing of additional document formats such as PDF, OpenOffice, and newer versions of Microsoft Office. This is available for indexing documents in the GroupWise library, and attachments in the GroupWise mailbox.

Once you are ready to continue, just turn to the next chapter in your upgrade plan.

10 Upgrading Your GroupWise Monitor

Upgrading the GroupWise Monitor is essentially installing the new GroupWise software for the monitor agent and optionally the Monitor application. If you have a GroupWise 5.5EP Monitor, you will need to totally reinstall your Monitor from scratch. As you know, GroupWise Monitor is similar to the GroupWise WebAccess we have always known, in that it has two components, the GroupWise Monitor “Agent” and a web application that can be installed on your web server. (Of course, as we discussed earlier, beginning with GroupWise 2012, GroupWise WebAccess no longer has an “Agent” and is driven entirely by the WebAccess Application and SOAP at the POA.)

While the Monitor setup seems similar to our prior versions of WebAccess, it is indeed quite a bit different. The Monitor Web Application is dependent upon a Monitor Agent being installed somewhere in your system. However, the Monitor Agent is not at all dependent on the Monitor Web Application, and can be used entirely “stand-alone” without the Monitor Web Application being installed at all. For this reason we will first show how to upgrade the Monitor Agent, and then a separate installation of the Monitor Web Application software so it will not confuse those who only use the Monitor Agent in their organizations.

Preparing for the Upgrade

There is very little preparation that must be made for the GroupWise Monitor upgrade. It can reside anywhere, and no database adjustments are made when it is installed. You must shut down the existing Monitor agent, or course (on Linux or Windows), and it’s best to also shut down Apache and Tomcat if you are installing the Monitor Web Application.

Shutting Down the Monitor Agent

Linux

On Linux, you must upgrade all GroupWise components at the same time. Thus, if your Monitor Agent is on the same server as any other GroupWise Component, the Agent has effectively already been upgraded. If you need to upgrade your Monitor Agent software, you need to first stop all processes that are GroupWise related. This includes all GroupWise agents and gateways and GroupWise Monitor. We are assuming that you are running your agents as daemons. If, however, you are running them with their GUI consoles, unload all of the agents by shutting down the GUI consoles. Close the GroupWise Linux client if it is running on the server. Finally, to be certain that all agents and gateways are closed, type the following commands at a terminal prompt:


```
/etc/init.d/grpwise stop  
/etc/init.d/grpwise-wa stop  
/etc/init.d/grpwise-ma stop
```

(you may receive errors if you are not using the grpwise-ma or grpwise-wa scripts, but it does not hurt to attempt to stop them even if you do not have these scripts installed).

After all GroupWise components have been shut down, type the following into the terminal prompt to verify that no GroupWise components are running:

```
ps -A | grep gw
```

If at this point you still see GroupWise components loaded you can kill them individually, either by pid or name – for example:

```
kill 9860
```

(if you show a GroupWise component with the pid 9860 running)

or

```
killall gwmon
```

Windows

For Windows, you must also shut down all of your agents that access the domain database. If you are running the agents as services, go into the services console from the Control Panel, right click on the GroupWise agents, and choose stop (see [Figure 10-1](#)). If you are not running the agents as services, go to the agent consoles and exit via F7 or from the agent menus.

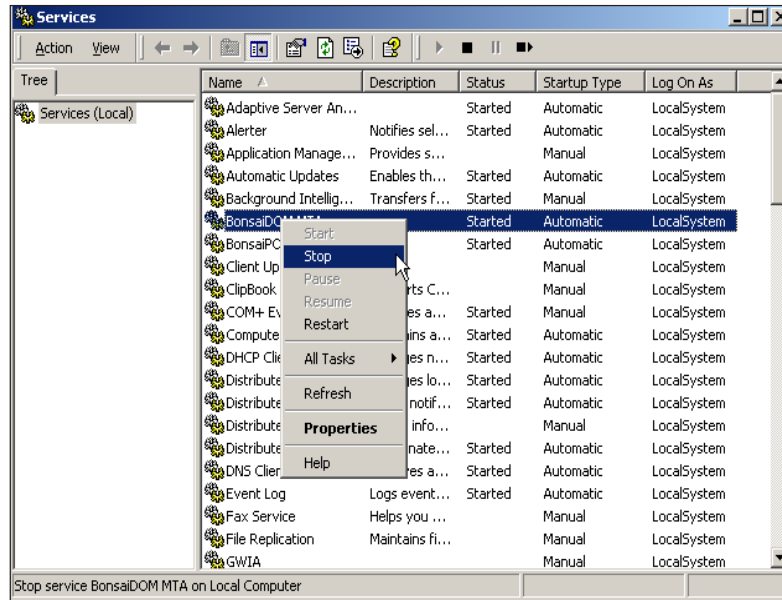


Figure 10-1: Stopping a Windows service

You must also close the Monitor Agent that is running on Windows. This is not a service. Press F7 at the Monitor Agent console to close the Monitor Agent.

Installing your Agent Software

This section will talk about installing just the Monitor Agent on Windows and Linux. The monitor agent is required to monitor your GroupWise system. The Monitor Application is not required, but does add some nice enhancements and functionality.

The installation for the GroupWise Monitor is pretty much the same whether you are upgrading from GroupWise 5.5EP or GroupWise 6.x/7x, or indeed if you are installing from scratch. The important thing to remember if you are upgrading from GroupWise 6.x/7.x is that you should make a copy of your **monitor.xml** file before you begin. The upgrade procedure should use the current **monitor.xml** file that it finds in the directory you specify in the installation (providing it is the same directory where your existing GroupWise 6.x/7.x monitor resides). However, having a backup is always nice, particularly if you have made customizations on your GroupWise Monitor.

Windows

1. If you are upgrading from GroupWise 6.x/7.x, make a copy of your **monitor.xml** file. This will typically be c:\gwmon.
2. From the Windows machine where Monitor will run, go to your Master SDD \admin\monitor directory, and run setup.exe.
3. Proceed to the GroupWise Monitor: Components Screen and Uncheck "GroupWise Monitor Application", click Next.

4. Select the local path where you wish to install the GroupWise Agent. Note that the default has changed from c:\gwmon to C:\Program Files\Novell\GroupWise Server\Monitor. This is one time when you can easily change this location without having trouble with the setup. If you choose to move your Monitor to this new location, just copy the monitor.xml from your former installation into the new directory.
5. Also verify that the IP address and Port are correct. Click Next
6. You will be instructed to verify that any agents running on this Windows server are shut down before continuing.
7. Since the GroupWise 7 Monitor can monitor both GroupWise agents and GroupWise Messenger agents, you will be asked which agents to monitor. If you wish to monitor both GroupWise and GroupWise Messenger agents, check both boxes. Click Next.
8. Define the path to any of your GroupWise domain databases. You can use any domain you wish. Choose the domain that the Monitor Agent machine has the easiest access to. Since all of your domains have access to information about all agents in your system, any domain can be used for the Monitor connection. The Monitor Agent will simply query the domain to find IP address, Port and HTTP user and password information for all agents in the system. Click Next.
9. Verify your default language and Click Next
10. You will then be given a summary of the Agent install. Verify that this information is correct and Click Next.
11. When the installation is complete, you may launch the GroupWise Monitor Agent.
12. A shortcut was created for you under the GroupWise Monitor menu.

After the installation, if you changed the location of your GroupWise Monitor Agent files, you must copy your monitor.xml from the old location into this new location in order to preserve your settings. Load your Monitor agent with the GroupWise Monitor shortcut to verify that your Monitor Agent loads properly, and that your previous settings are being honored.

Linux

If you have been reading the earlier chapters in this book, you will find that we are continuing on a familiar theme here! If your GroupWise 7 Monitor Agent was installed on the same Linux server as any other GroupWise Agent, the Monitor Agent software will already have been upgraded by the time you read this chapter. Indeed, if your Monitor Agent was already on this Linux box, you do not even need to do any configuration. However, if you are installing to a new server, here are the quick steps needed to install the Monitor.

1. 1 As root, run the /install script at the root of your SDD.
2. Choose Install Products
3. Choose GroupWise Monitor
4. Choose Install Monitor Agent. The software automatically installs to /opt/novell/groupwise/agents/bin - you will not be prompted for any information at this time.

