Installation Guide

GWAVA4

TABLE OF CONTENTS

OVERVIEW

Thank you for choosing GWAVA 4. This guide will walk you through the basic installation steps for GWAVA 4.

There is an installation section for both NetWare and Linux.

Installation – General Procedure

- Choose GWAVA 4 installation location
- Download the installation zip file (GWAVA4Install_xx.zip).
- Create an installation directory on the server.
- Run the installation procedure.
- Log in to the GWAVA4 management console and perform server activation
- Log in to the GWAVA4 management console and set up a scanner.
- Restart GroupWise to utilize GWAVA 4.

PREPARATION

The preparation section outlines some considerations in installing GWAVA 4 for the first time.

GWAVA 4 Scanning Location

GWAVA 4 offers protection at multiple e-mail scanning levels. Before beginning installation, you must determine where GWAVA scanning should be done.

GWAVA 4 protects your GroupWise system at the following levels:

- GroupWise Internet Agent (GWIA) (new)
- Message Transfer Agent (MTA)
- Post Office Agent (POA)

To protect messages at the GWIA or MTA level, GWAVA must be installed on the same server as the GroupWise agent. Only install GWAVA on the servers that you want to be protected.

To scan messages at the POA level, GWAVA does not need to be installed on the same server as the agent, but must have access to the Post Office via IMAP and a trusted application key.

A GWIA or MTA scanner can be done in real-time. POA real-time scanning is not available at this time.

Choosing where to scan

One of the most critical choices you will make is where scanning is performed. Some of the advantages/disadvantages are outlined below to help you choose where you would like to protect your e-mail system.

GWIA

A GWIA scanner cleans Internet traffic or messages that pass through the GWIA.

Internal messages (messages between users in separate post offices and messages between users in the same Post Office) will not be scanned. Generally most messages that need to be blocked are Internet traffic.

GWIA scanning is highly recommended.

If you only want mail to be scanned once, use the GWIA scanner.

MTA

A MTA scanner cleans Internet traffic and internal messages between post offices (messages between users in the same Post Office are not scanned).

The MTA scanner does provide added protection between post offices.

POA

A POA scanner cleans out messages after they have already been delivered. This is useful for making sure mailboxes do not contain inappropriate content.

If you do not know which level is most appropriate, use the GWIA scanner.

Installation Directory

Before you install GWAVA, ensure that the installation location has plenty of disk space. The Quarantine Management System (QMS) will use the most disk space. QMS replaces the old archive viewer used in GWAVA 3.6.

For Linux, ensure that '/opt' has been allocated as much disk space as possible.

For NetWare, install GWAVA to the volume that has the most available disk space.

You must have at least 5 GB of available disk space for the program software and additional space if you want to retain more than 7 days of quarantined messages.

Expect 10GB of space used by QMS to retain 30 days of data in a 500 user system.

(NetWare) Only install GWAVA on your SYS volume if it is the only volume on the server.

NETWARE INSTALLATION

This section will outline NetWare specific steps to installing GWAVA4.

Running a previous version of GWAVA during installation

GWAVA 3.7x shares some components with GWAVA 4. GWAVA 4's installation script will disable conflicting components during the installation process. GWAVA 3.7's core components will continue to run, but the advanced spam engine will be turned off.

GWAVA versions prior to 3.7x won't interfere with the GWAVA 4 installation.

Installing GWAVA 4

Download the installation file.

The installation file can be found at www.gwava.com

Create an empty directory on the NetWare SYS volume called 'GWAVA4Install'. Copy the zip file into the GWAVA4Install directory. Extract the zip contents into the GWAVA4Install directory.
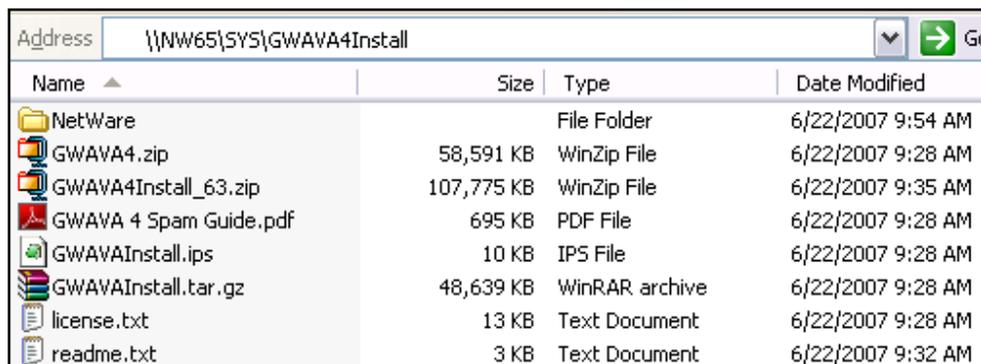
Name ▲	Size	Type	Date Modified
NetWare		File Folder	6/22/2007 9:54 AM
GWAVA4.zip	58,591 KB	WinZip File	6/22/2007 9:28 AM
GWAVA4Install_63.zip	107,775 KB	WinZip File	6/22/2007 9:35 AM
GWAVA 4 Spam Guide.pdf	695 KB	PDF File	6/22/2007 9:28 AM
GWAVAInstall.ips	10 KB	IPS File	6/22/2007 9:28 AM
GWAVAInstall.tar.gz	48,639 KB	WinRAR archive	6/22/2007 9:28 AM
license.txt	13 KB	Text Document	6/22/2007 9:28 AM
readme.txt	3 KB	Text Document	6/22/2007 9:32 AM

Run NWCONFIG from the server Console Screen.

If you would like a better way to get access to your server console try Free Console available at www.adremsoft.com

```
NW65:nwconfig_
```

Choose "Product Options"

```
                  Configuration Options

  Driver Options        (load/unload disk and network drivers)
  Disk Options          (configure storage and volumes)
  License Options       (install or remove licenses)
  Copy Files Options    (install NetWare system files)
  Directory Options     (install NDS)
  NCF files Options     (create/edit server startup files)
  Multi CPU Options     (install/uninstall SMP)
  Product Options       (other optional installation items)
  Exit
```

Choose "Install a product not listed".

```
Other Installation Actions

Choose an item or product listed above
Install a product not listed
View/Configure/Remove installed products
Return to the previous menu
```

Press F3 to choose a new directory.

```
Product will be installed from A:\.  If you are installing from
floppy, insert the first diskette of the product you want to
install into the drive and verify that the path above is correct.
    Press <F3> to specify a different path;
    Press <Enter> to continue.
```
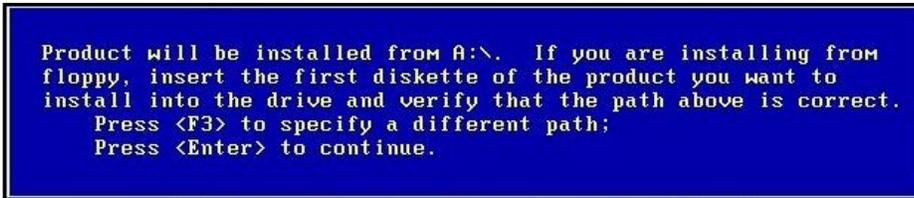
Enter the directory where you extracted the files (SYS:\GWAVA4Install).

```
Specify a directory path:

>SYS:\GWAVA4INSTALL_
```

Press ENTER and the installation procedure will start.

After specifying the install path you are asked to accept the license agreement; read the agreement, and press ESC when ready.

```
NetWare Configuration

                    Press ESC to continue

USER AGREEMENT AND SOFTWARE LICENSE TERMS.

CAREFULLY READ ALL THE TERMS AND CONDITIONS OF THIS
AGREEMENT.  BY USING THIS SOFTWARE, YOU ARE
CONSENTING TO BE BOUND BY AND ARE BECOMING A PARTY TO
THIS AGREEMENT.  IF YOU DO NOT AGREE TO ALL OF THE
TERMS OF THIS AGREEMENT, UNINSTALL THIS SOFTWARE IMMEDIATELY.

This User Agreement (the "Agreement") is a legal agreement between you and
BEGINFINITE, Inc. ("BEGINFINITE") for the accompanying software product, inc
software and associated media and printed materials, and if applicable
"online" or electronic documentation (the "Software"). In this Agreement,
the term "You" or "you" means the company, entity or individual who is
acquiring the license to use the Software under this Agreement.

The term "Use" means storing, loading, installing, executing or displaying
the Software. "Computer" means a central processing unit ("CPU") or group
of CPUs, that accesses its or their own individual non-cache Random Access
Memory. "Server" means a Computer which operates a component of your
messaging software.
```

Select YES to agree with the terms and press 'Enter'.

```
Do you Agree with these License Terms?
No
Yes
```

The installation will now instruct you to install GWAVA to your mail volume. Press 'Enter'.

```
Change the install location to your mail volume
(e.g. MAIL:\GWAVA4, GRPWISE:\GWAVA4, VOL1:\GWAVA4).

Press <Enter> to continue.
```
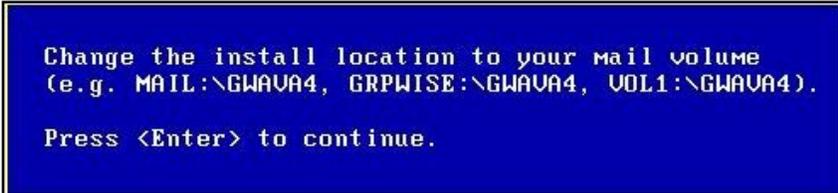
Press F3 to specify the install path for your server.

```
GWAVA 4 will be installed to (VOL1:\OPT\BEGINFINITE\GWAVA4) by default.

Press <F3> to specify a different path.
Press <Enter> to continue.
```
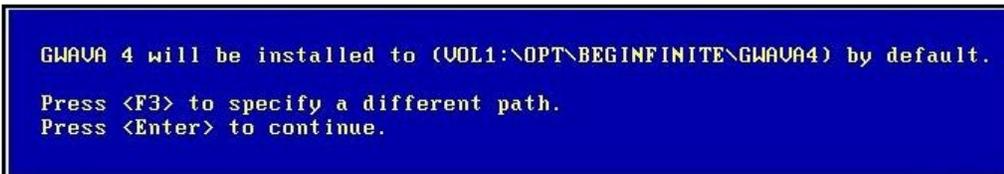
Press F3 to specify where to install the GWAVA 4 software.

Enter the path to install the software to, for example, DATA:\OPT\BEGINFINITE\GWAVA4.

```
Specify a directory path:
>DATA:\OPT\BEGINFINITE\GWAVA4
```

Be sure this volume you install to has at least 5 GB available.

