MICRO FOCUS

GroupWise 18
Server Migration Guide

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Contents

About This Guide

This Novell *GroupWise Server Migration Utility Installation and Migration Guide* explains how to use the GroupWise Server Migration Utility to migrate a GroupWise 7 or GroupWise 8 system from NetWare or Linux or Windows.

IMPORTANT: GroupWise 18 does not support NetWare, so earlier GroupWise components must be moved from NetWare to Linux or Windows.

The guide is divided into the following sections:

Audience

This guide is intended for network administrators who want to move their GroupWise systems from NetWare or Linux or Windows.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comment feature at the bottom of each page of the online documentation.

Additional Documentation

For additional GroupWise documentation, see the GroupWise 18 Documentation website (http://www.novell.com/documentation/groupwise18/).

Manual Server Migration

This section describes the manual steps for moving existing GroupWise 8 or GroupWise 2012 users, post offices, and domains from NetWare or Windows to Linux. It can also be used for moving existing GroupWise 2012 users, post offices, and domains from Windows to Linux. GroupWise 2012 is not available on NetWare.

This section is designed to help those who might have a domain or post office where the Server Migration Utility is not fully successful in migrating the GroupWise data.

IMPORTANT: If your GroupWise system is currently on NetWare and you are upgrading to GroupWise 2018, you must migrate to Linux or Windows first, then upgrade to GroupWise 2018.

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1 Transitioning GroupWise Administration to Linux

You migrate your GroupWise system from NetWare or Windows to Linux one post office and domain at a time. During the migration process, your system has domains and post offices on various platforms. You might use ConsoleOne on both Windows and Linux to administer domains and post offices located on any platform.

This section helps you set up the cross-platform connections that enable ConsoleOne to successfully access GroupWise databases on any platform.

Using Windows ConsoleOne to Access Domains and Post Offices on Linux

In order for you to be able to use ConsoleOne on Windows to administer GroupWise domains, post offices, and agents that are located on Linux, the Linux servers where the domains, post offices, and agents are located must be accessible from Windows.

Making a Linux Server Visible from Windows

To make a Linux server visible from Windows, you need to configure it so that you can map a drive to it as if it were a Windows server.

Operating System	Connection Method

Open Enterprise Server (OES) Linux	Use the NetWare Core Protocol (NCP) Server to create an NCP volume on the Linux server that will be visible from Windows just as a NetWare volume would be.
	
	On the Linux server, become `root`, then enter the following commands:
	
	`ncpcon create volume volume_name folder`
	`ncpcon set cross_protocol_locks=1`
	
	From a Windows workstation or server where the Novell client is installed, you can now use the Novell Map Network Drive feature to map a drive to the volume on your Linux server, and Windows-type file locking is respected by Linux.
	
	For more information, see "Using NetWare Core Protocol to Connect from Windows to an OES Linux Server" in the *GroupWise 2012 Administration Guide*.

Operating System	Connection Method
SUSE Linux Enterprise Server (SLES)	Use Samba to create a Windows share on the Linux server that will be visible from Windows just as a folder on another Windows server would be. For instructions on setting up a Samba share, see "Using Samba to Connect from Windows to a SLES Server" in the *GroupWise 2012 Administration Guide*.. From a Windows workstation or server, you can now use the Windows Map Network Drive feature to map a drive to the folder on your Linux server.

Accessing a Domain or Post Office on Linux from Windows ConsoleOne

After you have made the Linux server visible from Windows:

1. Map a drive to the domain folder on the Linux server.
2. In Windows ConsoleOne, click **Tools > GroupWise System Operations > Select Domain**.
3. Browse to and select the domain folder, then click **OK**.

You can now use Windows ConsoleOne to administer all GroupWise objects that belong to the domain that is located on Linux.

Using Linux ConsoleOne to Access Domains and Post Offices on NetWare or Windows

In order for you to be able to use ConsoleOne on Linux to administer GroupWise domains, post offices, and agents that are located on NetWare or Windows, the NetWare or Windows servers where the domains, post offices, and agents are located must be accessible from Linux.

- "Making a NetWare or Windows Server Visible from Linux" on page 12
- "Accessing a Domain or Post Office on NetWare or Windows from Linux ConsoleOne" on page 13

Making a NetWare or Windows Server Visible from Linux

To make a NetWare or Windows server visible from Linux, you mount the folder you need to access as a Linux file system.

Operating System	Connection Method
NetWare:	`mount -t ncpfs` *`NetWare_server_full_DNS_name_or_IP_address`* *`/Linux_mount_location/mount_point_folder`* `-o user=`*`fully_qualified_user_name`* `-o ipserver=`*`NetWare_server_full_DNS_name`* A NetWare server full DNS name should have the format of `mail2.provo.corporate.com`. A fully qualified user name should have the format of `Admin.Users.Corporate`. A typical Linux mount location would be `/mnt`. You can also use Novell Remote Manager (NRM) to create the NCP mount.

Operating System	Connection Method
Windows:	`mount -t smbfs //Windows_server_name_or_IP_address/sharename /Linux_mount_location/mount_point_folder -o username=Windows_user_name` To use this command, the WINS protocol must be functioning properly on your network. The specified Windows user must have sufficient rights to access the post office folder.

Accessing a Domain or Post Office on NetWare or Windows from Linux ConsoleOne

After you have made the NetWare or Windows server visible from Linux:

1. Mount the domain folder to the Linux server.
2. In Linux ConsoleOne, authenticate to the eDirectory tree where the Domain object is located.
3. Click **Tools > GroupWise System Operations > Select Domain**.
4. Browse to and select the domain folder, then click **OK**.

You can now use Linux ConsoleOne to administer all GroupWise objects that belong to the domain that is located on NetWare or Windows.

Migrating eDirectory to Linux

ConsoleOne modifies information stored in eDirectory. Novell eDirectory is available on NetWare, Linux, and Windows. eDirectory can be in use on any of these platforms when you are migrating your GroupWise system to Linux.

As part of the migration process, you might want to migrate eDirectory to Linux. Step-by-step instructions for migrating eDirectory to Linux are beyond the scope of the *GroupWise Installation Guide*, but the following documentation can provide assistance:

- If you are migrating to OES Linux, review *Consolidating Data to OES Linux* and *Migrating Data from NetWare Servers* in the *Novell Server Consolidation and Migration Toolkit Administration Guide* on the Open Enterprise Server 11 website. (http://www.novell.com/documentation/oes11/).
- For situations not covered in the above guide, the eDirectory migration process includes installing eDirectory on Linux, creating an eDirectory replica on one or more Linux servers, and ultimately making one of the Linux replicas the master replica so that you can phase out the replicas on other platforms. For guidance, see the documentation for your version of eDirectory:
  - eDirectory 8.8 (https://www.netiq.com/documentation/edir88/)
  - eDirectory 8.7.3 (http://www.novell.com/documentation/edir873/)

2 Manually Migrating a Post Office and Its POA to Linux

Manually migrating a post office and its POA to Linux includes copying folder structures to Linux, installing the POA software on Linux, and updating configuration information in ConsoleOne.

Preparing for the Post Office Migration

1. On the Linux server, become `root` in a terminal window.
2. Check the Linux server for adequate disk space for your backup solution of choice.

   If you want to use the GroupWise Database Copy utility (DBCopy), you create a copy of the post office and then back up the copy, which requires double the post office size in disk space. For instructions, see the following section in the *GroupWise Administration Guide* for your version of GroupWise:

   - GroupWise 2012: "GroupWise Database Copy Utility"
   - GroupWise 8: "GroupWise Database Copy Utility"

   If you want to use the GroupWise Target Service Agent (TSAFSGW), this extra disk space is not required. However, having a recent complete online backup available can be helpful in a variety of circumstances. For instructions, see the following section in the *GroupWise Administration Guide* for your version of GroupWise:

   - GroupWise 2012: The GroupWise Target Service Agent is no longer available.
   - GroupWise 8: "GroupWise Target Service Agent"
3. Make the Linux server visible from Windows.