At this point, the new monitor software has been installed, and you can reload the Monitor Agent. However, if for some reason you need to reconfigure the Monitor agent, follow these steps.

1. Choose Configure Monitor Agent

2. Click Next at the Introduction page, and accept the license.
3. You will be prompted whether to monitor GroupWise Agents, GroupWise Messenger Agents, or both. It is easier to configure the Messenger Agents manually, so just choose GroupWise Agents.
4. Enter the location of a GroupWise Domain that is easily accessible from the Monitor machine. This can be any GroupWise Domain (primary or secondary) in your system.
5. You will be notified that the Monitor Agent has been configured, and you can choose to start the Monitor Agent on startup.

To start the Monitor Agent now, run `/etc/init.d/grpwise-ma start`

Once the Monitor Agent is loaded, you can check the upgrade by going to the IP address and port where the Monitor Agent is running. For example `http://192.168.100.237:8200`.

Verify that your settings are correct.

Troubleshooting

There are very few things that can go wrong during a Monitor upgrade. The only problems we typically see have to do with the following:

- You neglect to keep a copy of your `monitor.xml` in case of difficulties.
- You change the location of the Monitor installation files during the installation (either accidentally, or on purpose) and then do not reconfigure the agent to update the startup files for the server.

Installing the Monitor Application Software

Windows Monitor Application Installation

To install the Monitor Application perform the following:

1. 1 Go to the `\admin\monitor` directory in your SDD, and run `setup.exe`
2. Proceed to the “GroupWise Monitor: Components” screen and Uncheck the “GroupWise Monitor Agent”. Click Next
3. Indicate the IP address or DNS Name of the server where the Monitor Agent is running (i.e., the server where you installed the Monitor Agent above). Also define the HTTP Port that the Monitor Agent is listening on (the default for the HTTP Port for the Monitor Agent is 8200.) Click Next

NOTE: If you are not sure what HTTP Port the GroupWise Monitor Agent is listening on, do the following. For the Windows agent, go to the GroupWise Monitor Agent screen and select Configuration|HTTP. For the Linux agent, check the monitor.xml file in /opt/novell/groupwise/agents/bin.

4. Choose the web server you intend to use. Also indicate the location to the web server's root directory. Indicate a drive letter path, not a UNC path. Click Next
5. At the Language screen, choose the default language you would like to use when logging into the GroupWise Monitor Application. Click Next.
6. At the "eDirectory Object Configuration" screen, you are given a choice where to place the Application object. As a general rule, keep the location chosen by the installation software. Many GroupWise sites put their web server in its own tree, so the web server can be in a DMZ. This is perfectly fine. Still though, place the GroupWise Monitor Application eDirectory objects in the same tree as your GroupWise objects. In other words, if the web server is in a different tree than the rest of your GroupWise system, still place the GroupWiseMonitor and the GroupWiseMonitorApplication objects in the tree where the rest of the GroupWise system is. Click Next.

NOTE: The eDirectory objects for the Monitor Application can be placed anywhere that you feel is appropriate in the tree. These objects are NOT technically GroupWise objects. They are a special eDirectory object that allows for a simple user interface to manage the Monitor configuration files. You can technically manage those files manually by editing the individual files. However, since not every GroupWise administrator is a seasoned web/java administrator, these eDirectory objects give you the tools you need to manage the files without really needing an in depth knowledge of the inner workings of the Monitor Application.

7. At the Summary screen, confirm that everything is configured as you would like it to be. Then click Finish to start the installation.
8. During the installation, you may be prompted about shutting down the web server and Java and overwriting newer files. You should choose the affirmative answer for all of these questions.
9. When the installation is complete you will be prompted to launch the Installation Summary and restart the web server. You may not wish to restart the web server at this time. Particularly if this is the same web server that is servicing your WebAccess users and you are planning on upgrading WebAccess next. See the instructions below in Loading The GroupWise Monitor Application for information on how to load the web server and the GroupWise Monitor Application.

Linux Monitor Application Installation

If your older Monitor Application was installed on a server that contained other GroupWise agents, the Monitor Application software will already have been upgraded to GroupWise 2012 by the time you get to this section. However, if you are upgrading GroupWise Monitor on a server that contains no other GroupWise components, here are the quick steps needed to install the Monitor.

1. As root, run the install script in your SDD
2. Choose Install Products

3. Choose GroupWise Monitor
4. Choose Install Monitor Application. The software automatically installs, and you will not be prompted for any information at this time.
5. Now choose Configure Monitor Application.
6. Click Next at the Introduction page, and accept the license.
7. Indicate the IP address or DNS Name of the server where the Monitor Agent is running (i.e., the server where you installed the Monitor Agent above). Also define the HTTP Port that the Monitor Agent is listening on. (The default for the HTTP Port for the Monitor Agent is 8200.) Click Next.

NOTE: If you are not sure what HTTP Port the GroupWise Monitor Agent is listening on, do the following. For the Windows agent, go to the GroupWise Monitor Agent screen and select Configuration|HTTP. For the Linux agent, check the monitor.xml file in /opt/novell/groupwise/agents/bin.

8. The settings shown below are the defaults for Apache and Tomcat. Unless you have customized your Web Server configuration, these should be correct:
 - Apache path: /etc/apache2/conf.d
 - Tomcat path: /srv/www/tomcat5/base/webapps
9. At the LDAP login screen, enter the details for your LDAP server. [Figure 10-2](#) shows how to fill out this information.

GroupWise Monitor Application Configuration

LDAP Authentication

The GroupWise Monitor Agent Configuration must authenticate to an LDAP server as a user with sufficient rights to create eDirectory objects.

LDAP server IP address: 192.168.100.236 Port: 389

Username in LDAP format: cn=admin,o=novell Password: [masked]

☐ Use SSL Connection

Path to SSL Certificate File (RootCert.der): [empty field]

Buttons: Cancel, Previous, Next

Figure 10-2: LDAP settings

10. Once you have logged into eDirectory through LDAP, you will be asked for the location of your Monitor Application objects. If you choose the same context as your existing objects, you will receive a message informing you that the existing objects will be used. The configuration will be complete, and you will be prompted to restart your web server and Tomcat.
11. You may not wish to restart the web server at this time, particularly if this is the same web server that is servicing your WebAccess users. See the instructions below in Loading The GroupWise Monitor Application for information on how to load the web server and the GroupWise Monitor Application.

Loading The GroupWise Monitor Application

1. Load the web server and the servlet gateway. The instructions for loading the web server or servlet gateway are different based upon the platform you are using. Just like the WebAccess Application, the Monitor Application needs two components in order to work. A Java Servlet Gateway, and a web server. Below are some important tips about loading these components.

TIP: Generally it's a good measure to re-boot the server with the web server on it after the installation. Sometimes the Monitor Application will not seem to behave as it should. When you reboot the web server, generally things work out. Look at the rest of the web server tips for instructions on the steps you may need to take to load the components that support the GroupWise Monitor Application.

Linux

Assuming you are using the default Apache2 and Tomcat5 installations on your Linux server, load the components thusly:

/etc/init.d/apache2 start

and

/etc/init.d/novell-tomcat5 start

You can also check status, stop and restart using these scripts.

Microsoft IIS – Web Server

The GroupWise Monitor Application is designed to start when the Microsoft IIS Service and Web Server is started. The Microsoft IIS Web Server is designed to start with the Microsoft Internet Information Server Service is started under Control Panel|Administrative Tools|Services.

Logging Into GroupWise Monitor Application

Just point your browser to

<https://yourserver.com/gwmon/gwmonitor>.

For example:

<https://groupwise.caledonia.net/gwmon/gwmonitor>.

Once you are ready to continue, just turn to the next chapter in your upgrade plan.

11 Upgrading Your GroupWise Clients

Most sites find that upgrading the GroupWise client is the last thing they do, simply because it seems to be time consuming and requires a lot of pre-planning. And, there are many ways to upgrade the GroupWise client, depending on the size and needs of your organization. Smaller sites will have desktop administrators move from desktop to desktop, installing the new GroupWise client (and many sites use this as an opportunity to do other desktop cleanup that has been pending for awhile). Other sites will want more automated solutions. We will look at a number of ways to get your GroupWise system upgraded quickly and smoothly.