To create the file structure for GWAVA 4, provide a login that has administrator privileges. Enter the admin name and password with the context.

```
Directory Services Login/Authentication
Administrator Name: .admin.mtl
Password:            *****_
```

Wait while the software installs.

```
                     File Copy Status

██████████████████████████████████████████████████████████████████
                          0%

   ┌──────────────────────────────────────────────────────────┐
   │ NWConfig is loading or has loaded another NLM.  This screen will │
   │ be unavailable for input until the product or configuration NLM │
   │ terminates and returns control back to NWConfig...         │
   │                       Please Wait                          │
   └──────────────────────────────────────────────────────────┘

   ┌──────────────────────────────────────────────────────────┐
   │                                                            │
   └──────────────────────────────────────────────────────────┘
```
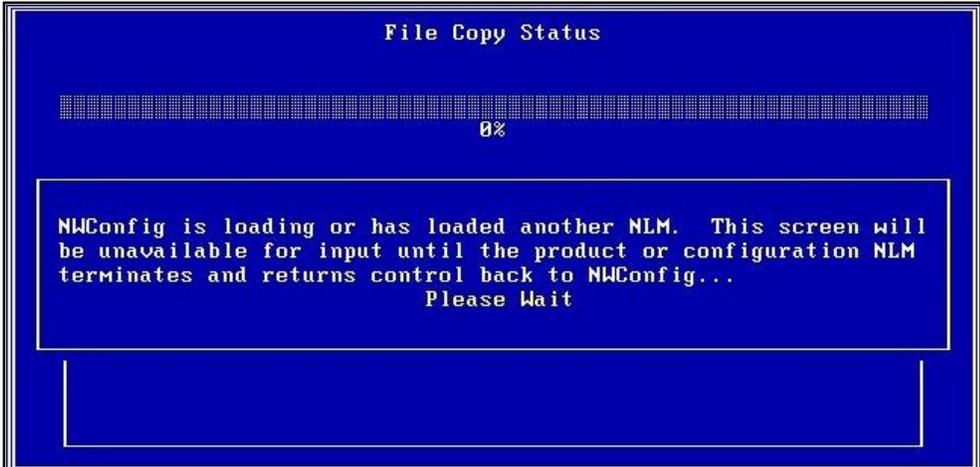
If you want GWAVA to start up automatically every time your server boots, select 'Yes' and GWAVA will add some information to the bottom of the autoexec.ncf. If you want to start GWAVA manually select 'No'. Default is 'Yes'.

```
┌────────────────────────────┐
│ Update AUTOEXEC.NCF?       │
├────────────────────────────┤
│ No                         │
│ Yes                        │
└────────────────────────────┘
```

GWAVA 4 now displays the README file. When you're done reading it, press 'ESC' to continue.

```
NetWare Configuration
┌──────────────────────────────────────────────────────────┐
│                  Press ESC to continue                     │
├──────────────────────────────────────────────────────────┤
│ GWAVA 4                                                  ▲ │
│ Build 62                                                 █ │
│ June 14, 2007                                              │
│                                                            │
│ 1.0  Welcome                                               │
│                                                            │
│     Thank you for your interest in GWAVA 4. This is a release candidate and │
│                                                            │
│ 2.0  Installation                                          │
│                                                            │
│     Installation information can be found at:              │
│                                                            │
│     http://support.gwava.com/wiki/index.php/Installing_the_GWAVA_package │
│                                                            │
│ 3.0  GWIA Queue Checker                                    │
│                                                            │
│     During this time it is possible that some systems may have some issues. │
│                                                            │
│     To make sure there is not a large amount of downtime there is a GWAVA c │
│     to make sure everything is operating normally.       ▼ │
└──────────────────────────────────────────────────────────┘
```

To start GWAVA 4 now select 'Yes'. select 'No' to start GWAVA at a later time. Default is YES.

```
Start GWAVA?
No
Yes
```
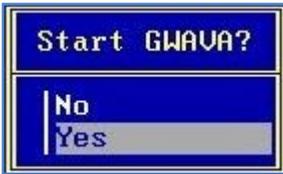
The installation displays login information for the Administration Web Console. By default, it's http://<server_ip_address>:49282 . Opening ports 49282 and 49285 in your firewall is recommended.

```
GWAVA is now running. By default GWAVAMAN listens on
port 49282. Access GWAVAMAN via http://<ipaddress>:49282

Press <Enter> to continue.
```

If you open ports 49282 and 49285 you will able to access your GWAVA configuration and mail quarantine from any location.

The commands to start and stop GWAVA 4 are GWAVAUP and GWAVADN, respectively.

```
Start GWAVA by typing 'gwavaup' and
turn GWAVA off by typing 'gwavadn'.

Press <Enter> to continue.
```
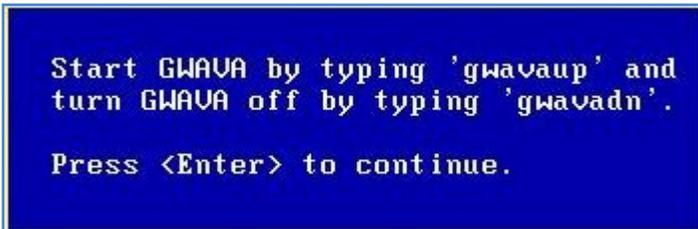
GWAVA 4 displays information on disabling prior versions of GWAVA.

```
Previous versions of GWAVA need to be disabled by removing the startup
switches from your MTA startup file. The switches /vsaction-discard,
/vstype-message, /vsnamevalue-MTASieve, /vsthread-16, /vscan-exclude,
/vsdomain-dummy, and /vsport-7108 need to be commented out (preceded
by ;), or removed from the startup file.

Press <Enter> to continue.
```

Now, exit NWCONFIG and return to the system console.

If you chose to start up GWAVA during the install, you will notice new console screens on your server. You can see the new screens by pressing 'ctrl+ESC' at the console.

```
Current Screens

    1.  System Console                         ╱ OS
    2.  Logger Screen                          ╱ OS
    3.  *NOVELL SSL Server Handshake Screen    ╱ OS
    4.  GroupWise Internet Agent               ╱ OS
    5.  GroupWise MTA - gwdom                  ╱ OS
    6.  GroupWise POA - gwpo.gwdom             ╱ OS
    7.  VMware Tools Screen                     ╱ OS
    8.  GWAVAMAN Console                        ╱ GWAVA4CFG
    9.  GWAVAQMS Console                        ╱ GWAVA4CFG
   10.  Autoblocker Console                     ╱ GWAVA4
   11.  GWAVA Scanner Console                   ╱ GWAVA4
   12.  GWVRELAY Console                        ╱ GWAVA4
   13.  GWAVAPOA Console                        ╱ GWAVA4
   14.  GWAVA Updater Console                   ╱ GWAVA4
   15.  ASEngine Console                        ╱ GWAVA4
   16.  GWVGWIA Console                         ╱ GWAVA4

If a screen name is preceded by *, select it to unhide the screen.

Select screen to view: _
```

The GWAVA 4 software is now installed and ready to be configured. Skip the Linux section and continue your installation in the Server Activation section.

Click here to move to the Server activation section.

LINUX INSTALLATION

This is the first time that GWAVA is available for Linux. Therefore, there will be no compatibility issues with previous releases of GWAVA.

Installing GWAVA 4

There are many different flavors of Linux, for this example SLES 10 using the GNOME environment will be used.

Log in to the server as ROOT. Click 'Computer' and select Firefox.
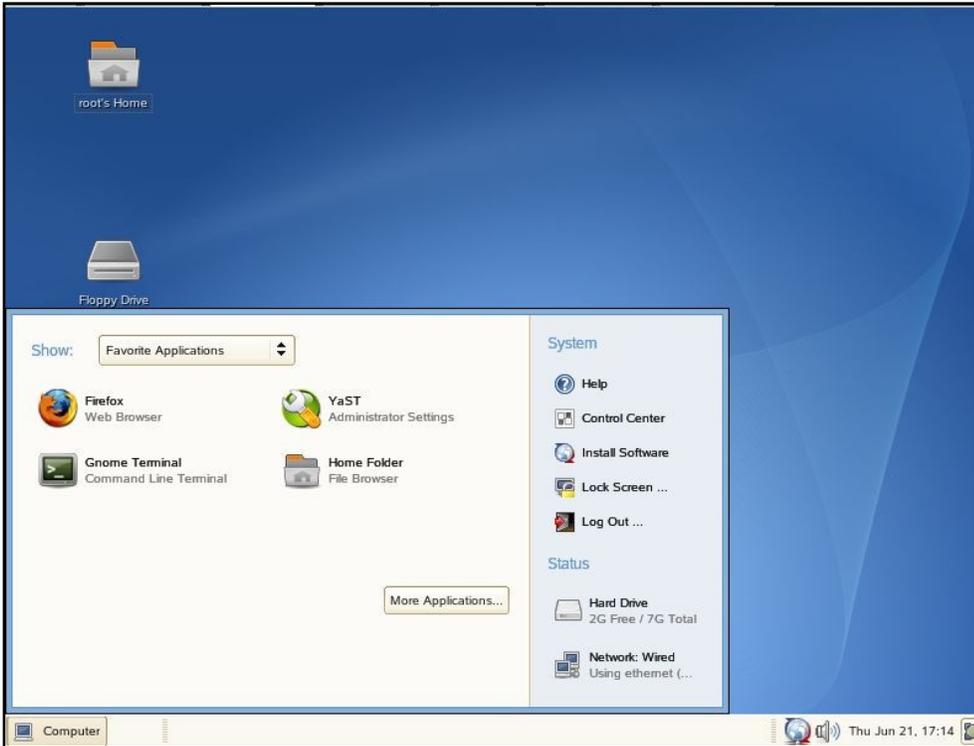
Enter the url http://www.gwava.com and download the GWAVA 4 install package. Save to disk and it should appear on your desktop when done.