   This is necessary in order to perform administration tasks from Windows ConsoleOne during the post office migration process. For Linux server configurations to accomplish this, see "Making a Linux Server Visible from Windows" on page 11.
4. Make the NetWare or Windows server visible from Linux.

   This is necessary in order to use the Linux version of the GroupWise Database Copy utility (DBCopy) to copy the post office folder and its contents to the Linux server. The Linux version of DBCopy includes switches specialized for the post office migration process. For `mount` commands, see "Making a NetWare or Windows Server Visible from Linux" on page 12.
5. In a location on the Linux server that is accessible from Windows, create a new folder for your GroupWise system into which you plan to copy the post office folder. For example:

   ```
   mkdir gwsystem
   ```

6 Install the GroupWise Database Copy utility (DBCopy) as described in the *GroupWise Administration Guide* for your version of GroupWise:

- GroupWise 2012: "GroupWise Database Copy Utility"
- GroupWise 8: "GroupWise Database Copy Utility"

7 Install GroupWise Check (GWCheck) as described in the *GroupWise Administration Guide* for your version of GroupWise:

- GroupWise 2012: "GroupWise Check"
- GroupWise 8: "GroupWise Check"

8 Continue with Performing the Post Office Migration.

Performing the Post Office Migration

In order to reduce the amount of time during which users cannot access their GroupWise mailboxes during the post office migration process, the post office data is copied twice. During the first copy, the POA is allowed to continue running and users can continue working. Because users are still accessing their mailboxes, some files are modified after being copied, thus necessitating the second copy of the files. For the second copy, the POA is stopped and users cannot access their Online mailboxes. However, only the modified files are copied, so the second copy procedure finishes much more quickly.

1 In the `/opt/novell/groupwise/agents/bin` folder, use DBCopy to copy the post office folder from the NetWare or Windows server to the new folder on the Linux server.

```
./dbcopy -m -f -p /post_office_folder /destination_folder
```

The -m switch indicates that DBCopy is being used for migration to Linux. This ensures that all folder names and file names are in lower case.

The -f switch indicates that this is the first pass of the migration process, during which the post office queue folders (`wpcsin` and `wpcsout`) are not copied.

NOTE: If you are migrating a large and active post office, you can run DBCopy with the -f switch multiple times as you work towards the final copy.

The -p switch indicates that you are migrating a post office.

The *`post_office_folder`* variable includes the Linux mount location (for example, **/mnt**), the mount point folder, and the full path to the post office folder on the NetWare or Windows server.

The *`destination_folder`* variable is the folder you created on the Linux server in Step 5 in the previous section.

DBCopy creates a log file named *`mmdd`*`gwbk.`*`nnn`*. The first four characters represent the date. A three-digit extension allows for multiple log files created on the same day. The log file is created at the root of the destination post office folder. Include the -v switch in the `dbcopy` command to enable verbose logging for the post office migration.

DBCopy is typically used for backing up your GroupWise system, but when you use the -m switch to migrate a post office to Linux, it changes folder names to lowercase as required on Linux and copies the message queue folders as well as the GroupWise databases in the post office.

This initial copy operation might require a substantial amount of time, but users are still able to access their mailboxes. Use the fastest network connection available for this copy operation.

2 (Conditional) If your Linux environment includes the X Window System, run the GroupWise Installation program to install the Linux POA for the post office, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Installing the Linux GroupWise Agents"
- GroupWise 8: "Installing the GroupWise Agents on Linux"

3 (Conditional) If the X Window System is not available, run the text-based GroupWise Installation program, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Installing GroupWise Components Using the Text-Based Installation Program"
- GroupWise 8: "Installing the GroupWise Agents Using the Text-Based Installation Program"

If you need to perform the installation from a remote location, you can use `ssh` to access the remote Linux server. Copy the GroupWise software image or software distribution directory to the server where you have migrated the domain, then run the text-based Installation program to install the POA on the Linux server.

4 Change to the `/opt/novell/groupwise/agents/bin` folder.

5 (Conditional) If the X Window System is available, enter the following command to start the Linux POA to verify that it runs for the post office in the new location:

```
./gwpoa --show --home /post_office_folder --noconfig
```

The --show switch starts the POA with a user interface. The --home switch provides the location of the post office. The --noconfig switch prevents the POA from reading configuration information from eDirectory; the current eDirectory information is obsolete because the post office has been migrated. For purposes of this initial test, the POA starts with default configuration settings, including using any available IP address.

You should see the POA server console described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Installing GroupWise Components Using the Text-Based Installation Program"
- GroupWise 8: "Starting the Linux Agents with a User Interface"

If the POA server console does not appear, review the preceding steps to verify that all steps have been followed. For additional assistance, see the following section in *GroupWise Troubleshooting 2: Solutions to Common Problems* for your version of GroupWise:

- GroupWise 2012: "Post Office Agent Problems"
- GroupWise 8: "Post Office Agent Problems"

6 (Conditional) If the X Window system is not available:

6a If LDAP authentication is not in use, enter the following command to start the Linux POA to verify that it runs for the post office in the new location:

```
./gwpoa --home /post_office_folder --noconfig
        --ip POA_server_IP_address --httpport 7181
```

The --home switch provides the location of the post office. The --noconfig switch prevents the POA from reading configuration information from eDirectory; the current eDirectory information is obsolete because the post office has been migrated. The --ip switch provides the IP address of the server where the POA is running. The -httpport switch enables the POA console and provides the port number.

or

If LDAP authentication is enabled for the post office, enter the following command:

```
./gwpoa --home /post_office_folder --noconfig
        --ip POA_server_IP_address --httpport 7181
        --ldapipaddr LDAP_server_IP_address
        --ldapport LDAP_port (if not the default of 389)
```

The --ldapipaddr switch provides the location of the LDAP server. The --ldapport switch is required only if the LDAP server communicates on a port other than the default of 389.

IMPORTANT: To simplify this test, do not use an SSL connection to the LDAP server.

6b Open a web browser and display the following URL:

`http://POA_server_IP_address:7181`

You should see the POA console described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Monitoring the Linux GroupWise Agents from Your Web Browser"
- GroupWise 8: "Monitoring the Linux GroupWise Agents from Your Web Browser"

If the POA console does not appear, review the preceding steps to verify that all steps have been followed. For additional assistance, see the following section in *GroupWise Troubleshooting 2: Solutions to Common Problems* for your version of GroupWise:

- GroupWise 2012: "Post Office Agent Problems"
- GroupWise 8: "Post Office Agent Problems"

7 (Conditional) If you have access to a GroupWise mailbox on the post office you have migrated, start the GroupWise client to further verify the functioning of the POA.

8 After verifying that the Linux POA runs successfully for the post office in the new location on Linux, stop the Linux POA, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Stopping the Linux GroupWise Agents"
- GroupWise 8: "Stopping the Linux GroupWise Agents"

9 (Conditional) If you are using SSL, create a new certificate file (`file_name.crt`) and a new key file (`file_name.key`) for the Linux server and place them in the `/opt/novell/groupwise/agents/bin` folder, which is the default location where the POA looks for certificate files.

For instructions on creating certificate and key files, see the following section of the *GroupWise Administration Guide* for your version of GroupWise:

- GroupWise 2012: "Server Certificates and SSL Encryption"
- GroupWise 8: "Server Certificates and SSL Encryption"

10 (Conditional) If you are using LDAP authentication, copy the public root certificate file (`file_name.der`) from the LDAP server to the `/opt/novell/groupwise/agents/bin` folder.