Overview of the Windows Client Upgrade

There are several methods that can be used to upgrade your users to the new GroupWise 2012 Windows client. We'll look at the various methods that Novell provides with GroupWise to upgrade your clients.

- Manual upgrade by launching the **setup.exe** at the desktop, and walking through the installation dialogs.
- Semi-automated upgrade by configuring a **setup.cfg** file for the post office and launching the **setup.exe** at the desktop.
- The Auto-Update method
- SETUPIP
- ZCM Installation to push the client out automatically with Zen.

We'll see how each of these can work for your environment.

The Auto-Update Algorithm

Before we actually get to configuring the post office for the upgrade, we will discuss how the Auto-Update Algorithm affects the upgrade process. GroupWise has a built-in mechanism for notifying the clients that it is time to upgrade. It is called the Auto-Update Algorithm, and it is an integral part of the functionality of the upgrade. The Auto-Update Algorithm is used in conjunction with the GroupWise Software Distribution Directory to allow the client on a Windows workstation to be upgraded automatically and seamlessly. At least that's the theory! In practice, the Auto-Update Algorithm often causes confusion when the SDD is not properly configured or users do not have proper rights to the SDD. Some of the side-effects of the Auto-Update Algorithm are seen when a user logs into a post office and is suddenly told that there is new software available, but that he does not have rights to it. Or if a user logs into a post office other than her own, and is told that there is newer software available, even though she has just updated her computer to the latest and greatest. This all comes about because the post office is

giving the GroupWise client some information about what software is available, and the client is then trying to interpret that to determine if it should upgrade.

In simple terms, here's how the Auto-Update Algorithm works.

- Every GroupWise post office must have a Software Distribution Directory defined in ConsoleOne. We find that this is often created with the post office, and then never touched again.
- When a post office is created, it gets a “bump” number associated with it. The Bump Number is controlled by ConsoleOne, and written to the **wpdomain.db** and **wphost.db** for the post office in question.
- Each version of the GroupWise client has a file called **software.inf** that has a “Build” Number in the file. For the shipping version of GroupWise 2012, the Build Number is 4100.
- The **setup.cfg** file is used to define whether or not clients should auto-update their software when all of the conditions of update are met.

All of these components work together to ensure that clients are notified of the update. Here's how this fits together:

1. The administrator places the new software into the client directory of the SDD defined for a particular post office.
2. Next the **setup.cfg** that is contained in the **/client** directory of the SDD is configured to force the auto-update, and this file is copied into the **/client/win32** directory of the SDD. In reality, the default of the **setup.cfg** is to perform the auto-update, so if you wish to prevent auto-update after performing Step 3 following, you should change the AutoUpdate value to Enabled=No and make sure the **setup.cfg** is copied to **<sdd>/client/win32**.
3. The administrator then changes the Bump Number. The administrator cannot choose the Bump Number, only increment it. This is done in the GroupWise view in ConsoleOne, Select **Tools|GroupWise System Operations|Software Directory Management**. Highlight the SDD for your post office that has the new GroupWise 2012 software and select the “Update” button. In the next dialog box that comes up, select the check box next to the words that read “Force auto-update check by GroupWise components”. Click the “OK” button. This increments the Bump Number for the post office by one. As we will explain in a few minutes, if you want your users to upgrade, clicking this button multiple times will not cause problems. However, clicking it just once when you do NOT want to upgrade will cause you some headaches!

The stage is now set to initiate your auto-update. The next time a user logs into the post office, the following exchange will occur.

1. The client on the user's PC will query the POA and ask what the Bump Number is.
2. The client on the user's PC then compares this Bump Number to the registry value in **HKEY_LOCAL_MACHINE\SOFTWARE\Novell\GroupWise\Client\5.0\NewSoftwareBump**. If this number is different (higher or lower), then the client continues on to ask for the Build Number.
3. The Build Number is found in both the **software.inf** file in the SDD, and in the workstation registry. The client looks at this value, and if the new value in the **software.inf** file is higher, the client then continues the update query process.
4. The client then looks in the **setup.cfg**, and if the Auto-Update value is set to “Enabled=Yes”, the client upgrades. Since the default for the Auto-Update is “Enabled=Yes” and occurs even if you do not configure the setup.cfg, if you wish to prevent the Auto-Update from occurring once you associate a GroupWise 2012 SDD to your post office (for example, if you have Windows 2000 users you need to be careful), you must place the setup.cfg file into the **<sdd>/client/win32** directory, and change the Auto-Update Enabled value to **No**.

As we saw when we upgraded our post office, part of the role of the SDD is to provide new OFVIEWS to the post office directory when the POA is upgraded. If you use the same SDD for all post offices in your system, of course this can't work. That is why when upgrading the post office we always manually copy those OFVIEWS files to the post office directory. It's impossible to know if all sites have their SDDs up-to-date and available, so it's a simple, quick step we take to ensure the success of the upgrade.

If you are unsure about what SDD is defined for your post office, this is easy to see in ConsoleOne. Simply view the properties of your post office and look under the "Post Office Properties" to see what SDD is assigned to this post office. See [Figure 11-1](#).

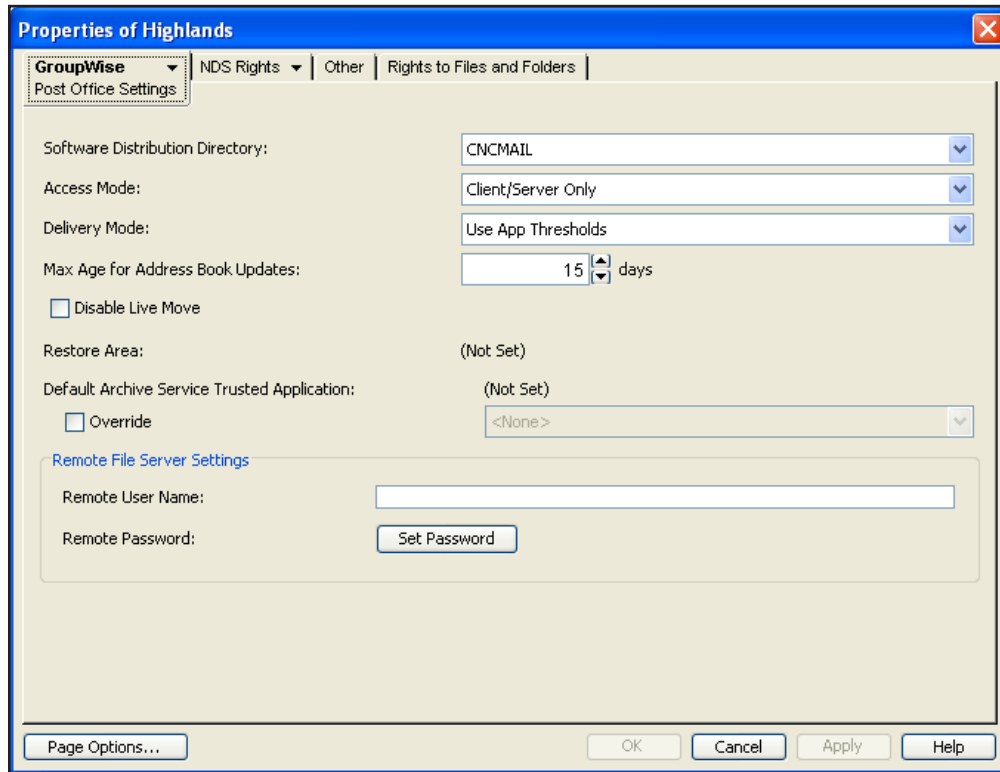


Figure 11-1: The SDD Associated with a Post Office

Of course, in order for an SDD to be used for a client upgrade, it must have the client software available. The GroupWise client is always found in the **sdd\client** directory. If your users are to be able to use the SDD to upgrade their clients, you must grant Read and File Scan rights to the **<sdd>\client** folder and subfolders. Users do not need, and should not have rights to any other location of the SDD. In order to prevent accidental access to other parts of the GroupWise system, we do not recommend that you place your SDD under your post office directory, or any other location where you need to restrict rights from standard users. In order for the GroupWise auto-update procedures to work correctly, the SDD should be in a location also accessible by the POA.