Example side text

Double-click on the install package to start "File Roller", the Linux unzip utility for the GNOME desktop. After the zip has been opened click 'Extract'.
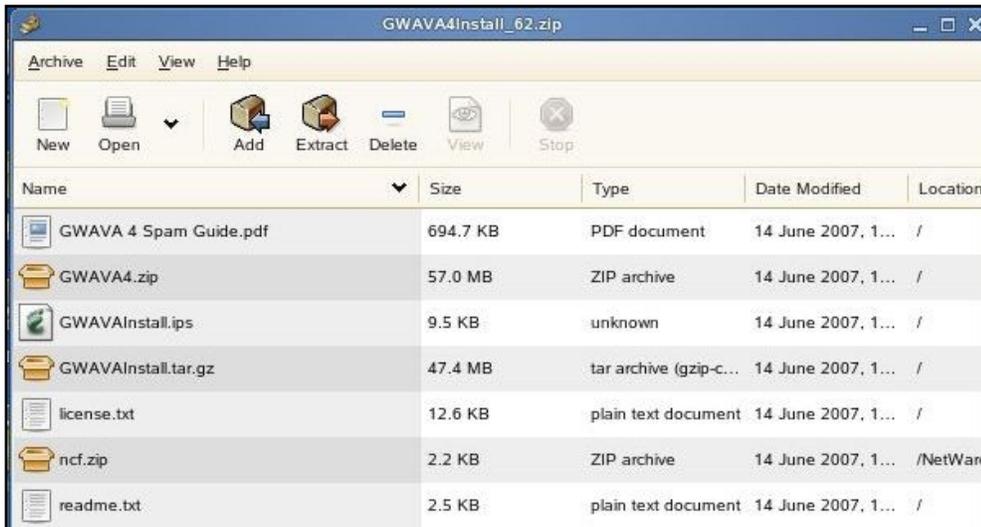
Before extracting the files we need to create a location for the files to be extracted. Click the path drop-down and choose 'Other...'.

Select 'File System' on the left-hand pane, and then double-click on 'OPT' on the right-hand pane. Then click 'Create Folder' to make a new directory.
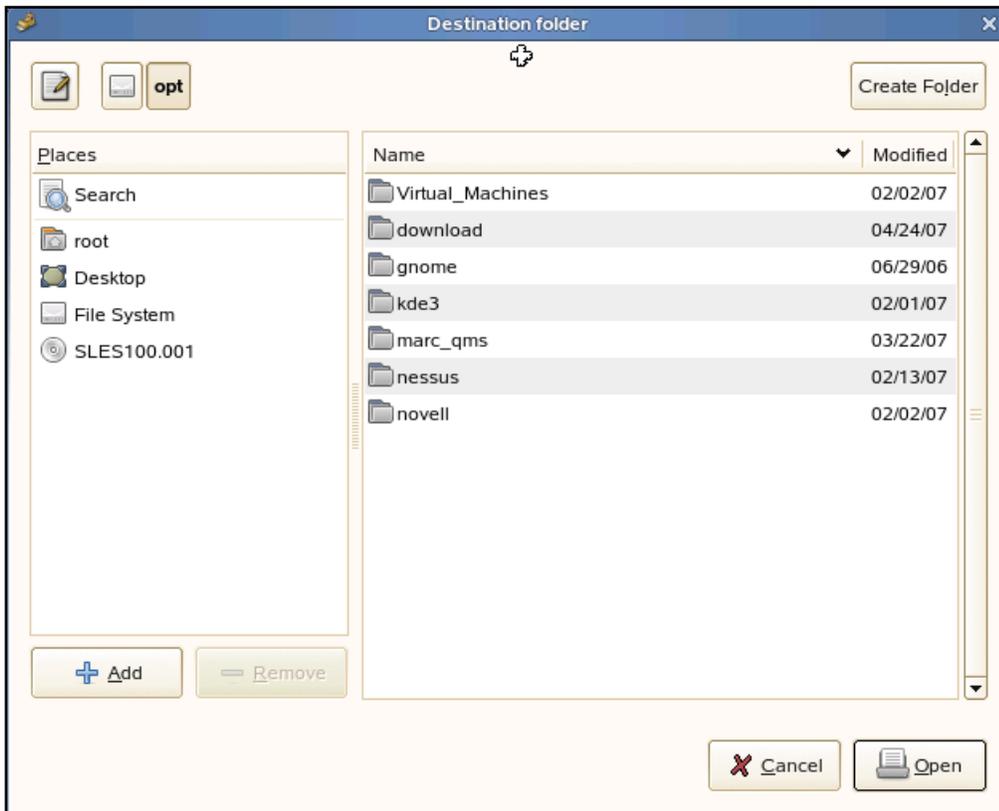
Enter the name of the folder where the install files will be extracted. Enter 'GWAVA4Install'.
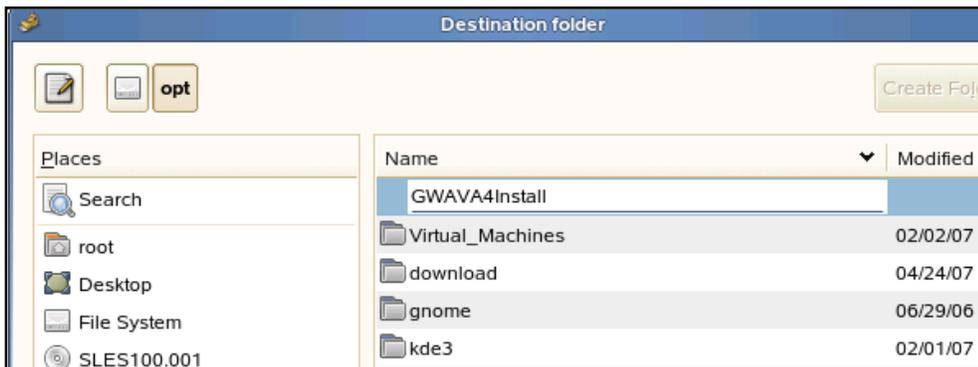
Press ENTER, you will automatically go into that folder. Click 'Open'. Click 'Extract' to begin extracting the files to your install folder.

Wait for the files to be extracted.
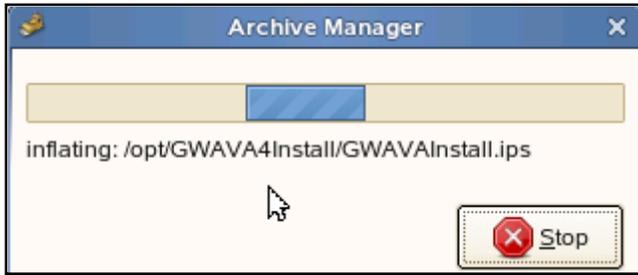
Now that the files are extracted, navigate to the folder where you extracted the files (/opt/GWAVA4Install) by opening the 'root's Home' folder on your desktop.

On the left-hand pane click on 'File System' and then select 'OPT' and then 'GWAVA4Install'.
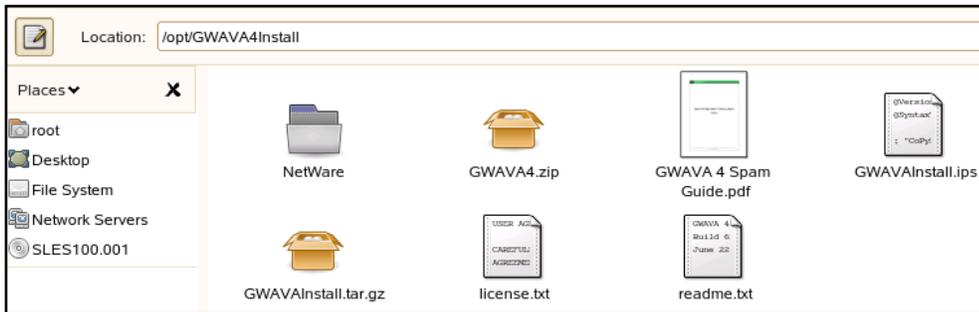
The GWAVA 4 for Linux install files is bundled within this universal package as GWAVAInstall.tar.gz.

We do not need to specify a different extraction path, so right-click on GWAVA4Install.tar.gz and select 'Extract Here'.
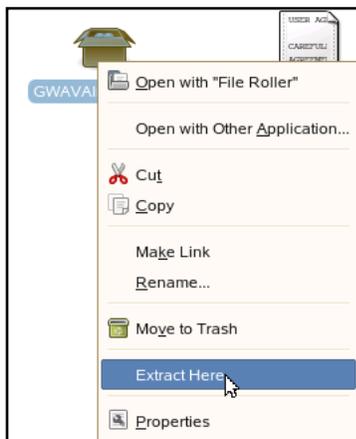
After the files have been extracted you will see a Linux folder in the GWAVA4Install directory, GWAVA4Install.sh, and menu.sh. Double-click on GWAVA4Install.sh to start the installation.
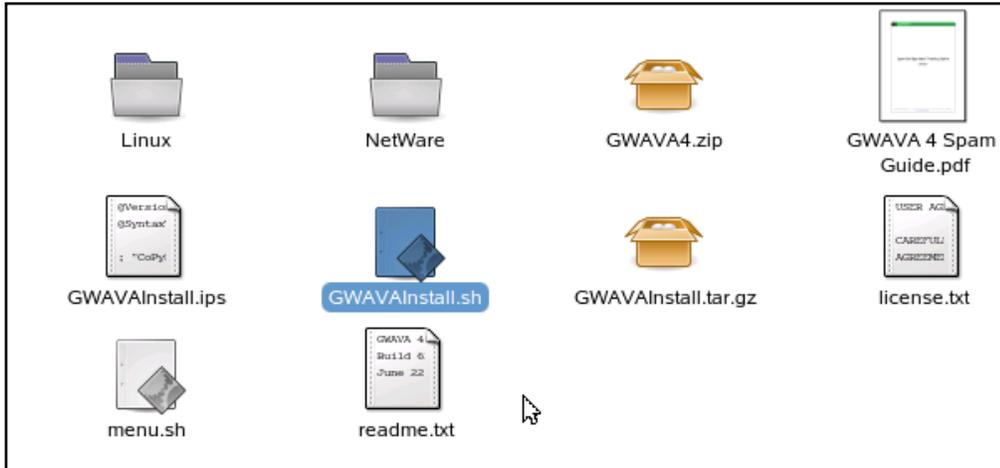
If this dialog comes up, click 'Run'.

On the installation menu, select **1** with your keyboard and press ENTER. This will launch the install procedure for the GWAVA core components to the /opt/beginfinite/gwava directory.

Wait for the installation to complete. After you see the text 'Preparing for AV Update...' press 'Enter' to continue.

```
        Install Core GWAVA [gwavaman-4.0-62]
gwavaman                 ###################################
Checking for  /etc/init.d/grpwise  ...

Modifying /etc/init.d/grpwise ...

Installing service ...
Updated MTA scanner. You must restart MTA.

Starting Service ...

----  GWAVAMAN is now running! ----
By default you may connect to GWAVAMAN by opening a
web browser (FireFox or Internet Explorer) to:
http://serveripaddress:49282

INSTALLATION COMPLETED
Preparing for AV Update...
█


                        < Exit >
```

For the update to succeed, GWAVA must be able to access the Internet on port 80. If your server goes through a proxy for Internet access, select 'Yes' to change the connection options. If your server does not require a proxy, continue the installation. The Kaspersky update connection settings are now displayed if you selected 'Yes'. Enter the necessary proxy settings and click 'OK' to continue.