11 (Conditional) If you are migrating a post office that has a library with a document storage area located outside the post office folder structure, decide how to handle the document storage area:

- **Mount the document storage area:** You can leave the document storage area on the NetWare or Windows server. To provide access, permanently mount the storage area folder to the Linux server where the post office is located, using the `mount` command that is provided in "Making a NetWare or Windows Server Visible from Linux" on page 12.
- **Migrate the document storage area:** If you want to eliminate the NetWare or Windows server, you can migrate the document storage area to a convenient location on the Linux server. This also eliminates the need for the permanently mounted file system.

12 (Conditional) If you decide to migrate the document storage area, use the following DBCopy command to migrate the document storage area to the Linux server:

```
./dbcopy -m -b /storage_area_folder /destination_folder
```

The -m switch indicates that DBCopy is being used for migration to Linux. This ensures that all folder names and file names are in lower case.

The -b switch indicates that DBCopy is being used to migrate a documentation storage area containing document BLOB (binary large object) files.

The *storage_area_folder* variable includes the Linux mount location (for example, /mnt), the mount point folder, and the full path to the document storage area.

The *destination_folder* variable is the location on the Linux server where you want to migrate the document storage area.

DBCopy creates a log file named *mmdd*gwbk.*nnn*. The first four characters represent the date. A three-digit extension allows for multiple log files created on the same day. The log file is created at the root of the destination document storage area folder. Include the -v switch in the dbcopy command to enable verbose logging for the storage area migration.

13 Notify users that they must exit the GroupWise client unless they are running in Caching mode.

Users in Caching mode do not need access to the post office in order to continue using GroupWise. However, they cannot send and receive new messages while the POA is not running.

14 Continue with Reconfiguring the Post Office in ConsoleOne.

Reconfiguring the Post Office in ConsoleOne

If the connection between Linux and Windows is set up correctly, as described in Step 3 in “Preparing for the Post Office Migration” on page 15, you can use Windows ConsoleOne to perform the reconfiguration of the post office. You can also use Linux ConsoleOne if desired.

1 In ConsoleOne, disable logins to the post office:

- **1a** Browse to and right-click the Post Office object, then click **Properties**.
- **1b** Click **GroupWise > Client Access Settings**.
- **1c** Select **Disable Logins**, then click **Apply** to save the setting.

2 Update the configuration information for the POA:

- **2a** Browse to and right-click the POA object for the post office, then click **Properties**.
- **2b** Click **GroupWise > Identification**.
- **2c** In the **Platform** field, ensure that **Linux** is selected.
- **2d** Display the Network Address property page of the POA object.
- **2e** In the **TCP/IP Address** field, specify the IP address of the Linux server.
- **2f** Display the Log Settings property page of the POA object.
- **2g** Ensure that the **Log File Path** field is empty so that the POA on Linux creates its log files in the default location (/var/log/novell/groupwise/*post_office_name*.poa) on the Linux server.
- **2h** Click **OK** to save the new configuration information for the POA.

3 (Conditional) If you are using SSL, update the location for the certificate and key files:

3a Display the **SSL Settings** property page of the POA object.

3b Browse to and select the certificate file and the key file that you created for the Linux server in Step 9 in "Performing the Post Office Migration" on page 16.

3c Click **OK** to save the SSL information for the POA.

4 (Conditional) If you migrated a document storage area to the Linux server in Step 11 in "Performing the Post Office Migration" on page 16, update the location of the document storage area:

4a Browse to and right-click the Library object, then click **Properties**.

4b Click **GroupWise > Storage Areas**.

4c Select the storage area that you have migrated, then click **Edit**.

4d In the **Linux Path** field, provide the full path to the storage area from the point of view of the POA running on the Linux server.

4e Click **OK** twice to save the storage area information.

5 Update the location information for the post office:

5a Display the **Identification** property page of the Post Office object.

5b In the **UNC Path** field, change the path to the location on the Linux server where you copied the post office. For example:

```
\\linuxsvr3\gwsystem\research
```

For a Linux server, ConsoleOne interprets the UNC path as a Linux path. Do not put a Linux path with front slashes in the UNC Path field, because backslashes are expected.

5c Click **OK** to save the new path information for the post office.

6 Check the status of the link between the POA still running on NetWare or Windows and the MTA it communicates with:

6a At the MTA server console, use **Options > Configuration Status**.

or

At the MTA console, look on the Links page.

After the ConsoleOne updates that you have just made are processed by the MTA, including the post office location change, the link changes to **Closed**. The status must show as **Closed** before you finalize the migration.

7 Continue with Finalizing the Post Office Migration.

Finalizing the Post Office Migration

1 On the NetWare or Windows server, stop the POA for the post office. If multiple POAs are currently running for the post office, stop all POAs.

GroupWise users can no longer access their Online mailboxes.

2 On the Linux server, run DBCopy again to copy the post office:

```
./dbcopy -m -s -p /post_office_folder /destination_folder
```

The -s switch indicates that this is the second pass of the migration process, during which the post office queue folders (`wpcsin` and `wpcsout`) are copied. The second DBCopy process should be substantially shorter than the first one.

3 (Conditional) If you migrated a document storage area to the Linux server in Step 11 in "Performing the Post Office Migration" on page 16, run DBCopy again to copy the document storage area and include files modified since the first copy:

```
./dbcopy -m -i mm-dd-yyyy -b /storage_area_folder /destination_folder
```

This copies only the files that have been modified since you first copied the document storage area, like an incremental backup

4 (Conditional) If your GroupWise system includes a GWIA that is used for POP and IMAP email clients, check the link between the GWIA and the post office:

4a In ConsoleOne, right-click the GWIA object, then click **Properties**.

4b Click **Post Office Links**.

4c Ensure that the link shows the correct IP address where the Linux POA for the migrated post office is now running.

5 (Conditional) If your GroupWise system includes the WebAccess Agent, check the link between the WebAccess Agent and the migrated post office:

5a In ConsoleOne, right-click the WebAccess Agent object, then click **Properties**.

5b Click **Post Office Links**.

5c Ensure that the link shows the correct IP address where the Linux POA for the migrated post office is now running.

6 Start the Linux POA with or without a user interface, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- "Installing GroupWise Components Using the Text-Based Installation Program"GroupWise 2012:
- GroupWise 8: "Starting the Linux Agents with a User Interface" or "Starting the Linux GroupWise Agents as Daemons"

7 Enable user logins for the post office, as described in the following section of the *GroupWise Administration Guide* for your version of GroupWise.

- GroupWise 2012: "Disabling and Enabling GroupWise Accounts"
- GroupWise 8: "Disabling and Enabling GroupWise Accounts"

8 (Conditional) If necessary, provide GroupWise users with the new IP address where the Linux POA is now running, so that they can start GroupWise again and access their Online mailboxes on the Linux server.

If you are running a GroupWise name server, users are automatically redirected to the new IP address when they start GroupWise, as described in the following section of the *GroupWise Administration Guide* for your version of GroupWise.

- GroupWise 2012: "Simplifying Client/Server Access with a GroupWise Name Server"
- GroupWise 8: "Simplifying Client/Server Access with a GroupWise Name Server"

9 When the Linux POA is running smoothly for the new post office location, delete the old post office folder structure from the NetWare or Windows server.

10 (Conditional) If you migrated a document storage area to the Linux server in Step 11 in "Performing the Post Office Migration" on page 16, delete the old document storage area on the NetWare or Windows server.