Also in ConsoleOne you can see where this SDD actually exists. Under **Tools|GroupWise System Operations|Software Directory Management** you can see that our CNCMail SDD referenced in [Figure 11-1](#) is located at **\\LOCHEE\VOL1\grpwise** ([Figure 11-2](#))

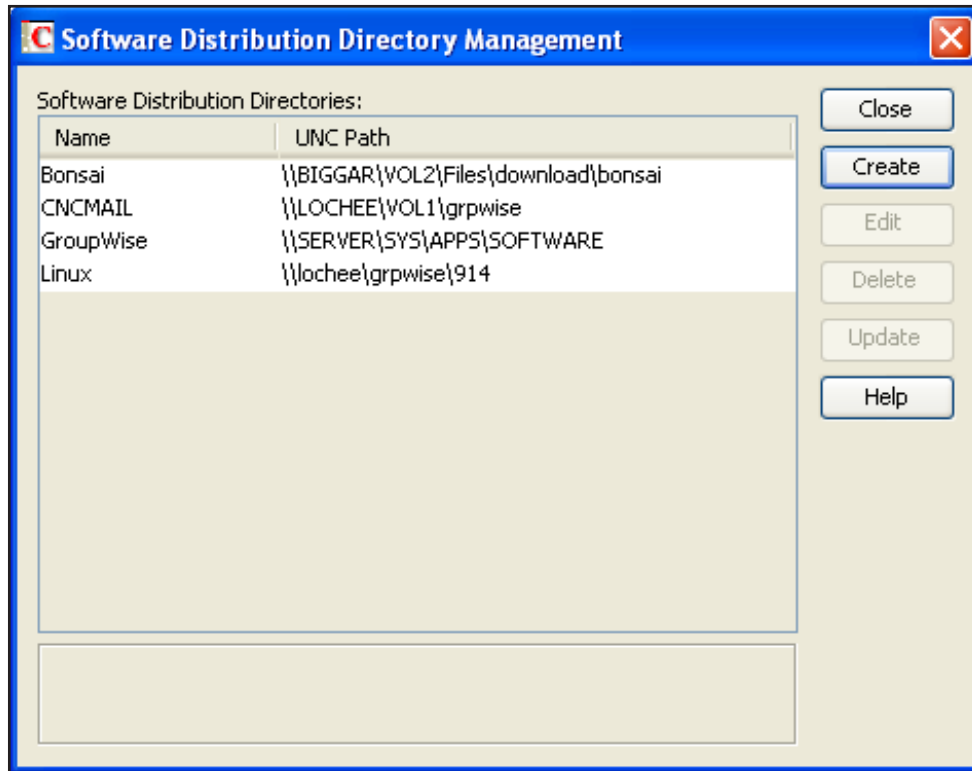


Figure 11-2: Software Directory Management

SETUP.INI

The setup.ini file in the **<sdd>/client/win32** directory is full of interesting settings for the Microsoft Installer. It also has one very important setting that you will want to set if you wish to totally automate your installation. You can disable the language dialog in the installation by verifying that the EnableLangDlg setting is set to No (N).

SOFTWARE.INF

The **software.inf** file simply designates the “development version” of the GroupWise software. For the shipping version of GroupWise 2012 the contents of this file are:

[General]

BuildNumber=4100

Whenever the GroupWise client is installed, the Build Number of the GroupWise client is put into the Windows registry. The **BuildNumber** string value is kept in the following registry location:

HKEY_LOCAL_MACHINE\SOFTWARE\Novell\GroupWise

SETUP.CFG

As we mentioned above, the **setup.cfg** is a very important file in the Auto-Update Algorithm. There is a **setup.cfg** file that ships with GroupWise 2012 in the **<sdd>\client** directory. This is a template file that is used for customizing the GroupWise client installation. This file does not have an effect on the installation of the GroupWise software unless it is copied in to the **<sdd>\client\win32** directory. If the **setup.cfg** resides in this directory, it will be used to set parameters for the client installation. The important settings for the **setup.cfg** file as pertains to the Auto-Update Algorithm are under the [AutoUpdate] section. The “Enabled” value must be set to “Yes” in order for the automatic update to occur. There are a number of other options you can set for the installation through the **setup.cfg** file. Here are some of the more common:

- If you wish to force your users to update the GroupWise client:

[AutoUpdate]

Enabled=Yes

ForceUpdate=Yes

Remember that Windows 2000 workstations should not be allowed to upgrade, so use this option only if you can ensure that your Windows 2000 users can be reverted back to their former client easily.

- If you wish to make the installation automatic for the users so that they are asked no questions and only see the progress and ending of the installation:

ShowDialogs=No

ShowProgress=Yes

ShowFinish=Yes

(Remember to also check the **setup.ini** file for EnableLangDlg=N)

- GroupWise Notify will not be put in the Windows startup folder

Notify=No

- GroupWise Tips will be enabled

[GWTip]

Default=Yes

- GroupWise Document Management integration will not be enabled by default

[Integrations]

=No for all components

- The Language will be English.

[Language]

Default=English

English=Yes

Choosing Your Windows Client Installation Method

Once you have prepared your SDD to deliver software to your users, there are a couple of methods you can use to complete the process. We can do any of the following:

- **Manual installation:** This means the **setup.exe** is launched manually at the desktop. You would then walk through the dialogs for the installation.
- **Semi-Automatic Upgrade:** If you follow the procedures above, this would launch the setup, but honor any settings in the **setup.cfg** (in the **<sdd>/client/win32** directory) and the **setup.ini** files. Thus, you could semi-automate the installation. For this, you could run the **setup.exe** manually, as a Zen startup application, through a login script, or any other way you would want to launch the **setup.exe**.
- **Auto-Update Direct Access:** This method relies on the client being notified through the Bump/Build number combination that there is new GroupWise software, and launches the installation when the client logs into the post office. This method requires that users have direct file access to the SDD.
- **Auto-Update through SETUPIP:** This method allow you to automatically upgrade users who do not have direct access to the SDD.
- **Pushing the Client Upgrade through ZCM:** If you use ZCM to manage applications for your users, you can push down the client through ZCM with no intervention by the user.

Auto-Update through Direct Access

In order to avoid having users prompted to upgrade before we are ready, we will create a new SDD as discussed above and assign it to the post office once we are prepared to kick off the upgrade.

Follow these steps to set up your post office for Auto-Update through the direct access method:

1. Create the directory structure for your new GroupWise 2012 SDD for the post office you are wishing to upgrade. All you need is the /client directory from your master SDD in order to populate this directory. Make sure users have Read and File Scan rights to this directory and its sub-directories.
2. Make the relevant changes to the **setup.cfg** file found in the **<sdd>/client** directory, and save it into the **<sdd>/client/win32** directory.
3. Make sure that the **setup.ini** file reflects your wishes regarding the language dialog.

4. Configure your new **SDD in Tools|GroupWise System Operations|Software Directory Maintenance**. Click Create to define the SDD at the location you created in Step 1 above.
5. Edit the properties of the post office and select the “Post Office Settings” property page from the GroupWise tab.
6. In the Software Distribution Directory field, select the SDD that you created in Step 4 above and then select OK.

The simple act of associating your post office to the new software distribution directory may be enough to trigger the upgrade when users log in. This is dependent on only one factor that we discussed above: the Bump Number. As long as the bump number in this new SDD is different than the bump number in the workstation registry, the upgrade query process will kick off when the user launches GroupWise. If you need to increment the bump number (i.e., the software is not upgrading), follow these steps:

1. In ConsoleOne, connect to the primary domain and under **Tools|GroupWise System Operations** choose **Software Directory Management**.
2. Highlight the new GroupWise 2012 SDD that you recently created and select the “Update” button.
3. In the next dialog box that comes up, select the check box next to the words that read:
“Force auto-update check by GroupWise components.”
4. Click the “OK” button.
5. If needed, repeat tasks 1 through 4 again until users are being prompted to upgrade. Triggering this option multiple times will not affect any users who have already upgraded. If the Build Number is correct for upgraded users, the client will simply ignore the bump number increase.

If you have an easy method to change the registry at your workstations, you can also simply change the value in the **HKEY_LOCAL_MACHINE\SOFTWARE\Novell\GroupWise\Client\5.0\NewSoftwareBump** to “0”. This will ensure that the Bump Number in the registry is different than what is in the wphost.db file, and will restart the upgrade query for all (or a subset if you choose to only change the registry for a group of users) of your workstations.