Kaspersky is the anti-virus scanner GWAVA will use to check messages for virus content.

```
Current HTTP Proxy Settings


            Current HTTP Proxy Settings

   Choose Using [UP] [DOWN], [Enter] to Select


       1  Use HTTP Proxy (Yes/No) [ No  ]
       2  Proxy HTTP Address      [ http://example.com ]
       3  Proxy HTTP Port         [ 8080 ]
       4  Authentication Enabled  [ Yes ]
       5  Proxy User              [ username ]
       6  Proxy Password          [ password ]




           <   K   >        < Exit >
```

The installation script will now download all of the latest Kaspersky virus definitions for use.
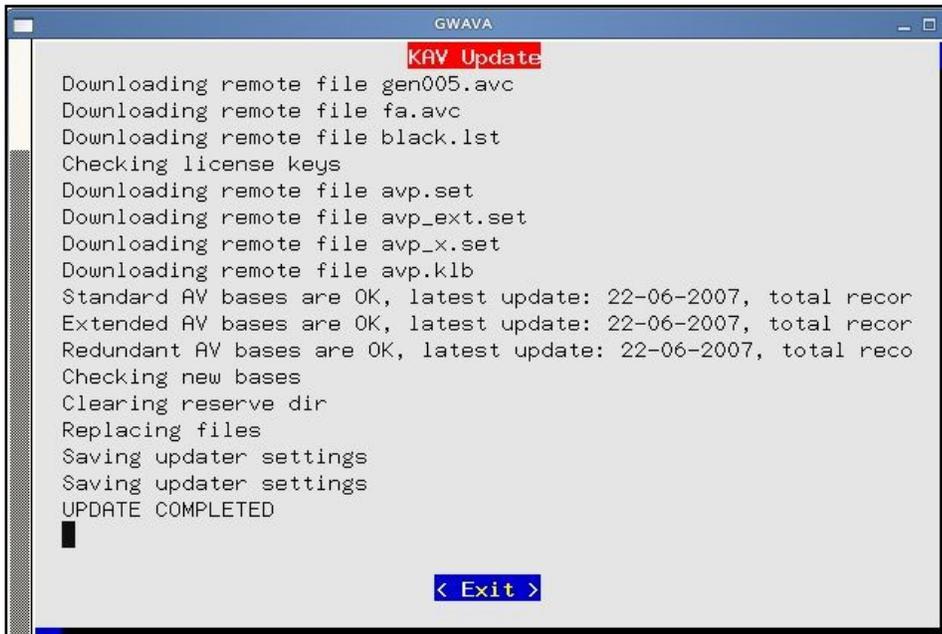
```
                                GWAVA                          _ □
                              KAV Update
  Downloading remote file gen005.avc
  Downloading remote file fa.avc
  Downloading remote file black.lst
  Checking license keys
  Downloading remote file avp.set
  Downloading remote file avp_ext.set
  Downloading remote file avp_x.set
  Downloading remote file avp.klb
  Standard AV bases are OK, latest update: 22-06-2007, total recor
  Extended AV bases are OK, latest update: 22-06-2007, total recor
  Redundant AV bases are OK, latest update: 22-06-2007, total reco
  Checking new bases
  Clearing reserve dir
  Replacing files
  Saving updater settings
  Saving updater settings
  UPDATE COMPLETED


                              < Exit >
```

At this point GWAVA should be running and waiting for activation, please continue to the Server Activation section.

Click here to move to the Server activation section.

SERVER ACTIVATION

From your workstation, enter the URL http://<your_server_ip>:49282. For example, http://192.168.10.60:49282, then click 'Go' or press 'Enter'.

Choose the default, 'This is a new GWAVA server' and click 'Continue'.
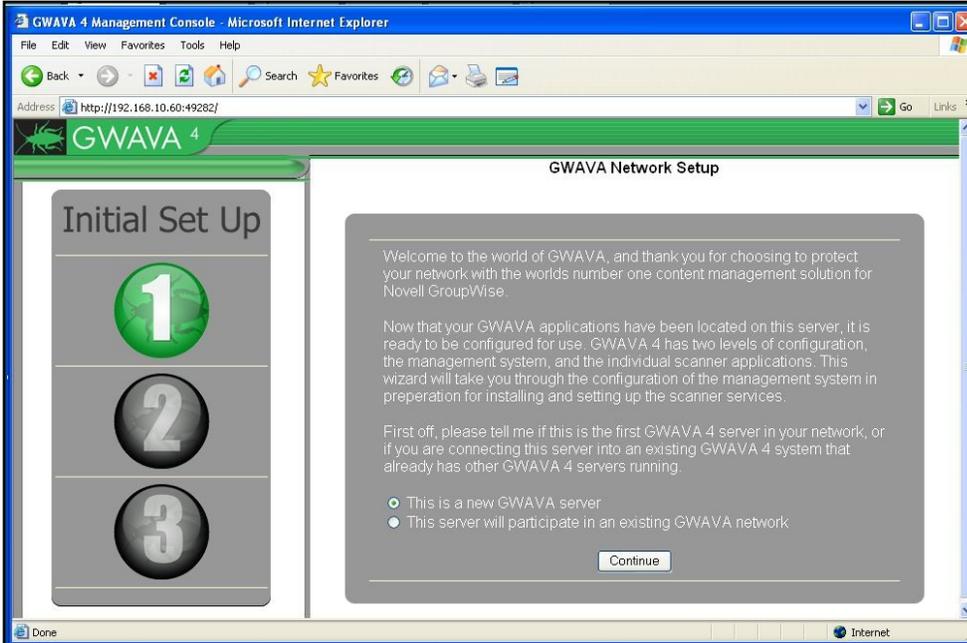
Enter the requested information for your environment GWAVA 4.

Remember your password. You will need this to log in to the GWAVA 4 Web Administration console.

Confirm that the information is accurate and click 'Install'.

After the server has been activated, the following screen should appear. This is what you should see when you log in to the web interface in the future.

Now that the server is activated we can proceed installing a scanner.

Click here to move to the Scanner Installation section.

To connect to the GWAVA4 Management Console in the future, open any browser that has access to the server and type the URL
http://<server_ip>:49282

LICENSE APPLICATION

In contrast to GWAVA 3, a license key and code will not be used to license GWAVA. PEM files, which are encoded certificates, will be used.

If you do not have your PEM file visit https://licenses.gwava.com/, enter your validation key: XXXXXXXX and complete the registration form. Then print the displayed License Certificate and download the PEM file.

If you do not have a validation key, contact your sales representative.

To apply your license file open the GWAVA4 Management Console (<IP_Address>:49282) and log in as 'admin'. Then under 'Server/Scanner' Management click on your server folder and then click on 'Server Management'. Click on 'Licensing' to load the Licensing screen.
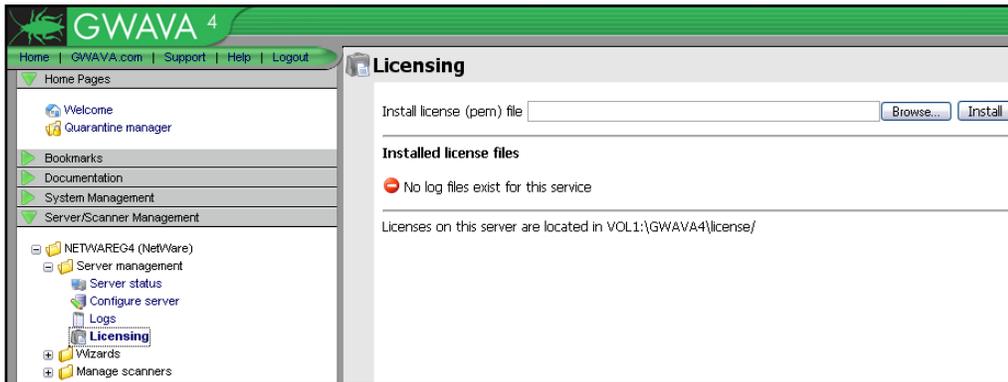
Click 'Browse' to find the location of your PEM file on your workstation, and then click 'Open'.
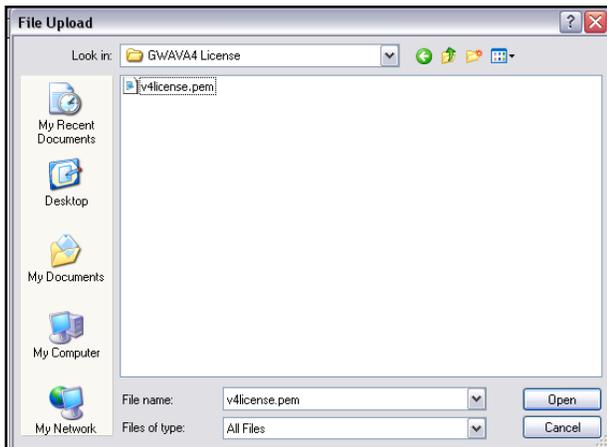
The path to the PEM file will now be shown on the licensing page.

Licensing

Install license (pem) file C:\Documents and Settings\Robert\Desktop\GWAVA4 License\v4 [Browse...] [Install]

Installed license files

🚫 No log files exist for this service

Licenses on this server are located in VOL1:\GWAVA4\license/
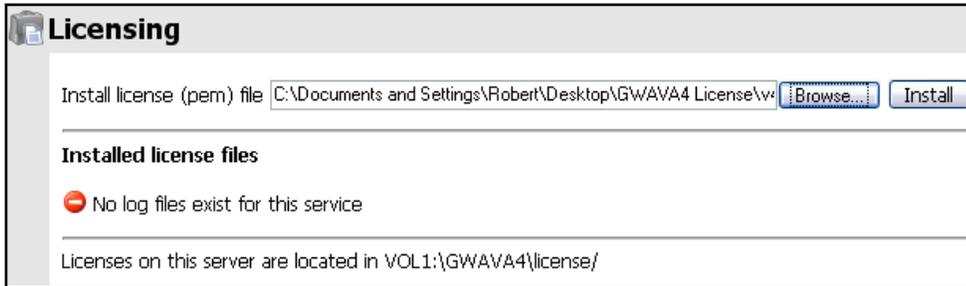
Click 'Install' for the license to be applied.