11 Set up a backup procedure for the post office in its new location on Linux.

If you want to use the GroupWise Database Copy utility (DBCopy), you create a copy of the post office and then back up the copy, which requires double the post office size in disk space. For instructions, see the following section in the *GroupWise Administration Guide* for your version of GroupWise:

- GroupWise 2012: "GroupWise Database Copy Utility"
- GroupWise 8: "GroupWise Database Copy Utility"

If you want to use the GroupWise Target Service Agent (TSAFSGW), this extra disk space is not required. However, having a recent complete online backup available can be helpful in a variety of circumstances. For instructions, see the following section in the *GroupWise Administration Guide* for your version of GroupWise:

- GroupWise 2012: The GroupWise Target Service Agent is no longer available.
- GroupWise 8: "GroupWise Target Service Agent"

12 (Optional) Uninstall the old POA software to reclaim disk space on the NetWare or Windows server.

See Chapter 7, "What's Next," on page 43.

3 Manually Migrating a Domain and Its MTA to Linux

Manually migrating a domain and its MTA to Linux includes copying folder structures to Linux, installing the MTA software on Linux, and updating configuration information in ConsoleOne. This section describes the manual steps involved in the process.

Preparing for the Domain Migration

1. On the Linux server, become `root` in a terminal window.
2. Check the Linux server for adequate disk space for your backup solution of choice.

   If you want to use the GroupWise Database Copy utility (DBCopy), you create a copy of the post office and then back up the copy, which requires double the post office size in disk space. For instructions, see the following section in the *GroupWise Administration Guide* for your version of GroupWise:

   - GroupWise 2012: "GroupWise Database Copy Utility"
   - GroupWise 8: "GroupWise Database Copy Utility"

   If you want to use the GroupWise Target Service Agent (TSAFSGW), this extra disk space is not required. However, having a recent complete online backup available can be helpful in a variety of circumstances. For instructions, see the following section in the *GroupWise Administration Guide* for your version of GroupWise:

   - GroupWise 2012: The GroupWise Target Service Agent is no longer available.
   - GroupWise 8: "GroupWise Target Service Agent"
3. Make the Linux server visible from Windows.

   This is necessary in order to perform administration tasks from Windows ConsoleOne during the domain migration process. For Linux server configurations to accomplish this, see "Making a Linux Server Visible from Windows" on page 11.
4. Make the NetWare or Windows server visible from Linux.

   This is necessary in order to use the Linux version of the GroupWise Database Copy utility (DBCopy) to copy the domain folder and its contents to the Linux server. The Linux version of DBCopy includes switches specialized for the domain migration process. For `mount` commands, see "Making a NetWare or Windows Server Visible from Linux" on page 12.
5. In a location on the Linux server that is accessible from Windows, create a new folder for your GroupWise system into which you plan to copy the domain folder. For example:

   ```
   mkdir gwsystem
   ```

6 Install the GroupWise Database Copy utility (DBCopy) as described in the following section in the *GroupWise Administration Guide* for your version of GroupWise:

- GroupWise 2012: "Using DBCopy on Linux"
- GroupWise 8: "Using DBCopy on Linux"

7 Continue with Performing the Domain Migration.

Performing the Domain Migration

1 On the NetWare or Windows server, stop the MTA for the domain.

2 (Conditional) If the domain has gateways, stop the gateways.

3 In the `/opt/novell/groupwise/agents/bin` folder, use DBCopy to copy the domain folder from the NetWare or Windows server to the new folder on the Linux server.

```
./dbcopy -m -d /domain_folder /destination_folder
```

The -m switch indicates that DBCopy is being used for migration to Linux. This ensures that all folder names and file names are in lower case.

The -d switch indicates that you are migrating a domain.

The *`domain_folder`* variable includes the Linux mount location (for example, `/mnt`), the mount point folder, and the full path to the domain folder on the NetWare or Windows server.

The *`destination_folder`* variable is the folder you created on the Linux server in Step 5 in "Preparing for the Domain Migration" on page 23.

DBCopy creates a log file named *`mmdd`*`gwbk.`*`nnn`*. The first four characters represent the date. A three-digit extension allows for multiple log files created on the same day. The log file is created at the root of the destination domain folder. Include the -v switch in the `dbcopy` command to enable verbose logging for the domain migration.

DBCopy is typically used for backing up your GroupWise system, but when you use the -m switch to migrate a domain, it changes folder names to lowercase as required on Linux and copies the message queue folders as well as the GroupWise databases in the domain.

4 (Conditional) If you are using the /work startup switch to place the MTA working folder (`mslocal`) outside the domain folder structure, relocate the folder and rename files:

4a Copy the `mslocal` folder to the Linux server so that no messages en route between users are lost.

4b In the `mslocal` folder structure, rename files and folders that contain uppercase letters to all lowercase.

5 (Conditional) If your Linux environment includes the X Window System, run the GroupWise Installation program to install the Linux MTA for the domain, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Installing the Linux GroupWise Agents"
- GroupWise 8: "Installing the GroupWise Agents on Linux"

6 (Conditional) If the X Window System is not available, run the text-based GroupWise Installation program, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Installing GroupWise Components Using the Text-Based Installation Program"
- GroupWise 8: "Installing the GroupWise Agents Using the Text-Based Installation Program"

If you need to perform the installation from a remote location, you can use `ssh` to access the remote Linux server. Copy the GroupWise software image or software distribution directory to the server where you have migrated the domain, then run the text-based Installation program to install the MTA on the Linux server.

7 Change to the `/opt/novell/groupwise/agents/bin` folder.

8 (Conditional) If the X Window System is available, enter the following command to start the Linux MTA to verify that it runs for the domain in the new location:

```
./gwmta --show --home /domain_folder
```

The --show switch starts the MTA with a user interface. The --home switch provides the location of the domain.

You should see the MTA server console described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Installing GroupWise Components Using the Text-Based Installation Program"
- GroupWise 8: "Starting the Linux Agents with a User Interface"

If the MTA server console does not appear, review the preceding steps to verify that all steps have been followed. For additional assistance, see the following section of *GroupWise Troubleshooting 2: Solutions to Common Problems* for your version of GroupWise:

- GroupWise 2012: "Message Transfer Agent Problems"
- GroupWise 8: "Message Transfer Agent Problems"

9 (Conditional) If the X Window system is not available:

9a Enter the following command to start the Linux MTA to verify that it runs for the domain in the new location:

```
./gwmta --home /domain_folder --ip mta_server_ip_address
                                                --httpport 7180
```

The --home switch provides the location of the domain. The --ip switch provides the IP address of the server where the MTA is running. The -httpport switch enables the MTA console and provides the port number.

To simplify this test, do not use an SSL connection.

9b In an appropriate environment, open a web browser and display the following URL:

```
http://mta_server_ip_address:7180
```

You should see the MTA console described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Monitoring the Linux GroupWise Agents from Your Web Browser"
- GroupWise 8: "Monitoring the Linux GroupWise Agents from Your Web Browser"

If the MTA console does not appear, review the preceding steps to verify that all steps have been followed. For additional assistance, see the following section of *GroupWise Troubleshooting 2: Solutions to Common Problems* for your version of GroupWise:

- GroupWise 2012: "Message Transfer Agent Problems"
- GroupWise 8: "Message Transfer Agent Problems"

10 After verifying that the MTA starts successfully for the domain in the new location on Linux, stop the MTA, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Stopping the Linux GroupWise Agents"
- GroupWise 8: "Stopping the Linux GroupWise Agents"

11 (Conditional) If you plan to use SSL on Linux, create new certificate and key files for the Linux server and place them in the `/opt/novell/groupwise/agents/bin` folder, the default location where the MTA looks for certificate and key files.