Upgrading the GroupWise Client with SETUPIP

Using the SETUPIP utility, users can upgrade the GroupWise client without needing direct access to a file server where the GW 8 software is located. These users might not have network accounts, or may have the SDD on a server for which they have no access.

SETUPIP requires a web server to serve up the client files. When you deliver the GroupWise client using SETUPIP, it downloads a compressed version of the GW client from a file called **setupip.fil**. Any additional languages you wish to include will only add 3-5 MB per language to the download. After everything is downloaded, SETUPIP launches the GroupWise client **setup.exe** installation program from the users local hard drive and the installation begins.

The SETUPIP functionality can exist alongside the direct access solution discussed earlier in this chapter. Thus, if a user does have rights to the SDD for the post office, the GroupWise client will run the **setup.exe** from the **<sdd>\client\win32** directory. On the other hand, if a user does not have rights to the SDD, then the **<sdd>\client\win32\setupip.exe** utility will kick in, and the user will upgrade via an IP connection to the POA and a web server.

You do not necessarily have to use SETUPIP in conjunction with your post office software distribution method. Alternatively you can generate a **setupip.exe** and send it to remote users, or put it on a web server for your at-home or mobile users to download.

Configuring Your Web Server

You can use any web server available that allows connections on port 80. Here are the steps to configure your web server.

1. Determine the document root directory for your Web Server. By default on Linux this is **/srv/www/htdocs**
2. Under the document root, create a directory called **gwclient** where you will place your GroupWise files. For example on a Linux server the whole path to this directory would be: **/srv/www/htdocs/gwclient**. This directory must match the directory you define in the **writeip.exe** utility which is discussed in detail later on.
3. Create a sub-directory under the gwclient directory called **win32**. For example on Linux the whole path to this directory would be **/srv/www/htdocs/gwclient/win32**
4. In your SDD locate the **admin\utility\setupip** directory.
5. Copy the **setupip.fil** file from the **<sdd>\admin\utility\setupip** directory to the web server's **<document root>\gwclient** directory. This file is the compressed GroupWise client.
6. Copy the proper language file(s) from your **<sdd>\admin\utility\setupip** directory to the web server's **<document root>\gwclient** directory. Language files are named **setupip.xx** where the XX represents the language code. Users can pick what language they want to download if you have more than one language file in the **gwclient** directory. For example if you wish users to be able to install the GroupWise client in German, you would copy the **setupip.de** file to the **gwclient** directory. We will discuss more about these language files when we create the **setupip.exe** file in the next section.
7. In your post office specific SDD, locate the file called **setup.cfg**. This file should be in the **client\win32** directory as we defined in Step 2 of the [“Auto-Update through Direct Access”](#) section above.
8. Copy the **setup.cfg** file to the web server's **<document root>\gwclient\win32** directory.
9. Copy the **setup.ini** from your **<sdd>\client\win32** directory to your web server's **<document root>\gwclient\win32** directory.

Now that you've configured your web server, we can create the **setupip.exe** that will control the installation of the GroupWise client through the web server. The next section entitled *Configure and generate the setupip.exe executable* will explain this process.

Configure and Generate the setupip.exe Executable

The **setupip.exe** file is used to download and launch the GroupWise client installation over an IP connection to a web server. When executed, the **setupip.exe** file downloads the compressed GroupWise client and then launches the **setup.exe** file. It contains the location (URL) to your web server(s) where you have hosted the GroupWise client as explained previously. To generate your **setupip.exe** follow these steps.

1. From your Master SDD, run the utility called **writeip.exe** in the **\admin\utility\setupip** directory.

2. In the WRITEIP utility fill in the DNS name or IP address of the web server with the appropriate location to the GroupWise client directory on the web server. Based on the previous section this would be **http://<your server IP or DNS name>/gwclient**

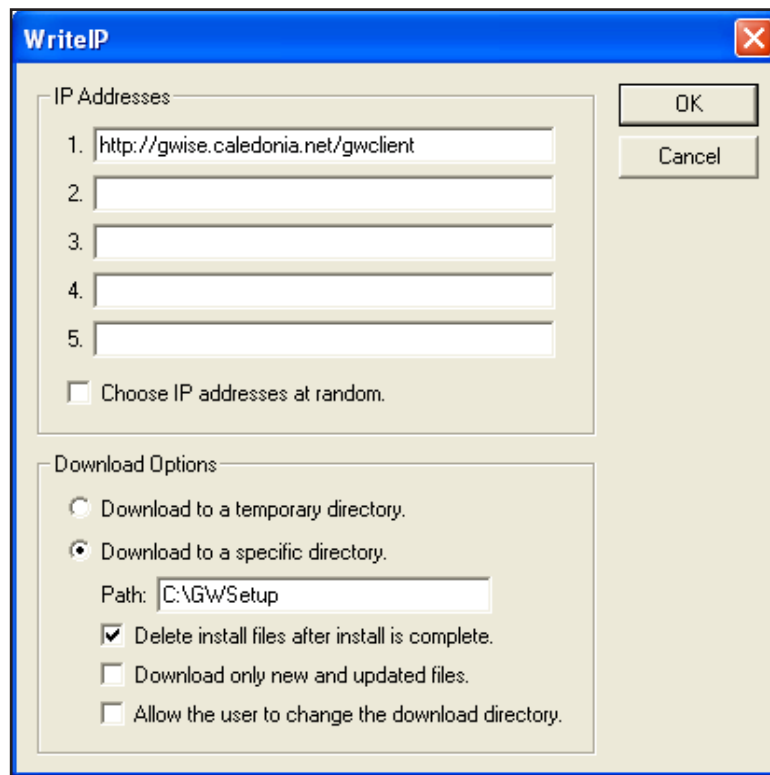


Figure 11-3: The Write IP interface

NOTE: You cannot download the GroupWise client via an SSL connection. So you cannot use the syntax `https://` for your download location.

NOTE: You can define multiple web servers for the GroupWise client download. This allows the client to be downloaded from randomly from the sites you define if you check this option. Otherwise, if the first web server is down, the client will be downloaded from the next web server on the list. If you are providing SETUPIP functionality for users both on your network and across the Internet, you might want to provide URLs with both private and public IP addresses to the same web server location.

3. After filling in the information in the WRITEIP utility select the OK button, which will generate a new executable in the **admin\utility\setupip** directory called **setupip.exe**.
4. Copy the **setupip.exe** file to the into the **client\win32** directory of the SDD for the post office for which you are configuring SETUPIP. If the user does not have access to the post office's SDD, the Post Office Agent will send this file to the user, and the installation will be launched. On the other hand, if the user does have rights the install is simply started directly from the SDD rather than through **setupip.exe**.

NOTE: If your users need to use an http proxy to reach your SETUPIP web server, you can add the proxy information to the URL while running writeip.exe. Place the proxy information and port on the URL with the syntax of http://<server>;proxy:port. For example if my proxy server was known as HTTPProxy.cnc.com and worked on port 8080 my URL would be http://mail.cnc.com;HTTPProxy.cnc.com:8080

Troubleshooting SETUPIP

The SETUPIP utility makes a file called **setupip.err** in the Windows program directory. The Windows program directory is usually **c:\windows**. If you experience problems with SETUPIP, look at this file for some clues.

Upgrading Mobile Users with SETUPIP

If you have users who access GroupWise outside of your network with Remote or Caching Mode, they may never get the notification to upgrade. For those users you can simply e-mail the setupip.exe file that you generated above. While the user is connected to the Internet, he can simply launch the setupip.exe attachment (save it to a temporary location first) and the **setupip.fil** file will be downloaded and the upgrade can commence. You can also put the setupip.exe file on a web server for download.

NOTE: The setupip.exe utility can be used to install the GroupWise client on a computer that has never had GroupWise installed before. SETUPIP is not just an upgrade utility. Simply deliver the setupip.exe to the user by whatever means available, and when the user launches the program it will install GroupWise.

Upgrading Users with ZCM

The following information is applicable to ZCM 11, SP1. If you have earlier versions of ZCM, these instructions may not work in your environment. We will not cover any other ZCM versions for this guide. Also, we will not cover every permutation of ZCM that you might need for installing GroupWise. If you are using ZCM, we assume you are familiar with the ZCC dialogs, and that you know how to assign your own relationships and requirements to your application bundles. The steps below are only intended to show the part of the ZCM setup that is specific to the GroupWise 2012 client installation.