Licensing

Last action: Installed license file v4license.pem

Install license (pem) file [_____] [Browse...] [Install]

Installed license files

📄 v4license.pem (3505 bytes)

Licenses on this server are located in VOL1:\GWAVA4\license/
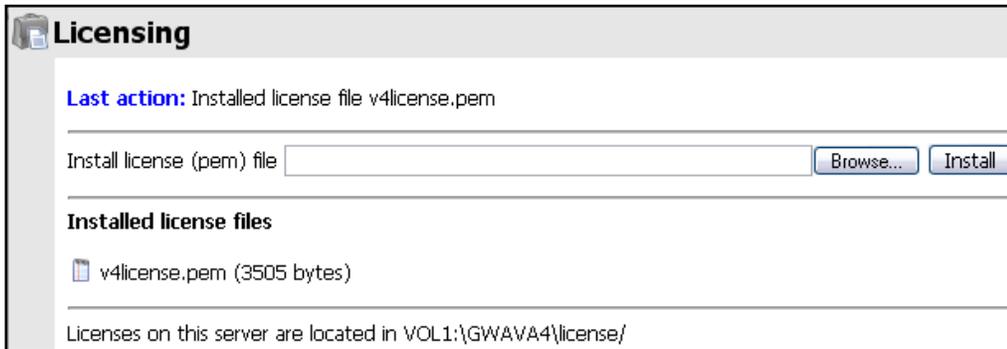
GWAVA 4 is now fully licensed and has complete functionality.

SCANNER INSTALLATION

To install a scanner access the GWAVA 4 Management Console by browsing to the URL

http://<your_server_ip>:49282. Click 'Enter Management Console'. When prompted, provide the username and password you used during the Server Activation process.

Controls are on the left, information is on the right.
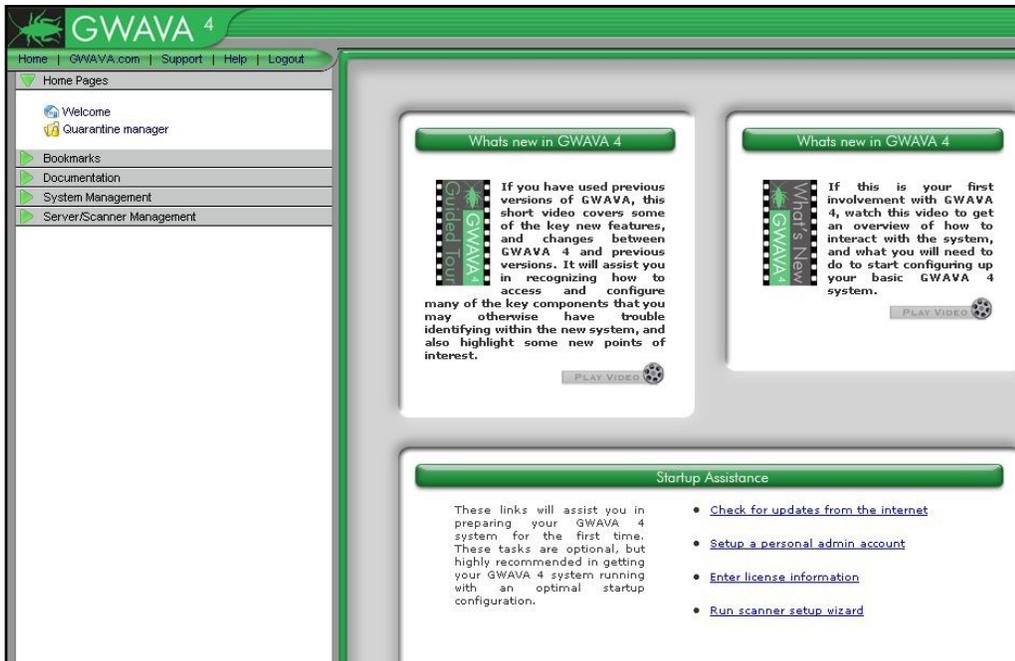
On the left-hand pane, expand your view below Server/Scanner Management.
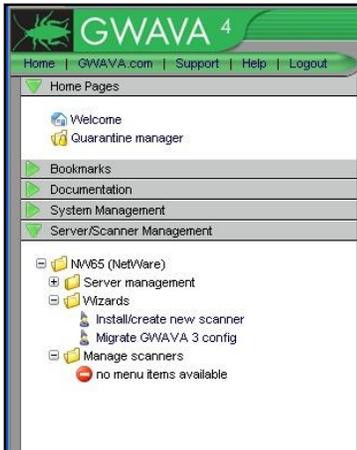
Since no scanners have been defined, you see the "no menu items available". Click 'Install/create new scanner' to install a scanner. If you want to migrate your GWAVA 3.x configuration, click 'Migrate GWAVA 3 config'.
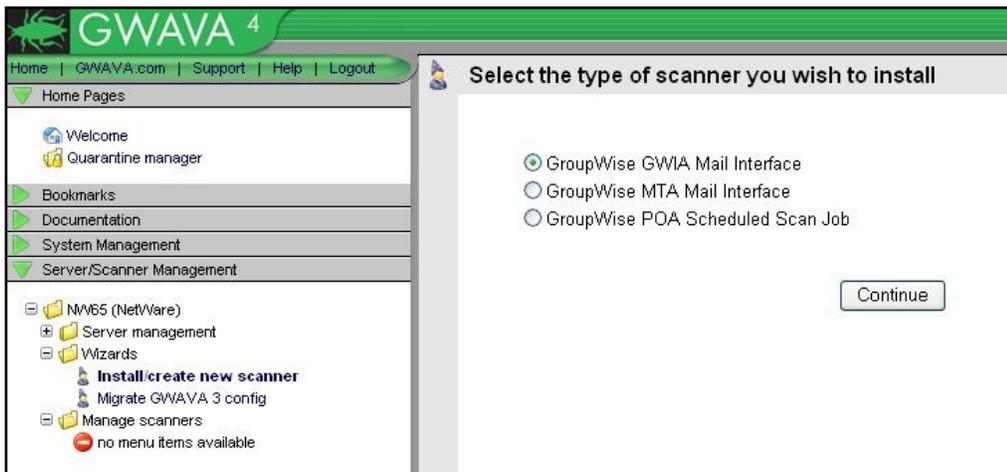
The Management Console will walk you through the rest of the process. For this example a GWIA scanner will be installed.

To install a GWIA scanner, select 'GroupWise GWIA Mail Interface' and select 'Continue'.

This example will not be a migration. The steps are exactly the same, except the migration will ask for your GWAVA 3 gmtacfg.ini file. When the wizard asks browse to the <domain_dir>\GWAVA4\config directory and select the ini file for the installer.

GWAVA provides helpful information before the scanner is created. Read the information then click 'Continue'.
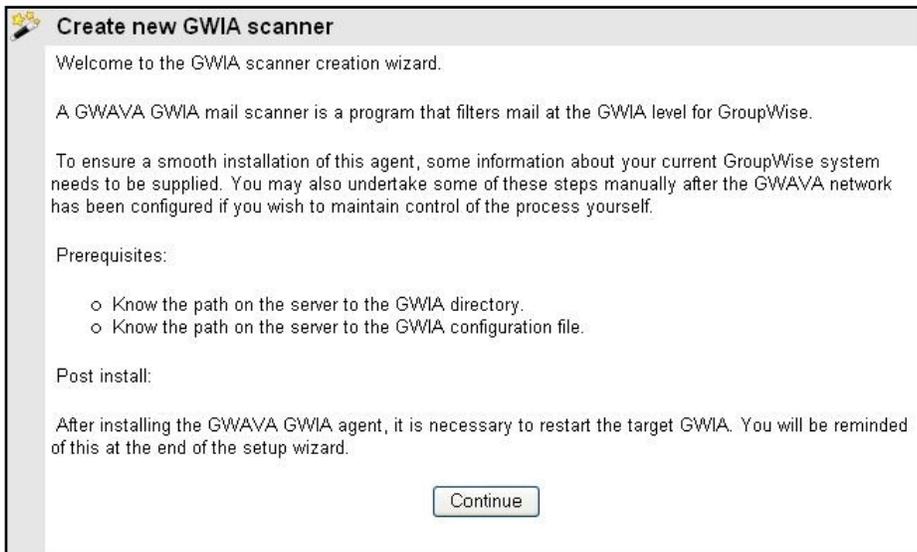
Enter the name of the new GWIA scanner. Choose a name you will be able to recognize as this particular GWIA scanner when you see it in the scanner list.

Also enter the paths to your GWIA. The first path is to the GWIA.CFG in your SYS:\SYSTEM directory. The second path is to the GWIA working directory. This is under the domain directory (gwdom in the example shown).

If you are unsure of these paths, **DO NOT** click 'Continue' until you have verified the paths.

Verify configuration file directory

For the GWIA scanner the needed file is gwia.cfg, for an MTA scanner the file is <domain_name>.mta. These files for NetWare will be located in SYS:\System most of the time. For Linux these files will probably be located in /opt/novell/groupwise/agents/share.

To verify this, browse to the SYS:\System or /opt/novell/groupwise/agents/share directory and make sure you find the file the scanner installation is asking for.

If the file is not there, consult Appendix A: Locating Configuration Files.

Make sure you use forward slashes in the path.

The gwia.cfg file will be located wherever the GroupWise NLMs are located.

The MTA startup file does not have to be the domain name, but it most often is. Look for something that ends with the extension 'MTA', it is most likely the startup file.

Verify domain directory

Once the configuration files are found you can find out where your domain directory is by looking in the gwia.cfg. At the bottom of the file there should be a 'Home' switch that resembles /Home-\\NETWAREG4\vol1\dom1\wpgate\GWIA or /Home-Vol1:\dom1\wpgate\GWIA or –-home /mail/dom1/wpgate/gwia. The part before you get to the wpgate directory is your domain directory, just add the wpgate/gwia on to the domain directory for the GWIA path when installing a GWIA Scanner.

When you've entered the paths correctly, click 'Continue'.

Scanner Options

There are two sections of scanner options, viruses and spam.