For instructions on creating certificate and key files, see the following section of the *GroupWise Administration Guide* for your version of GroupWise:

- GroupWise 2012: "Server Certificates and SSL Encryption"
- GroupWise 8: "Server Certificates and SSL Encryption"

12 Continue with Reconfiguring the Domain in ConsoleOne.

Reconfiguring the Domain in ConsoleOne

If the connection between Linux and Windows is set up correctly, as described in Step 3 in "Preparing for the Domain Migration" on page 23, you can use Windows ConsoleOne to perform the reconfiguration of the post office. You can also use Linux ConsoleOne if desired.

1 In ConsoleOne, update the location information for the domain:

1a Browse to and right-click the Domain object, then click **Properties**.

1b Click **GroupWise > Identification**.

1c In the **UNC Path** field, change the path to the location on the Linux server where you migrated the domain. For example:

```
\\linuxsvr3\gwsystem\provo3
```

For a Linux server, ConsoleOne interprets the UNC path as a Linux path. Do not put a Linux path in the **UNC Path** field.

1d Click **OK** to save the new location information for the domain.

2 Update the configuration information for the MTA:

2a Browse to and right-click the MTA object for the domain, then click **Properties**.

2b Click **GroupWise > Identification**.

2c In the **Platform** field, ensure that **Linux** is selected.

2d Display the Network Address property page of the MTA object for the domain.

2e In the **Network Address** field, specify the IP address of the Linux server.

2f Click **OK** to save the new configuration information for the MTA.

3 (Conditional) If the domain that you migrated to Linux has gateways associated with it, reselect each gateway folder:

3a Browse to and select the Domain object.

3b Right-click a Gateway object, then click **Properties**.

3c Click **GroupWise > Identification**.

3d In the **Subdirectory** field, reselect the gateway folder.

If you do not have any gateway subfolders to choose from, you have not successfully completed Step 1.

3e Click **OK** to save the gateway folder information.

3f Repeat Step 3a through Step 3e for each gateway that belongs to the domain.

4 Continue with Finalizing the Domain Migration.

Finalizing the Domain Migration

1 Start the Linux MTA with or without a user interface, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Installing GroupWise Components Using the Text-Based Installation Program"
- GroupWise 8: "Starting the Linux Agents with a User Interface" or "Starting the Linux GroupWise Agents as Daemons"

2 At the MTA server console or console, check to ensure that all links between the new Linux MTA and other domains and post offices are open.

If you have closed links, see the following section of *GroupWise Troubleshooting 2: Solutions to Common Problems* for your version of GroupWise:

- GroupWise 2012: "MTA Status Box Shows a Closed Location"
- GroupWise 8: "MTA Status Box Shows a Closed Location"

3 (Conditional) If the domain has gateways, start each gateway.

4 Set up a backup procedure for the domain in its new location on Linux, as described in the following sections in the *GroupWise Administration Guide* for your version of GroupWise:

- GroupWise 2012: "GroupWise Database Copy Utility"
- GroupWise 8: "GroupWise Target Service Agent" and "GroupWise Database Copy Utility"

5 (Conditional) If the domain has a GWIA that is running on the same NetWare or Windows server where the domain folder was previously located, migrate the GWIA to the Linux server where the domain folder is now located. See Chapter 4, "Manually Migrating the Internet Agent to Linux," on page 29.

After the domain has been migrated to Linux, the NetWare or Windows GWIA can continue receiving and queuing Internet messages, but it cannot pass them into the GroupWise system until the GWIA has been migrated to Linux along with its domain and MTA.

6 (Conditional) If the domain has a WebAccess Agent that is running on the same NetWare or Windows server where the domain folder was previously located, consider migrating the WebAccess Agent to the Linux server where the domain folder is now located. See Chapter 5, "Manually Migrating WebAccess to Linux," on page 33.

Because it is common for the WebAccess Agent to run on a different server from where its domain is located, there is no urgency about migrating it to Linux.

7 When the Linux MTA is running smoothly for the new domain location, and other GroupWise agents belonging to the domain have been migrated to Linux as needed, delete the old domain folder structure (and if applicable, the `mslocal` folder structure) from the NetWare or Windows server.

8 (Optional) Uninstall the old MTA software to reclaim disk space on the NetWare or Windows server.

See Chapter 7, "What's Next," on page 43.

4 Manually Migrating the Internet Agent to Linux

Manually migrating the Internet Agent (GWIA) to Linux includes migrating its domain to Linux, then installing the GWIA software on Linux, updating GWIA configuration information in ConsoleOne, and copying queued Internet messages from the NetWare or Windows server to the Linux server.

1. Migrate the GWIA's domain to Linux. See Chapter 3, "Manually Migrating a Domain and Its MTA to Linux," on page 23.

   If you are using SSL, migrating the domain and its MTA includes creating a new certificate file (*file_name*.crt) and a new key file (*file_name*.key) for the Linux server and placing them in the /opt/novell/groupwise/agents/bin folder, as described in Step 11 in "Performing the Domain Migration" on page 24.

2. On the Linux server, become root in a terminal window.

3. Make the Linux server visible from Windows.

   This is necessary in order to perform administration tasks from Windows ConsoleOne during the GWIA configuration process. For Linux server configurations to accomplish this, see "Making a Linux Server Visible from Windows" on page 11.

4. Install and configure the Linux GWIA, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

   - GroupWise 2012: "Installing the GroupWise Internet Agent"
   - GroupWise 8: "Installing the GroupWise Internet Agent"

5. In ConsoleOne, update the GWIA property pages for the new location of the GWIA:

   5a On the Identification property page of the **GroupWise** tab, set **Platform** to **Linux**, then click **Apply**.

   5b On the Network Address property page of the **GroupWise** tab, specify the IP address or DNS hostname of the Linux server, then click **Apply**.

   5c On the Log Settings property page of the **GroupWise** tab, if you have specified a folder path in the **Log File Path** field, delete the NetWare or Windows path, then click **Apply**.

   On Linux, GWIA log files are stored in the /var/log/novell/groupwise/*domain.gwia*.

   5d On the SSL Settings property page of the **GroupWise tab**, if you have specified full paths in the **Certificate File** and **SSL Key File** fields, delete the NetWare or Windows path, then click **Apply**.

   On Linux, the GWIA looks in the /opt/novell/groupwise/agents/bin folder for certificate and key files by default.

   5e On the **Server Directories** tab, update the **Conversion Directory** and **SMTP Queues Directory** fields with corresponding Linux locations.

6. On the NetWare or Windows server, stop the GWIA.

   Internet messages cannot be received into your GroupWise system while the GWIA is stopped.

7. From Windows, copy the queued Internet messages in the GWIA SMTP queues folder on the NetWare or Windows server to the Linux server.

NOTE: Because of Step 3 above, the Linux server is already visible from Windows. If you prefer to perform the copy operation from Linux, you must first make the NetWare or Windows server visible from Linux. See "Making a NetWare or Windows Server Visible from Linux" on page 12.

The default GWIA SMTP queues folder is *domain*`/wpgate/`*gwia*. In this folder, four queue subfolders are used for SMTP processing: `send`, `receive`, `result`, and `defer`. When you migrated the domain to Linux, DBCopy copied these queue folders and their contents to the Linux server along with the rest of the domain folder structure, but additional Internet messages might have arrived since that time. Therefore, you need to copy these queue folders again now that the GWIA has been stopped.

If you used the **SMTP Queues Directory** field on the Server Directories property page of the GWIA object in ConsoleOne or the /dhome switch in the `gwia.cfg` file to place the queue folders outside the domain folder structure, then DBCopy did not copy the queue folders. Copy the queue folders from the NetWare or Windows server to their default location in the domain folder structure or to another location of your choice on the Linux server. If you do not copy them to their default location, update the **SMTP Queues Directory** setting with the full path to the SMTP queues folder.