The first thing that we do when preparing the GroupWise client for ZCM is to generate the GroupWise MST file required for the installation. This is done by using the **gwtuner.exe** file that is supplied with GroupWise 2012. The **gwtuner.exe** file is found in your SDD under **/admin/utility/tools**.

1. Run the **gwtuner.exe** file. You will see the information in [Figure 11-4](#).

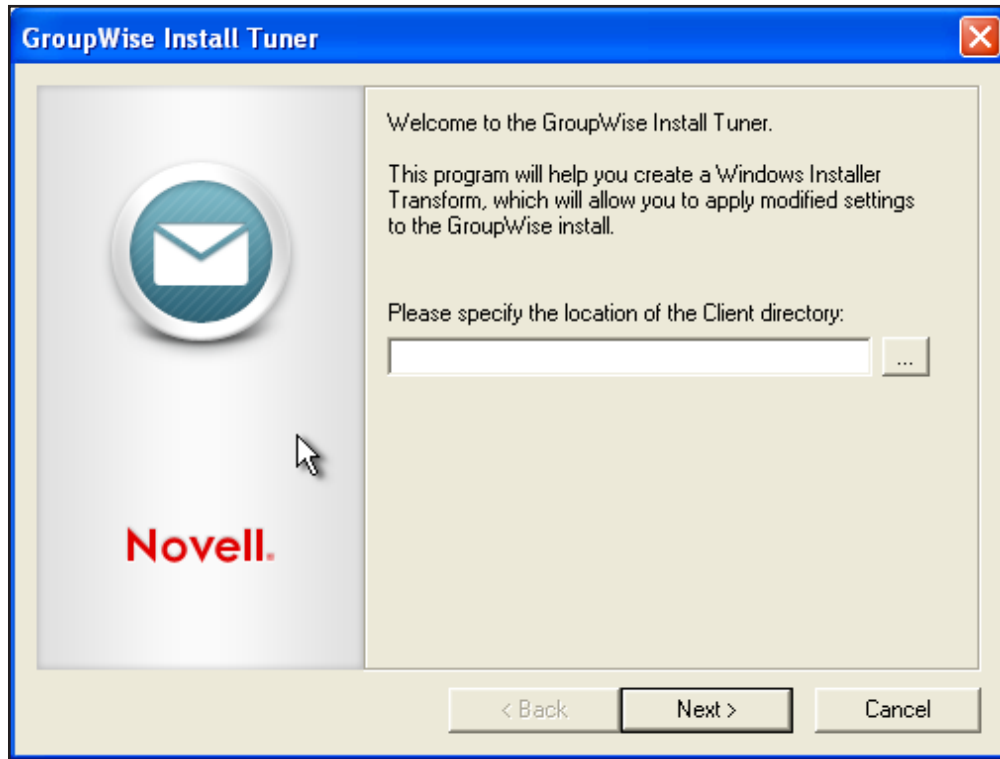


Figure 11-4: The GWTuner Client Directory Window

2. At this screen, enter the location of your client directory in your SDD. For example **f:\gw12soft\client**.
3. The next screen shows the options for the installation. For our purposes, we wish to have ZCM control the client entirely, so we will go over the options here. In order to allow ZCM to control these options, we are unchecking most of the boxes in the dialog:
 - **Install path:** Enter your installation path. The default is shown in the figure below.
 - **Program folder:** This is the name of the Program folder, should you choose to create one (as you will see later, we will not be creating a program folder during our setup).
 - **Add GroupWise to the Desktop:** If you choose, you can add a GroupWise icon to the desktop during installation. For our purposes this is unchecked.
 - **Add GroupWise to the Quick Launch:** We can also add an icon to the Quick Launch. We are leaving this unchecked.
 - **Add Notify to the Startup folder:** We wish to control this with ZCM, so we are leaving this unchecked.
 - **Install Internet Browser Mail Integration:** This adds “mail to” functionality to your browsers to launch GroupWise when a “mail to” link is clicked.
 - **Add icons to the Start Menu:** If we leave this checked, the Program folder listed above will be created for the Start Menu.

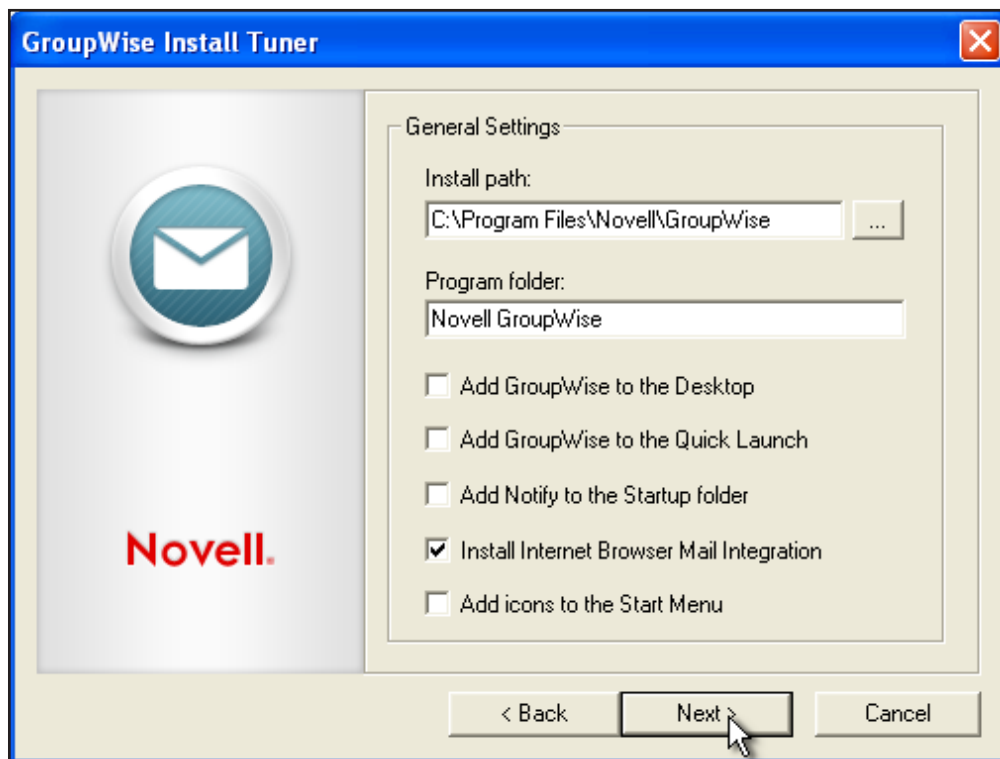


Figure 11-5: The GWTuner General Settings

4. The next screen will allow you to choose the languages you wish to install. You can, of course, choose as many languages here as you require. If you choose more than one language, the next screen will prompt you for the default language for the installation.
5. The next screen shows software integrations. Any application on the installation computer that is available to be integrated with GroupWise Document Management will be listed here, and they will all be checked. If you are NOT using GroupWise Document Management, please uncheck all of these to avoid helpdesk calls after the fact. These integrations are only used with GroupWise Document Management, and do not, for example, have anything to do with “send to” functionality from within an application.
6. When you click Finish, your **groupwise.mst** file will be created in the **win32** directory under the client directory you specified in Step 2 above. In our case, this is **f:\gw12soft\client\win32\groupwise.mst**.

Now that our groupwise.mst file has been created, we can configure the ZCM routine to deliver this client to the workstation. Novell has made some modifications to the GroupWise and ZCM settings that allow this to happen with much less work than in past versions. As we saw in the [“Upgrading the GroupWise Client with SETUPIP”](#) section above, the GroupWise client for SETUPIP is packaged in a file called setupip.fil that contains the complete GroupWise client for distribution. This is found in your SDD under /admin/utility/setupip. ZCM will be able to use this file, and a few other files to manage the GroupWise installation, rather than thousands of individual files as in the past. The only files we will need for our ZCM repository are setupip.fil, extract.bat and the language files we chose in the GroupWise Install Tuner. So, if we had chosen English and German as our languages to install above, we would need to also have setupip.en and setupip.de for our bundle. We will walk through those steps now.