First select your AV scanner, for this example file locking is displayed. Typical file locking AV products are McAfee NetShield and Symantec AV.
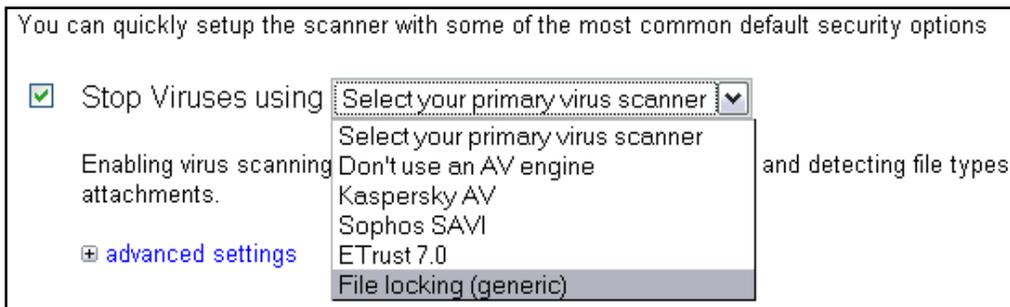
For a file locking AV GWAVA needs access to the file system via a NDS user. Admin is typically used for this purpose. Fill in the server and admin/password fields.
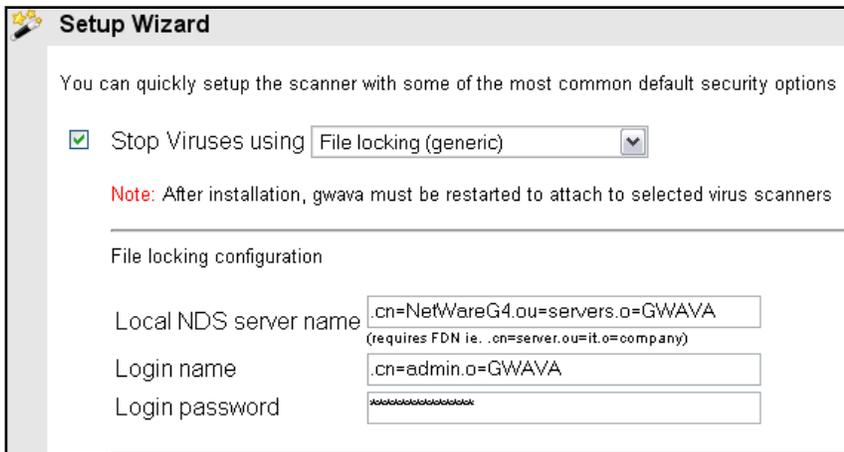
You will not see this screen if you are doing a migration.

The Virus scanner selection option is only available in NetWare. Kaspersky will automatically be used as your AV scanner in Linux.

For Kaspersky, Sophos SAVI, and ETrust all you have to do is select it from the list.

Make sure you enter the fully distinguished name and context of the object (as shown).

Under 'Stop Viruses' click 'advanced settings' for more installation options. Check/uncheck what best suits your needs.

⊟ advanced settings

☐ Quarantine infected messages

☑ Block attachments with file names commonly associated with viruses (*.exe, *.pif, *.vbs etc)
    ☑ Quarantine messages blocked because of attachment names
☑ Detect and block attachments commonly associated with viruses (fingerprint exe, pif, com etc)
    ☑ Store fingerprint blocked messages in the quarantine system

Under 'Stop Spam' click 'advanced settings' for more installation options. Check/uncheck what best suits your needs. Once you are satisfied with the configuration click 'Continue'.

☑ Stop Spam

Enabling spam detection includes enabling the heuristic detection system and the SURBL and RBL features in GWAVA.

⊟ advanced settings

☑ Enable antispam heuristics service
    ☑ Quarantine messages detected by the heuristics engine
☑ Enable RBL service
    ☐ Quarantine messages detected with RBL
☑ Enable SURBL service
    ☐ Quarantine messages detected with SURBL

[Continue]

Verify the information and paths are correct and click 'Install'.

Create new GWIA scanner

The requisite information has been collected and is ready to be deployed. If you are satisfied that the installation information is correct, press the install button to commit the installation procedure to the GWAVA network.

Scanner name	NW65-GWIA
Install to server	NW65 (NetWare)
GWIA startup file	sys:/system/gwia.cfg
GWIA path	data:/grpwise/gwdom/wpgate/gwia
Stop Viruses	Yes
Stop Spam	Yes

[Install]

When this dialogue appears the scanner is ready for operation.
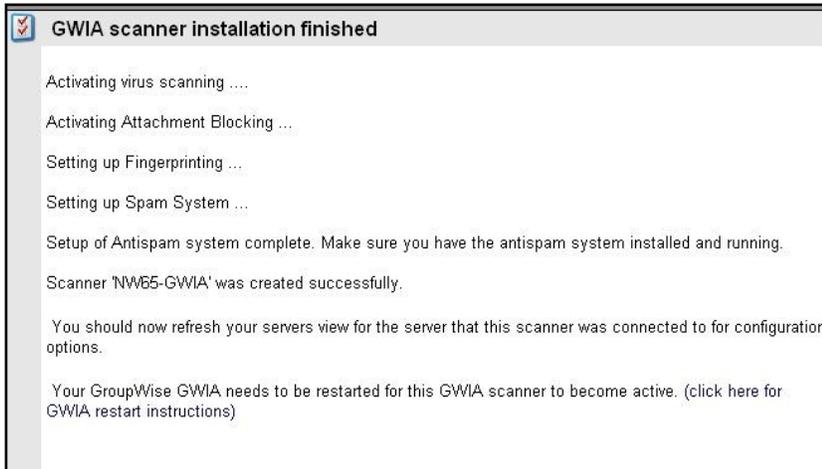
Before the scanner can be used, GroupWise needs to be restarted. Because we installed a GWIA Scanner all we have to do is restart the GWIA. If we had installed a MTA scanner, you need to restart the MTA.

Netware Restart Instructions

To restart the GWIA, go to the GroupWise Internet Agent screen via a remote console and press 'ESC'. Select 'Yes', and wait until the agent goes down. Then from the system console type 'gwia' and that will load the GWIA back up.

To restart the MTA, go to the MTA screen via a remote console and press 'ESC'. Select 'Yes', and wait until the agent goes down. The from the system console type 'gwmta @<MTA_startup_filename>.mta'. For example, 'gwmta @gwdom.mta'.

Linux Restart Instructions

In Linux it is easy to restart all of GroupWise. Open a shell prompt and type 'rcgrpwise stop' and then after it is finished type 'rcgrpwise start', and GroupWise has been restarted.

After the restart of GroupWise, messages should start to flow through GWAVA. Verify GWAVA is working by checking the statistics screen found in the GWAVA 4 Management Console.

To view the stats, log in to the Management Console (http://<server_ip_address>:49282), then under 'Server/Scanner Management' select your Server, then 'Manage scanners', then click 'Scanner Information', and finally click on 'Statistics'.

Selecting STATISTICS gives you this page. If numbers are filled in, your Scanner is working properly.

To configure the spam settings appropriately, refer to the Spam Configuration guide found in the GWAVA4Install directory.

Congratulations, GWAVA has been installed and will protect your e-mail system. For more documentation please visit http://support.gwava.com/wiki.

APPENDIX A: LOCATING CONFIGURATION FILES

It is rare to see the Linux configuration files not in /opt/novell/groupwise/agents/share; only NetWare instructions are included to find your GroupWise configuration files.

NetWare

If your GroupWise system loads automatically during startup, load up the autoexec.ncf in an edit window by typing 'edit autoexec.ncf'. Scroll to the bottom of the autoexec.ncf and it should look similar to the following example.
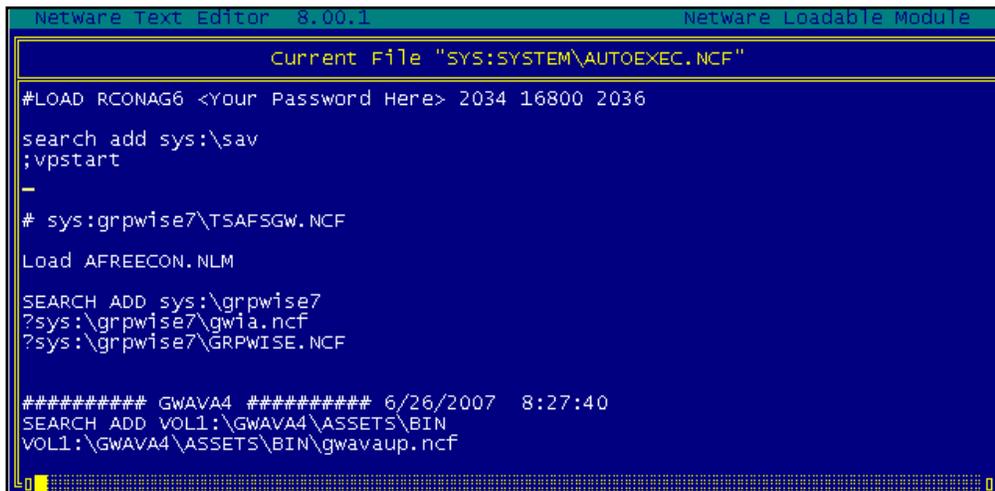
In the autexec.ncf, look for the gwia.ncf or the grpwise.ncf. If you found those files, look at where it is located. In this example it is located in sys:\grpwise7. Now that I know that sys:\grpwise7 has some of my data in it I can look in there for more information.

From my administrative workstation I access that directory and look inside the gwia.ncf first. I now know that my gwia.cfg is located in sys:\grpwise7
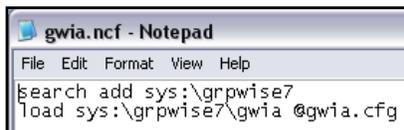
Now I need to find my MTA startup file so I open grpwise.ncf. After reviewing grpwise.ncf I know that my MTA startup file is named G4NETWAR.MTA and is located in sys:\grpwise7.
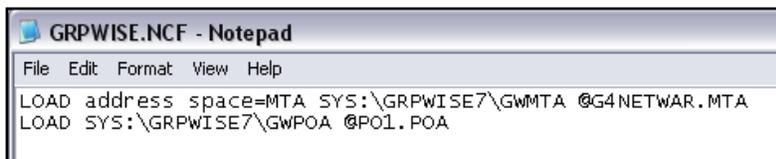
At this point you should have enough information to complete the scanner wizard.

APPENDIX B: TCP/IP PORTS GWAVA 4 USES

GWAVA 4 has its own web services that allow access to the Management Console and QMS through a web browser.

GWAVA does have its own port assignments that you should be familiar with. The key port to remember is "49282". An easy way to remember it is that 49282 spells out GWAVA on a touch-tone phone.

It is also important to note that if you do use SSL, you will need to have an SSL certificate and key generated by yourself or a CA.