8 (Conditional) If Sendmail, Postfix, or any other SMTP daemon is enabled on your Linux server, disable it before starting the GWIA.

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

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

As an alternative, you can configure the GWIA to bind exclusively to the server IP address, so that the GWIA IP address does not conflict with the default Postfix IP address of `127.0.0.1` (the loopback address).

For instructions, see the following section in the *GroupWise Administration Guide* for your version of GroupWise:

- GroupWise 2012: "Binding the GWIA to a Specific IP Address"
- GroupWise 8: "Binding the Internet Agent to a Specific IP Address"

9 (Conditional) If you want to use the GWIA for POP3 and IMAP4 mail, ensure no POP3 or IMAP4 daemons are running on your Linux server.

10 Ensure that the MTA for the domain is running.

11 Start the Linux GWIA with or without a user interface, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Linux: Starting the GWIA"
- GroupWise 8: "Linux: Starting the Internet Agent"

If the GWIA server console does not appear, or the GWIA console is not available in your web browser, review the preceding steps to verify that all steps have been followed. For additional assistance, see the following section of *GroupWise Troubleshooting 2: Solutions to Common Problems* for your version of GroupWise:

- GroupWise 2012: "Internet Agent Problems"
- GroupWise 8: "Internet Agent Problems"

12 When the Linux GWIA is running smoothly for the new domain location, and other GroupWise agents belonging to the domain have been migrated to Linux as needed, delete the old domain folder structure from the NetWare or Windows server.

13 (Conditional) If the SMTP queue folder was located outside the domain folder structure, delete this folder and its contents from the NetWare or Windows server.

14 (Optional) Uninstall the old GWIA software to reclaim disk space on the NetWare or Windows server.

See Chapter 7, “What’s Next,” on page 43.

5 Manually Migrating WebAccess to Linux

You can migrate just the WebAccess Agent, just the WebAccess Application, or both from NetWare or Windows to Linux. The process includes installing the WebAccess software on Linux, then transferring configuration information from old eDirectory objects to new eDirectory objects and from old startup files and configuration files on NetWare or Windows to new startup files and configuration files on Linux.

IMPORTANT: If you are upgrading to GroupWise 2018 as well as migrating to a different platform, you do not need to migrate the WebAccess Agent, because the WebAccess Agent is not part of GroupWise 2018.

Manually Migrating the WebAccess Agent to Linux (GroupWise 8 Only)

NOTE: This section does not apply to GroupWise 2018.

1. On the Linux server, become `root` in a terminal window.
2. (Conditional) If you are installing the WebAccess Agent on a server other than the one where its domain is located, provide access to the domain folder on the server where you are installing the Linux WebAccess Agent.

   If the domain folder is located on another Linux server, use your mount command of choice. If the domain is located on a NetWare or Windows server, see "Making a NetWare or Windows Server Visible from Linux" on page 12 for suggested mount commands.

   As an alternative to a permanent mount, and to provide better performance and stability, you can create a secondary domain and run a Linux MTA on the Linux server local to the WebAccess installation. For instructions, see "Creating a New Domain" in the *GroupWise 8 Administration Guide*.
3. (Conditional) If your Linux environment includes the X Window System, run the GUI GroupWise Installation program to install the Linux WebAccess Agent software. See "Installing the Linux WebAccess Agent" in the *GroupWise 8 Administration Guide*.
4. (Conditional) If the X Window System is not available, run the text-based GroupWise Installation program instead. See "Installing the GroupWise Agents Using the Text-Based Installation Program" in the *GroupWise 8 Installation Guide*.

   If you need to perform the installation from a remote location, you can use `ssh` to access the remote Linux server. Copy the GroupWise software image or software distribution directory to the server where you have migrated the domain, then run the text-based Installation program to install the WebAccess Agent on the Linux server.

5 Configure the WebAccess Agent. See“Configuring the Linux WebAccess Agent” in the *GroupWise 8 Installation Guide*.

5a On the Gateway Directory page, specify a new name for the WebAccess gateway folder under `wpgate` in the domain folder, so that the old gateway folder and its contents are retained.

5b On the Gateway Object page, specify a new object name, so that the old WebAccess Agent object is retained.

6 In ConsoleOne, review the property pages for the old WebAccess Agent object and transfer any settings that you have customized on the on the old WebAccess Agent object to the new WebAccess Agent object.

IMPORTANT: The encryption key on the WebAccess Settings page is especially important. Check and transfer it if necessary.

---

7 Copy the `commgr.cfg` file from its location under the new WebAccess gateway folder:

`domain_folder``/wpgate/`*`new_webaccess_agent_gateway_folder`*

to the WebAccess, and optionally WebPublisher, software folders:

```
/opt/novell/groupwise/webaccess
/opt/novell/groupwise/webpublisher
```

If you plan to run multiple WebAccess Agents for the domain, this step needs to be done only for the primary WebAccess Agent, as listed on the Environment property page of the GroupWise Provider object.

8 Review the existing WebAccess Agent startup file:

`old_webaccess_agent_object_name``.waa`

located on the NetWare or Windows server in:

NetWare: `sys:\system\webac80a.waa`

Windows: `c:\Program Files\Novell\GroupWise Server\WebAccess\webac80a.waa`

and transfer any customized settings to the new WebAccess Agent startup file:

`new_webaccess_agent_object_name``.waa`

located on the following folder on the Linux server:

`/opt/novell/groupwise/agents/share`

9 Review the old Document Viewer Agent startup file (`gwdva.dva`) located on the NetWare or Windows server in the same folder with the WebAccess Agent startup file, and transfer any customized settings to the new Document Viewer Agent startup file on the Linux server.

10 Start the Linux WebAccess Agent with or without a user interface. See “Starting the Linux WebAccess Agent” in the *GroupWise 8 Installation Guide*.

If the WebAccess Agent server console does not appear, or if the WebAccess Agent console is not available in your web browser, review the preceding steps to verify that all steps have been followed. For additional assistance, see “WebAccess Agent Problems” in *GroupWise 8 Troubleshooting 2: Solutions to Common Problems*.

11 After the new WebAccess Agent is running successfully, replace the old WebAccess Agent with the new WebAccess Agent in the WebAccess Application’s provider list:

11a In ConsoleOne, right-click the GroupWise Provider object, then click **Properties**.

11b In the GroupWise WebAccess Agent Information box, click **Add**.

11c Browse to and select the new WebAccess Agent object, then click **OK** to add it to the list of WebAccess Agents.

11d Select the old WebAccess Agent, then click **Delete**.

11e Click **OK** to save the updated WebAccess Agent list.

12 Stop the old WebAccess Agent on the NetWare or Windows server.

13 Delete the old WebAccess Agent object from eDirectory.

14 Delete the old WebAccess Agent gateway folder under `wpgate` in the domain folder.

15 (Optional) Uninstall the old WebAccess Agent software to reclaim disk space on the NetWare or Windows server.

See Chapter 7, "What's Next," on page 43.

Manually Migrating the WebAccess and WebPublisher Applications to Linux

NOTE: GroupWise 2018 does not include WebPublisher.

1 On the Linux server, become `root` in a terminal window.

2 Ensure that the Linux server already has Apache and Tomcat configured and running successfully and that you know the full path to the Apache and Tomcat root folders.