1. Launch your Zenworks Control Center in your browser, and choose Bundles.
2. Create a new bundle by clicking on “New” and then choosing “Bundle” and then indicating it is a Windows Bundle and click Next.

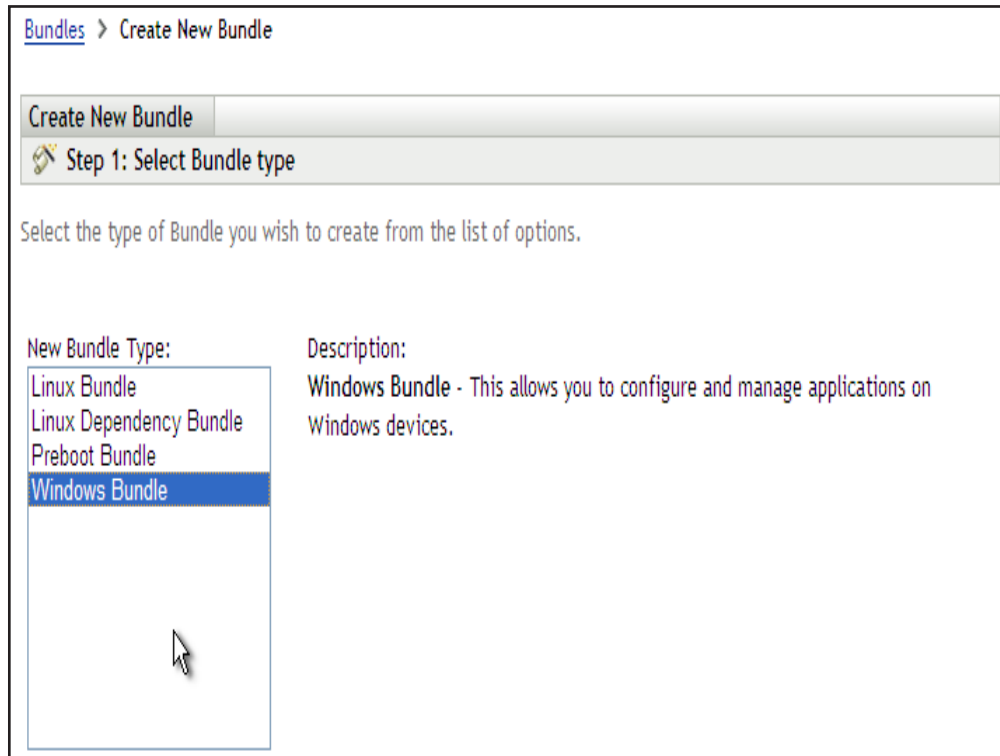


Figure 11-6: Creating a new ZCM Windows Bundle

3. Create this as an empty bundle so that we can configure the actions as necessary.
4. On the next screen we will need to fill in a number of values:
 - **Bundle Name:** Give your bundle a name such as “**GW2012**”
 - **Folder:** The default is **/Bundles**.
 - **Icon:** GroupWise 2012 has specified an icon for this use. Browse to your **SDD/client/win32** directory and choose **grpwise12.ico** as your icon file.
 - **Description:** Enter your description for GroupWise 2012 here.
5. On the next screen ZCM 11 will allow you to create your bundle as a “Sandbox” version if you choose to do so until you are ready to publish the bundle for installation. Leave “Define Additional Properties” checked here so that we can further customize the application.

Next we will create some installation actions for our bundle.

1. Click on the Install tab to create some new actions.
2. Choose “Install File(s)” as the action. In this action we are essentially having ZCM put the installation files in a temporary location on the workstation so that the extract.bat can perform the installation. Name this action something that will make sense to you. For example “Install files to temporary installation folder”.
3. Click on Add to get to the Select Files dialog, and click Add again to find the files. As we mentioned above, we need to go to the **SDD/admin/utility/setupip** folder and select the **extract.bat**, **setupip.fil**, and our language files (in our example, **setupip.en** and **setupip.de**). Click “Open” to include these files in the Select Files dialog.

4. The **setupip.fil** file is already a compressed file, so it not necessary to compress these files further. Thus, check the box that says “do not compress or encrypt uploaded content”.
5. When you click Okay, you will see a confirmation screen to show you the files that will be uploaded to your repository.
6. Once the files are uploaded, you will be returned to the Select Files dialog. Now you will need to specify where these files should be placed on the local machine. Remember this is a temporary installation directory, so you can choose any location you like. An example would be **c:\gwclient**. Select Okay.

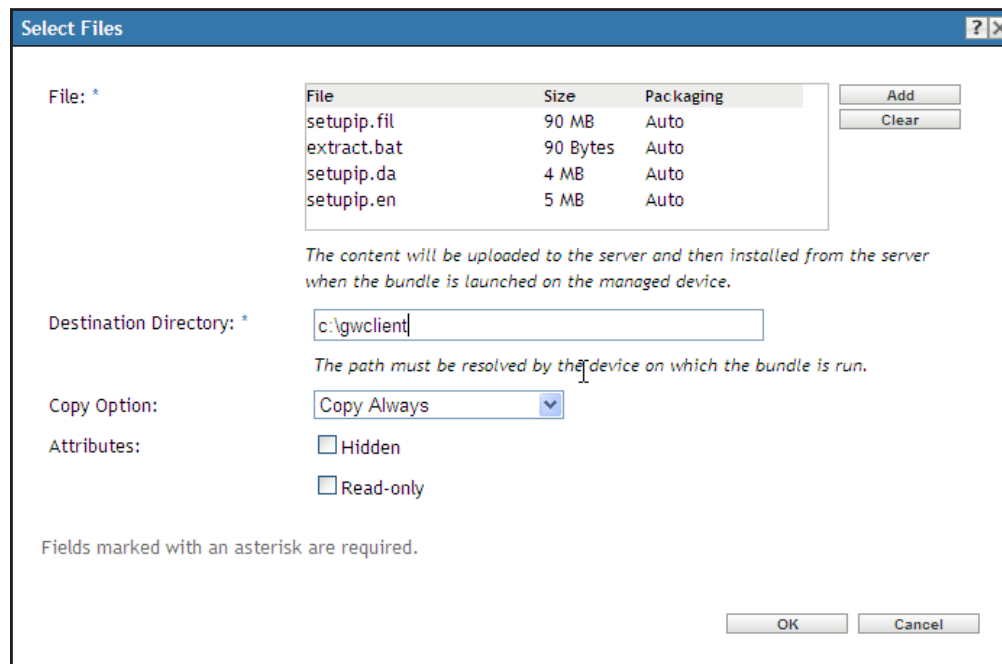


Figure 11-7: The completed Select Files dialog

7. At the next screen, you can select to run this installation as a secure system user to avoid any rights problems during the copy. Select okay to save this action.

The next action we need to create is one to extract the files from the **setupip.fil** file for GroupWise.

1. Back on the Install Tab, click Add to create a new action, and choose Run Script as the action.
2. In our first action, we copied **extract.bat** to **c:\gwclient**, so we can enter **c:\gwclient\extract.bat** as the Script File Name. The **extract.bat** file will then extract all of the files under this directory into **c:\gwclient\win32**. This is important for our final installation step.
3. Click the radio button next to “When Action is Complete” for the wait parameter for this script.

Action Name: *

General | **Advanced** | **Requirements**

Script to Run:

Script File Name: *
(e.g. C:\scripts\xyz.pl)

Script Parameters:

Path to Script Engine:

Script Engine Parameters:

Wait before proceeding to next action

☐ No wait

☒ When action is complete

☐ Wait for

☐ Terminate action if wait period is exceeded

Figure 11-8: Creating the Run Script Command

4. Before you leave this screen, you should give the Action Name a more specific name, such as “Run Script to extract GW2012 files”.
5. Click on the Advance tab and choose to run the script as dynamic administrator to avoid problems during the extraction.
6. Click OK and you will now see two actions in your Install tab.