Port	SSL Port	Name	Comment
49282	49382	GWAVAMAN	- GWAVA Administration Console. - If you use SSL, both ports 49282 AND 49382 must be opened. - The Management Interface uses this port to communicate with your Web Browser.
49283	49383	GWAVA	Internal port used by GWAVA to communicate with the other GWAVA modules
49284	49384	ASENGINE	Internal port used by ASENGINE to report spam scanning results to GWAVA
49285	49385	GWAVA QMS	- GWAVA Quarantine Management System - Users will need to be able to web into this port to access their quarantine or release messages from the digest. - Should be accessible from wherever users will be using GroupWise.

Once you have opened up port 49282 and 49285 in the firewall you can access the Management console and QMS from anywhere by using the server's hostname with the port of the service you are trying to connect to added on.

You can use the hostname of the GWIA or one you've created yourself.

Example: Mail.gwava.com:49282 accesses the Management Console.

Mail.gwava.com:49285 accesses QMS.

User Access to QMS
We suggest that you make a DNS entry that resolves to the physical server where you are installing GWAVA 4 both inside and outside of the firewall. Use THIS DNS address to refer to the GWAVA 4 server.

GWAVA 4 Access to the Internet
GWAVA 4 needs to access the Internet by http. This is how GWAVA stays updated, among other things. Please ensure that GWAVA 4 has access to the Internet. If a proxy is required, be sure to set that up in the GWAVA 4 administration console.

APPENDIX C: DISASTER RECOVERY

Disaster recovery is an important topic with all server software products.

Restoring GWAVA from backup

GWAVA 4 already has some backup mechanisms in place. Each critical piece of GWAVA has a backup directory. The key paths to look at (NetWare or Linux) are:

- …\config\backup (Configuration DB backups)
- …\services\qms\backup (QMS DB backups)
- …\services\asengine\configs\<config_id>\backup (Spam Dictionary backups)
- …\services\qms\data\storage\ (your Quarantined messages are here)

To back up only critical data have your backup software only back up the directories listed above. The rest of the GWAVA directory structure isn't critical. If you use this method you'll need to restore the backed up zip files and then unzip the contents before GWAVA is fully restored.

For a complete backup, you can back up the entire GWAVA directory structure, but it isn't necessary. This will enable you to get GWAVA up and running faster but requires more disk space.

If you need to restore GWAVA 4, take the following steps:

- Reinstall GWAVA 4 from scratch.
- Shut down GWAVA (gwavadn or rcgwavaman stop)
- Find your backups and restore them to the GWAVA 4 directory structure.
- Reconnect your interfaces (GWIA, MTA, POA).
- Bring your GroupWise components back online.
- Start GWAVA 4 (gwavaup or rcgwavaman start). You should be back to the same configuration as before.

Reconnecting Interfaces

Once your GWAVA 4 system is running again, you will need to reconnect your GWIA and MTA.

GWIA

There are specific examples provided for Linux and NetWare. Basically, the GWIA.CFG needs the smtphome switch added to the bottom.

NetWare Example

Here is a NetWare example of the switch to include in the GWIA.CFG file (normally in SYS:\SYSTEM)

```
;============================================================
/HN-"gwava.com"
/smtphome-data:/grpwise/gwdom/wpgate/gwia/3rd
```

The /smtphome switch points to the directory "3rd"

Linux Example

Here is a Linux example of where to put the switch in the GWIA.CFG file, normally found in the /opt/novell/groupwise/agents/share directory.

```
;============================================================
--smtphome /opt/novell/groupwise/lxdemo/lxdemdom/wpgate/gwia/3rd
```

These are just examples. The domain can be anywhere you specify during the GroupWise installation.

For this example, here is the directory structure under GWIA. Note the path to this directory.

MTA

If you have an MTA scanner, you will need to add these lines to the end of the <domain_name>.mta configuration file. Here is an example:

```
;========================= END OF FILE =============================

/vscan-EXCLUDE
/vstype-MESSAGE
/vsnamevalue-MTASieve
/vsthread-50
/vsdomain-DUMMY
/vsport-7108
/vsaction-DISCARD
```

POA

There is no need to do anything special to reconnect the POA. Assuming that IMAP is enabled on the POA and that the trusted application key is the same, it should just work as before.

The MTA startup file does not have to be the domain name, but it most often is. Look for something that ends with the extension 'MTA', it is most likely the startup file.

APPENDIX D: MOVING A GWAVA4 INSTALLATION

GWAVA 4 was designed to be portable. All of GWAVA's components are under the same directory. This means that you can move your GWAVA 4 installation to any other place and it will run the same as before.

Some Linux purists have noticed that GWAVA 4 does not store its logs in the /var/log directory as other traditional Linux applications. The main reason for this is the portability of the GWAVA 4 system.

To move a GWAVA 4 system the general steps are as follows:

- Shut down GWIA to stop the flow of messages through GWAVA
- Shut down the MTA if you have an MTA scanner
- Shut down GWAVA by using GWAVADN or rcgwavaman stop
- Copy the directory structure to its new location
- Edit AUTOEXEC.NCF to update the system path referenced to GWAVA
- Edit the paths for the system/startup files
- Start GWAVA 4
- Restart the GroupWise components that were stopped

The GWAVA NCFs that must be edited are found in the GWAVA4 directory under assets\bin.

The specific steps for moving GWAVA are outlined below.

Moving GWAVA on NetWare

In this example GWAVA will be moved from the SYS volume to the DATA volume.

Shut down the GWIA. Press 'ESC' and select 'Yes' from the GWIA console screen.

Shut down the MTA. Press 'ESC' and select 'Yes' from the MTA console screen.

Shut down GWAVA by typing 'GWAVADN' at the system console.

```
Loading Module GWAVAVSA.NLM                              [NOT MULTIPLE]
NW65:gwavadn
Unloading modules from address space GWAVA4.
GWVGWIA: Waiting for threads to exit...
Module GWVGWIA.NLM unloaded
ASENGINE: Waiting for threads to exit...
Module ASENGINE.NLM unloaded
GWAVAUPD: Waiting for threads to exit...
Module GWAVAUPD.NLM unloaded
GWAVAPOA: Waiting for threads to exit...
Module GWAVAPOA.NLM unloaded
GWVRELAY: Waiting for threads to exit...
Module GWVRELAY.NLM unloaded
AUTOBLOCKER: Waiting for threads to exit...
Module AUTOBLKR.NLM unloaded
GWAVA: Waiting for threads to exit...
Module GWAVA.NLM unloaded
Module CLXNLM32.NLM unloaded
Module CLNNLM32.NLM unloaded
Module NLMLIB.NLM unloaded
Module REQUESTR.NLM unloaded
Module THREADS.NLM unloaded
Module LIBC.NLM unloaded
Unloading modules from address space GWAVA4CFG.
GWAVAQMS: Waiting for threads to exit...
```

This same process could be used to move GWAVA to a cluster volume. You will need to make sure each server has an appropriate search path to the GWAVA4\assets\bin directory.

Using your administration workstation, copy the entire directory structure at SYS:\OPT\BEGINFINITE\GWAVA4 to DATA:\OPT\BEGINFINITE\GWAVA4.

Everything that has to do with GWAVA is under that directory so you can move it without any issue.

The Autoexec.ncf must be edited first to reflect the new GWAVA location. At the system console type 'Edit AUTOEXEC.NCF'.

Look for the SYS:\OPT\Beginfinite… entry and change it to DATA:\OPT\Beginfinite…
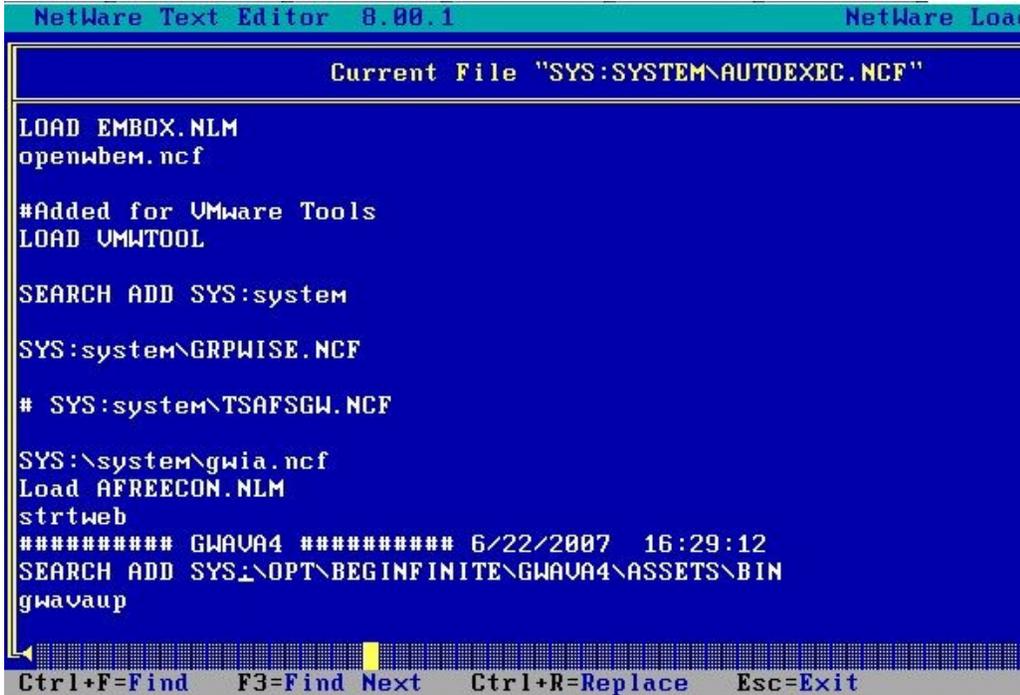
For example:

Now go to the DATA:\OPT\BEGINFINITE\GWAVA4\ASSETS\BIN directory, and find the GWAVAUP.NCF and RESTARTGWAVA.NCF files.