3 (Conditional) If your Linux environment includes the X Window System, run the GUI GroupWise Installation program to install and configure the Linux WebAccess Application, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Linux: Setting Up GroupWise WebAccess"
- GroupWise 8: "Installing and Configuring the WebAccess Application and WebPublisher Application"

4 (Conditional) If the X Window System is not available, run the text-based GroupWise Installation program instead, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Installing GroupWise Components Using the Text-Based Installation Program"
- GroupWise 8: "Installing the GroupWise Agents Using the Text-Based Installation Program"

IMPORTANT: On the WebAccess Objects page, specify a new context for the WebAccess Application objects, so that the old objects are retained.

If you need to perform the installation from a remote location, you can use `ssh` to access the remote Linux server. Copy the GroupWise software image or software distribution directory to the server where you have migrated the domain, then run the text-based Installation program to install the WebAccess Application on the Linux server.

5 (Conditional) If you want to use WebPublisher on Linux, perform the manual configuration described in "Configuring WebPublisher" in the *GroupWise 8 Installation Guide*.

6 In ConsoleOne, review the property pages for the old WebAccess Application objects:

- GroupWise WebAccess
- Novell Speller
- LDAP Provider

- GroupWise Provider
- GroupWise Document Provider

7 Transfer any settings that you have customized on the old WebAccess Application objects to the new WebAccess Application objects.

8 (Conditional) If you installed WebPublisher, review the property pages of the old GroupWise WebPublisher object, then transfer any settings that you have customized on the old GroupWise WebPublisher object to the new GroupWise WebPublisher object.

9 (Conditional) If you have customized any WebAccess or WebPublisher template files, copy the customized template files from the old web server to the following folders on the Linux web server:

```
/var/opt/novell/gw/WEB-INF/classes/com/novell/webaccess/templates
/var/opt/novell/gw/WEB-INF/classes/com/novell/webpublisher/templates
```

10 Stop and then start Apache and Tomcat, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Installing the Linux WebAccess Software"
- GroupWise 8: "Restarting the Web Server"

11 Verify that the new WebAccess Application is communicating successfully with the existing WebAccess Agent by accessing your GroupWise mailbox through the WebAccess client:

`http://new_web_server_address/gw/webacc`

12 To keep users' existing browser bookmarks from being broken, redirect the old WebAccess and WebPublisher URLs to the new WebAccess and WebPublisher URLs:

12a (Conditional) If your old web server was Apache on NetWare:

12a1 Change to the `conf` subfolder of the Apache root folder (for example, `\apache2\conf`).

12a2 Edit the Apache configuration file for GroupWise.

On NetWare 6, the Apache configuration file is `gwapache.conf`. On NetWare 6.5, the Apache configuration file is `gwapache2.conf`.

12a3 Add the following line:

```
redirect permanent /servlet/webacc
                        http://web_server_address/gw/webacc
```

12a4 If you use WebPublisher, add the following additional line:

```
redirect permanent /servlet/webpub
                        http://web_server_address/gw/webpub
```

12a5 Save the file, then exit the editor.

12a6 Restart Apache to put the redirections into effect.

12b (Conditional) If your old web server was Internet Information Server (IIS) on Windows:

12b1 Change to the `netpub\wwwroot` subfolder of the IIS root folder (for example, `c:\inetpub\wwwroot`).

12b2 Create a subfolder named `servlet`.

12b3 Under the `servlet` subfolder, create a subfolder named `webacc`.

12b4 If you use WebPublisher, create a second subfolder named `webpub`.

12b5 In IIS Manager, expand the tree in the left pane to display **Default Web Site** under **Web Sites**.

Under **Default Web Sites**, you should see the `servlet` subfolder you created in Step 12b2

12b6 Expand the `servlet` subfolder to display the `webacc` subfolder (and optionally, the `webpub` subfolder) that you created in Step 12b3.

12b7 Right-click the `webacc` subfolder, then click **Properties**.

12b8 Click **Directory,** select **A Redirection to a URL**, then type `/gw/webacc` in the associated field.

12b9 Select **A Permanent Redirection for This Resource**, then click **OK** to save your changes.

12b10 If you use WebPublisher, repeat Step 12b7 through Step 12b9, using `webpub` in place of `webacc`.

12b11 Restart the IIS web server to put the redirections into effect.

13 Notify users of the new WebAccess and WebPublisher URLs so that users can update their browser bookmarks if they want to.

14 (Optional) Uninstall the old WebAccess Application software to reclaim disk space on the NetWare or Windows server.

See Chapter 7, “What’s Next,” on page 43.

6 Manually Migrating Monitor to Linux

As with WebAccess, you can migrate just the Monitor Agent, just the Monitor Application, or both from NetWare or Windows to Linux. The process includes accessing a domain (either local or remote), installing the Monitor software on Linux, copying the Monitor Agent configuration file (`monitor.xml`) from NetWare or Windows to Linux, and modifying the configuration file. For convenience, you can keep the Monitor Application on the same web server as the WebAccess Application.

NOTE: Monitor migration is not provided in the Server Migration Utility. It must be done manually.

Manually Migrating the Monitor Agent to Linux

1. On the Linux server, become `root` in a terminal window.
2. Ensure that the web server where the Monitor Application is installed is up and running.
3. Provide access to a domain folder and its associated domain database (`wpdomain.db`).

   If the domain folder is located on another Linux server, use your mount command of choice. If the domain folder is located on a NetWare or Windows server, see "Making a NetWare or Windows Server Visible from Linux" on page 12 for suggested mount commands.
4. (Conditional) If your Linux environment includes the X Window System, run the GUI GroupWise Installation program to install the Linux WebAccess Agent software, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:
   - GroupWise 2012: "Installing and Configuring the Linux Monitor Agent"
   - GroupWise 8: "Installing the Linux Monitor Agent"
5. (Conditional) If the X Window System is not available, run the text-based GroupWise Installation program instead, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:
   - GroupWise 2012: "Installing GroupWise Components Using the Text-Based Installation Program"
   - GroupWise 8: "Installing the GroupWise Agents Using the Text-Based Installation Program"

   If you need to perform the installation from a remote location, you can use `ssh` to access the remote Linux server. Copy the GroupWise software image or software distribution directory to the server where you have migrated the domain, then run the text-based Installation program to install the Monitor Agent on the Linux server.
6. Configure the Linux Monitor Agent, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:
   - GroupWise 2012: "Installing and Configuring the Linux Monitor Agent"
   - GroupWise 8: "Configuring the Linux Monitor Agent"

7 Restart the web server, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Installing and Configuring the Linux Monitor Agent"
- GroupWise 8: "Restarting the Web Server"

8 Start the Linux Monitor Agent, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Starting the Linux Monitor Agent as a Daemon"
- GroupWise 8: "Starting the Linux Monitor Agent as a Daemon"

9 Ensure that the Linux Monitor Agent can communicate with the Monitor Application by viewing the following URL:

```
http://web_server_network_address/gwmon/gwmonitor
```

If the Monitor console does not appear, review the preceding steps to verify that all steps have been followed. For additional assistance, see the following section of *GroupWise Troubleshooting 2: Solutions to Common Problems* for your version of GroupWise:

- GroupWise 2012: "Monitor Agent Problems"
- GroupWise 8: "Monitor Agent Problems"

10 Stop the Linux Monitor Agent, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Stopping the Linux GroupWise Agents"
- GroupWise 8: "Stopping the Linux GroupWise Agents"

11 Copy the Monitor Agent configuration file (`monitor.xml`) from its Windows location:

- GroupWise 2012: `c:\Program Files\Novell\GroupWise Server\ Monitor`
- GroupWise 8: `c:\Program Files\Novell\GroupWise Server\Monitor`

to its location on Linux:

```
/opt/novell/groupwise/agents/share
```

12 Edit the `monitor.xml` file for its new location:

12a Change the `HOME_PATH` setting to the full path to the domain folder that you made accessible in Step 3.