The next step is to copy the MST file that we created with the GroupWise Install Tuner to the local temporary installation directory. The following steps will do this:

1. Click Add again to create a new action. Choose “Install File(s)”, and give the action a name that designates that you wish to “Copy groupwise.mst to local directory”.
2. Click Add to show the Select Files screen, and click Add again to show the add dialog.
3. Browse to your **SDD/client/win32** directory and choose the groupwise.mst file that we created above. Click OK. The file will be uploaded to the ZCM repository.
4. Next you will be asked where this file should be copied. The extract.bat process created **c:\gwclient\win32** (if you used **c:\gwclient** as your temp directory). This is where the groupwise.mst file must reside.
5. Leave the copy option as Copy Always.
6. Change to the Requirements tab and run the process as Dynamic Administrator.

Our final action will be to actually install GroupWise using the groupwise.mst file.

1. Again, at the Install Tab, add a new action of “Launch Executable”. Name this Action “Launch install.bat for GroupWise 2012”.
2. The command name in our case will be **c:\gwclient\win32\install.bat**.
3. For command line parameters you can choose:

- /unattended - this will show the typical GroupWise progress statuses for the installation
 - /silent - the user will not see anything while GroupWise installs
4. Click on Add under Environment Variables and add the following:
 - **Name:** GW_INST_TRANSFORM_FILE
 - **Value:** groupwise.mst - note that this assumes the same folder as the install.bat file, which in our case is correct.
 Click Ok.
 5. Click on Add under Environment Variables for a second variable to update existing GroupWise installations to match our current installation msi:
 - **Name:** GW_INST_REMOVE_MSI
 - **Value:** True
 Click OK

Action Name: * Launch the install.bat executable

General Advanced Launch Options Requirements

Command: * c:\gwclient\win32\install.bat Browse

Command Line Parameters: /silent

Working Directory:

Success Return Codes:

Codes separated by commas (e.g. 1,2,3)

Environment Variables	
	Add Remove Edit
<input type="checkbox"/>	Name Value
<input type="checkbox"/>	GW_INST_REMOVE_MSI True
<input type="checkbox"/>	GW_INST_TRANSFORM_FILE groupwise.mst

Figure 11-9: Our action for running install.bat

6. Next click on the Advanced tab and select “When action is complete” for the wait time. Also choose to run as dynamic administrator. Click OK.

Next we will create a launch action for the GroupWise 2012 bundle.

1. Click on the Launch Tab, then click on the Add button and choose “Launch Executable” as the type.
2. For the command, you will have “**c:\program files\novell\groupwise\grpwise.exe**” (assuming you installed in **c:\program files**).
3. For command line parameters you can choose any parameters you typically use.
4. Click on the Advance Tab. Since this is for the launch of the client, you should choose “no wait” and “Run as logged in user”. Click OK.
5. Apply your changes.

Back at the script parameters for the installation, we had the choice of running the installation in “unattended” or “silent” mode. If you chose silent, you might wish to allow ZCM to control the dialog that users see. To do so, go back to the Summary page of your new bundle, and scroll down until you see “Show Bundle Activity”. If you change this to “Yes”, ZCM will provide the status information to the user as the application installs.

Next, change the “Displayed Version” at the top of the Summary from Sandbox to Published. To do so, click on the “Publish” button, publish as a new version.

To complete your installation, add your relationships, requirements, icon choices and schedule.

Adding Grace Logins Before a Forced Upgrade

You may want to allow your users some “Grace Logins” before they must upgrade their GroupWise client. This allows users the flexibility to install the GroupWise client at a time that may be more convenient for them.

In order to do this, edit the **setup.cfg** in the SDD assigned to the post office. Place a value in the **GraceLoginCount=** argument. For example, if you wanted the user to have five grace logins before upgrading, then the setting would look as follows:

GraceLoginCount=5

The **GraceLoginCount=** argument when combined with the **ForceUpdate=Yes** causes the GroupWise client installation to allow for Grace Logins before users are forced to upgrade.

Upgrading the Linux Cross-Platform Client

There is no upgraded GroupWise Linux client for GroupWise 2012. The GroupWise 8 client is available for you in your GroupWise 2012 media. If you need to install the GroupWise Linux client, follow these instructions.

- As root, run the **install** script from the **\client\linux** directory of the GroupWise Linux installation CD.
- Install the RPM manually from the **\client\linux** directory of the GroupWise Linux installation CD. You can install the RPM as follows:

```
rpm -Uvh novell-groupwise-gwclient-8.0.0-84910.i586.rpm
```

SUSEconfig

Of course, the actual version of the RPM will change over time. The name of the RPM above is simply the shipping version.

Upgrading the MAC Cross-Platform Client

There is no upgraded GroupWise Mac client for GroupWise 2012. The GroupWise 8 client is available for you in your GroupWise 2012 media. If you need to install the GroupWise Mac client, deploy the groupwise.dmg file to your Mac users.

Auditing the GroupWise Client Upgrade

The GroupWise 2012 POA has a feature that can give you a quick look at who has upgraded to GroupWise 2012. In order to see this feature your GroupWise 2012 POA should support HTTP monitoring and your post office must have enabled the setting for tracking a minimum client version. You can either enable HTTP monitoring in ConsoleOne or in the startup file of the POA. The advantage of using Console One to apply these settings is that the POA will pick up the settings dynamically, and you will not need to restart the post office agent.

The minimum client version settings will highlight in red the version number or release date of the GroupWise client for any user who is using a client older than the version or date you indicate.

Below is how you can enable these settings through Console One:

1. Go to the properties of the Post Office object in Console One
2. Select Client Access Settings under the GroupWise tabs drop down list
3. Enter the version you would like for your Minimum Client Release Version (12.0 would represent the GroupWise 2012 client).
4. Make sure you do not check the box next to the Minimum Client Release or only your GroupWise 2012 users will be able to log in.
5. Click Apply, then OK to exit.

NOTE: If you check the check box to Lock Out Older GroupWise Clients then users will get a message before even entering their GroupWise password that states "The version of GroupWise you are using is older than the minimum version allowed by the system administrator." You need to be careful about enabling the lock out function, as the user will not even be given the opportunity to update their client if you select this option. You may be better off using the grace login option in the SETUP.CFG file to give the user X number of grace logins before they are able to login without updating.

After enabling these settings you can monitor the client versions from your browser. Go to the POA's http port in this manner from your browser:

`http://192.168.100.238:7181`

NOTE: If you are not sure what HTTP port your POA is using, you can hit the C/S port (1677) and it will redirect you to the HTTP Port.

You may be prompted for the User Name and Password for the POA HTTP Monitor. Once you have loaded the Web monitor for the POA, click on the C/S Users link. From here you can view the version of GroupWise client that your various users are using. Any user that is using an older GroupWise client than you specified will show up in red. Any user that is using at least the GroupWise client version you have specified will show up in blue.

Configuration Settings of Note

Here are a few things that you might be interested in as you upgrade the clients:

Sent Items Folder Issues:

- **Renamed Sent Items Folder:** The first time a former GroupWise 6.0 and earlier user logs into the GroupWise 2012 post office, the POA will convert the Sent Items folder into a new system level folder, rather than the former *search* folder that was the Sent Items folder in earlier versions. This will generally be transparent to the users. However, if the user has in the past deleted the Sent Items search folder and then recreated it, the user may find that there is now both a Sent Items folder, and an “Old Sent Items” folder just above the Sent Items folder. The “Old Sent Items” is also a search folder, and can be deleted without removing any messages.
- **No Sent Items In a GroupWise 5.5x or 6.0x Client:** If as in the above case, the new Sent Items folder is created, but your users continue to access GroupWise with an older 5.5x or 6.0x client, it will not recognize the new Sent Items folder, and will not appear to have a Sent Items folder at all. You can recreate the Sent Items query folder if necessary. Of course it’s better to just upgrade the client if possible!

GroupWise 2012 Home View

In GroupWise 7, Novell introduced the new Home View. The first time a new GroupWise 2012 user clicks on the Home folder, he will see a “Welcome” screen that explains the home view usage. However, if your upgrade is from GroupWise 7 or GroupWise 8, the user has already been confronted with this welcome screen before, and if the “Do not show this screen again” box has been checked, it will not appear when opening the Home View with the GroupWise 2012 client. This is a registry setting found here:

HKEY_CURRENT_USER\Software\Novell\GroupWise\Client\Setup\Show Home Folder Help

Change this key entry to “1” (for yes) and the Home View Welcome will reappear.

Hopefully this chapter will get you on your way to finishing up your GroupWise upgrade. Good luck!