Edit these files by finding all references to the SYS: volume and change them to DATA: volume.
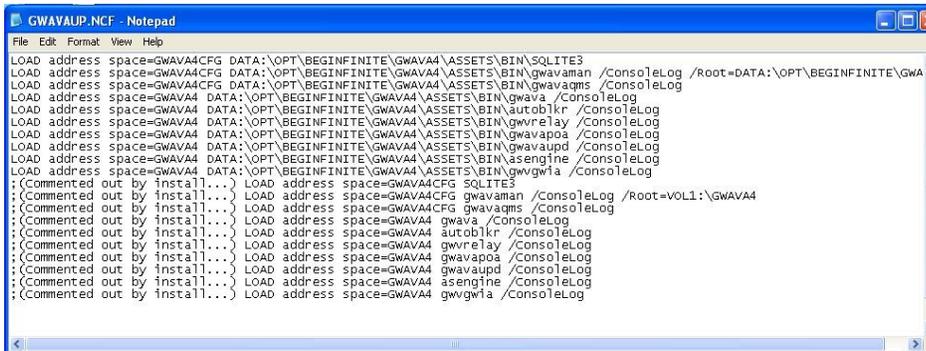
Edit the RESTARTGWAVA.ncf to also reflect the changed volume.
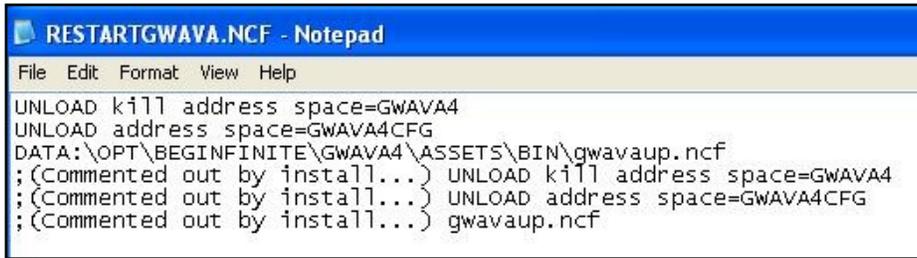
Before you can start GWAVA 4, the search paths must be corrected on the server. Check the search paths by typing 'Search' at the server console.

To fix the search path, first type 'search del 16' to remove the old search path and then 'search add DATA:\OPT\BEGINFINITE\GWAVA4\ASSETS\BIN'. Now you can run GWAVAUP.ncf and GWAVADN.ncf without issue.

Start GWAVA 4 by running 'GWAVAUP' at the system console.

Start the GroupWise agents that were stopped earlier.

Moving GWAVA4 on Linux

Before moving GWAVA, shut down GWAVA by opening a terminal and typing 'rcgwavaman stop'.

```
 ▣                            Terminal                    _ □ X

  File   Edit   View   Terminal   Tabs   Help

 Gwava4Demo:~ # rcgwavaman stop                                    ▲

 Shutting down /opt/beginfinite/gwava/assets/bin/gwvgwia      done
 Shutting down /opt/beginfinite/gwava/assets/bin/autoblkr     done
 Shutting down /opt/beginfinite/gwava/assets/bin/gwavaupd     done
 Shutting down /opt/beginfinite/gwava/assets/bin/asengine     done
 Shutting down /opt/beginfinite/gwava/assets/bin/gwavapoa     done
 Shutting down /opt/beginfinite/gwava/assets/bin/gwvrelay     done
 Shutting down /opt/beginfinite/gwava/assets/bin/gwava        done
 Shutting down /opt/beginfinite/gwava/assets/bin/gwavaqms     done
 Shutting down /opt/beginfinite/gwava/assets/bin/gwavaman     done
 Gwava4Demo:~ # █
```

Now that GWAVA is down you can move it to the new desired location. For our example we'll move GWAVA to /test/ instead of /opt/Beginfinite/.

We'll use the terminal to move GWAVA 4 by typing 'mv /opt/beginfinite/gwava /test/'.

```
 ▣                            Terminal                    _ □ X

  File   Edit   View   Terminal   Tabs   Help

 Gwava4Demo:/ # mv /opt/beginfinite/gwava/ /test/               ▲
```

To verify that the move worked properly browse to the /test directory (cd /test) and then view the contents by using ls.
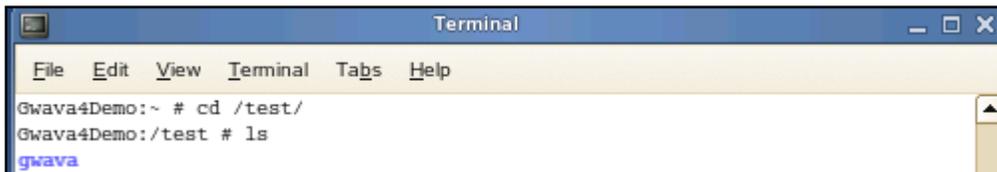
```
 ▣                            Terminal                    _ □ X

  File   Edit   View   Terminal   Tabs   Help

 Gwava4Demo:~ # cd /test/                                        ▲
 Gwava4Demo:/test # ls
 gwava
```

Now that GWAVA is moved we can create a symbolic link so that the gwavaman script works properly.

To do that type 'ln -sf /test/gwava /opt/beginfinite/'.
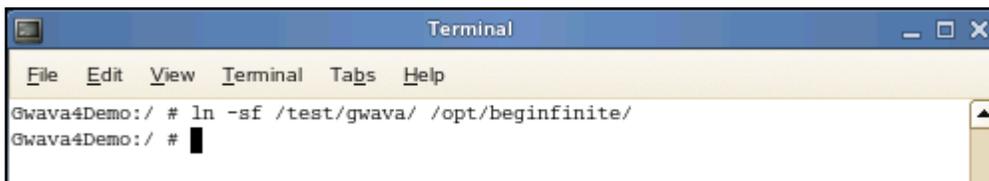
```
 ▣                            Terminal                    _ □ X

  File   Edit   View   Terminal   Tabs   Help

 Gwava4Demo:/ # ln -sf /test/gwava/ /opt/beginfinite/           ▲
 Gwava4Demo:/ # █
```

This same process could be used to move GWAVA to a cluster resource. Each node would need to have the gwavaman start/stop script though.

The destination directory must already be created before moving GWAVA.

To verify that the link was made correctly, browse to the /opt/beginfinite directory (cd /opt/beginfinite) and then view the contents by typing 'ls'. The word gwava is light blue, because it is a symbolic link or a pointer to the actual file location.
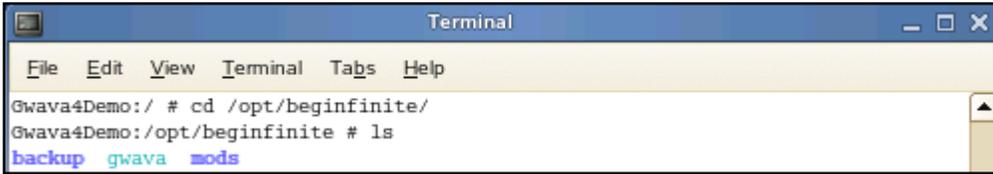
```
Gwava4Demo:/ # cd /opt/beginfinite/
Gwava4Demo:/opt/beginfinite # ls
backup  gwava  mods
```

If you go into the 'gwava' (cd gwava) directory you'll see the normal file contents, but it is actually reading from the /test/gwava location.

```
Gwava4Demo:/opt/beginfinite # ls
backup  gwava  mods
Gwava4Demo:/opt/beginfinite # cd gwava
Gwava4Demo:/opt/beginfinite/gwava # ls
assets  config  http  restart.sh  services  temp
```

With that done you can now type 'rcgwavaman start' to start GWAVA in its new location.
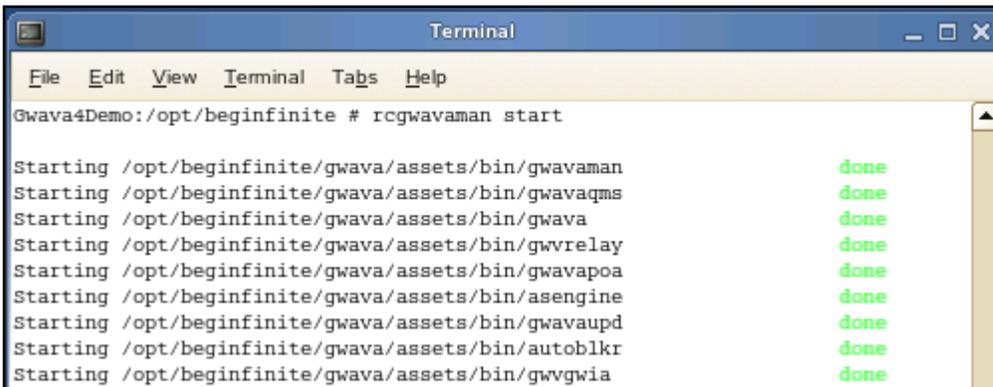
```
Gwava4Demo:/opt/beginfinite # rcgwavaman start

Starting /opt/beginfinite/gwava/assets/bin/gwavaman       done
Starting /opt/beginfinite/gwava/assets/bin/gwavaqms       done
Starting /opt/beginfinite/gwava/assets/bin/gwava          done
Starting /opt/beginfinite/gwava/assets/bin/gwvrelay       done
Starting /opt/beginfinite/gwava/assets/bin/gwavapoa       done
Starting /opt/beginfinite/gwava/assets/bin/asengine       done
Starting /opt/beginfinite/gwava/assets/bin/gwavaupd       done
Starting /opt/beginfinite/gwava/assets/bin/autoblkr       done
Starting /opt/beginfinite/gwava/assets/bin/gwvgwia        done
```

GWAVA is now in its new location and operating normally.

APPENDIX E: NOTES FOR BUSY LINUX SYSTEMS

By default, GWAVA uses 16 threads to scan messages. If for any reason you decide to change this value there is a Linux limitation you should know about.

By default Linux sets a limit on the number of files any process can handle at any given time. It is possible for GWAVA to run into this limit, on busy systems, if some changes are not made to the Linux system.

If mail halts and all of GWAVA is still running you may have ran into this issue.

To verify that this actually is the problem you are looking at:

Find the pid of asengine (`ps ax | grep asengine`).

Write down the pid.

Then type `lsof -p <asengine_pid>.`

The fourth column over is for FD (file descriptors) and if it shows any of:

- 1020r
- 1021r
- 1022r
- 1023r

Then we have run into the limit. So use these steps to correct it:

Adjustments:

Set kernel parameter fs.file-max to 65535:

Edit the file **/etc/sysctl.conf** and add:

```
fs.file-max = 65535
```

Set the hard limit for max number of open files to 65535:

Edit the file **/etc/security/limits.conf** and add:

```
*        soft    nofile  65535
*        hard    nofile  65535
```

Edit the file **/etc/pam.d/login** and add:

```
session    required    /lib/security/pam_limits.so
session    required    /lib/security/pam_unix.so
```

Set the ulimit for all shells

Edit the file: **/etc/profile.local** and add:

```
ulimit -n 65535
```

Load the new parameters:

Type the following at a terminal prompt.

```
'sysctl -p /etc/sysctl.conf'
```

Restart GWAVA by typing the following at a terminal prompt.

`'rcgwavaman restart'`

If you are still experiencing this pausing after making the changes, restart the server.