12b Change the `LOG_PATH` setting to the typical location for Monitor Agent log files on Linux (`/var/log/novell/groupwise/gwmon`).

12c Change the `LOG_ACCOUNTING_PATH` setting to the typical location for Monitor Agent accounting file on Linux (`/var/log/novell/groupwise/gwmon/acct`).

12d Change the `LOG_EDITOR` setting to " " (an empty setting).

13 Start the Linux Monitor Agent with its new configuration file.

14 Ensure that the Linux Monitor Agent can still communicate with the Monitor Application by viewing the Monitor URL for the platform of your web server:

```
http://web_server_network_address/gwmon/gwmonitor
```

15 Stop the old Windows Monitor Agent.

16 (Optional) Uninstall the old Monitor Agent software to reclaim disk space on the NetWare or Windows server.

See Chapter 7, "What's Next," on page 43.

Manually Migrating the Monitor Application to Linux

1. On the Linux server, become `root` in a terminal window.
2. Ensure that the Linux server already has Apache and Tomcat configured and running successfully and that you know the full path to the Apache and Tomcat root folders.
3. (Conditional) If your Linux environment includes the X Window System, run the GUI GroupWise Installation program to install and configure the Linux Monitor Application, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:
   - GroupWise 2012: "Installing and Configuring the Linux Monitor Application"
   - GroupWise 8: "Installing and Configuring the Monitor Application"
4. (Conditional) If the X Window System is not available, run the text-based GroupWise Installation program instead, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:
   - GroupWise 2012: "Installing GroupWise Components Using the Text-Based Installation Program"
   - GroupWise 8: "Installing the GroupWise Agents Using the Text-Based Installation Program"

   If you need to perform the installation from a remote location, you can use `ssh` to access the remote Linux server. Copy the GroupWise software image or software distribution directory to the server where you have migrated the domain, then run the text-based Installation program to install the Monitor Application on the Linux server.
5. Stop and then start Apache and Tomcat, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:
   - GroupWise 2012: "Installing and Configuring the Linux Monitor Application"
   - GroupWise 8: "Restarting the Web Server"
6. Verify that the new Monitor Application is communicating successfully with the existing Monitor Agent by viewing the Monitor URL for the platform of your web server:

   ```
   http://web_server_network_address/gwmon/gwmonitor
   ```

7. (Optional) Uninstall the old Monitor Application software to reclaim disk space on the NetWare or Windows server.

   See Chapter 7, "What's Next," on page 43.

7 What's Next

After you have migrated all your GroupWise post offices and domains to Linux, you have NetWare or Windows servers that are no longer being used for GroupWise. If you plan to use those servers for other purposes in the future, you need to remove the GroupWise data and software from them.

Folders

Remove the following folders from NetWare and Windows servers:

GroupWise 2012 Folders	GroupWise 8 Folders
◆ Domain directory	◆ Domain folder
◆ Post office directory	◆ Post office folder
◆ MTA working directory (if it is not under the domain)	◆ MTA working folder (if it is not under the domain)
◆ Software distribution directory	◆ Software distribution directory

The links provide information about the folders so that you can identify them on the source server.

NetWare Software

For a NetWare server, follow the instructions in the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: N/A.
- GroupWise 8: "Uninstalling the NetWare GroupWise Agents"

Be sure to remove the migrated agents from the NetWare `autoexec.ncf` file so that the server does not try to start the migrated agents automatically when it is restarted.

Windows Software

For a Windows server, follow the instructions in the *GroupWise Installation Guide* for your version of GroupWise:

- GroupWise 2012: "Uninstalling the Windows GroupWise Agents"
- GroupWise 8: "Uninstalling the Windows GroupWise Agents"

In-Place Database Migration

The GroupWise Server Migration Utility helps you migrate your GroupWise system from NetWare or Windows to Linux by copying domains and post offices from one server to another. If your domains and post offices are located on a SAN, you do not need to copy the domains and post office from one location to another. You can convert the domain and post office folder structures to the format used on Linux, so that the same physical location can be mounted for use on a different operating system.

The folder structure format used on NetWare and Windows uses mixed-case file names and folder names. Because Linux is a case-sensitive operating system, folder structures originally created on Linux use only lowercase file names and folder names. Therefore, folder structures originally created on NetWare or Windows need to be converted to lowercase file names and folder names in order to be usable by the GroupWise Linux agents. DBCopy can perform this conversion.

- Chapter 8, “Performing an In-Place Database Migration,” on page 47

8 Performing an In-Place Database Migration

1. Install DBCopy on the Linux server where you want to mount the domain or post office.

   For instructions, see the following section in the *GroupWise Administration Guide* for your version of GroupWise:

   - GroupWise 2012: "Using DBCopy on Linux"
   - GroupWise 8: "Using DBCopy on Linux"

2. (Conditional) For an NSS volume on an OES Linux server, set the name space on the volume to `Unix`.

   The default OES Linux name space setting is `Long`, which is case insensitive. The `Unix` name space setting is case sensitive, which allows all file names and folder names in the domain or post office folder structure to be converted to lower case. For instructions, see "Configuring the Name Space for an NSS Volume" in the *NSS File System Administration Guide for Linux* for your version of OES Linux. (http://www.novell.com/documentation/oes.html)

3. Mount the domain or post office folder to the Linux server.

4. Change to the following folder:

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

5. Use the following command to convert the domain or post office folder structure to lowercase:

   ```
   ./dbcopy -l domain_or_post_office_folder
   ```

6. Install and start the GroupWise Linux agents on the Linux server where the domain or post office is mounted, as described in the following section of the *GroupWise Installation Guide* for your version of GroupWise:

   - GroupWise 2012: "Installing the Linux GroupWise Agents"
   - GroupWise 8: "Installing the GroupWise Agents on Linux"

Appendixes

A Troubleshooting Post-Migration Problems

Messages are not flowing between the migrated POA and the MTA for the domain

Problem: The migrated POA and the MTA for the domain are not able to communicate with each other.

Possible Cause: The source POA was stopped before the configuration changes replicated to the POA.

Action: Manually configure the MTP link between the source POA and the MTA for the domain.

1. Display the POA console.

   `http://source_server_address:port_number`

2. Click **MTP Status**.

   The status in the **Receive** column shows **Closed**.

3. Click the **Closed** link,
4. In the **Address** field, specify the new IP address of the POA, then select **Start MTP Receive**.
5. Click **Submit** to execute the actions.

The POA cannot start

Problem: The POA tries to start, but exits.

Possible Cause: The POA log file path information has not yet been reconfigured.

Action: Properly configure the log file path.

1. Start the POA with the /noconfig switch so that the POA ignores the troublesome configuration settings and starts successfully.
2. Because of the /noconfig switch, manually configure the link between the POA and the MTA for the domain. See “Messages are not flowing between the migrated POA and the MTA for the domain” on page 51

3 Allow time for the configuration information to replicate from ConsoleOne to the post office database (wphost.db) so that the POA has the correct configuration settings.

4 Start the POA again.

It should start successfully this time.

The POA cannot start because of incorrect permissions

Problem: The POA cannot start and displays the following message:

```
Error: Running the agent with conflicting effective users
```

Possible Cause: You are trying to set the POA up to run as a non-`root` user, but you have already run the POA as `root`.

Action: Remove the file that is preventing the POA from running as a non-`root` user.

1 On the Linux server, change to the post office folder.

2 Delete the `uid.run` file.

3 Start the POA again.

It should start successfully this time.

The POA cannot start because of a C06B error

Problem: The POA tries to start, but displays a C06B error and exits.

Possible Cause: The post office owns a library that has one or more remote document storage areas and they have not been configured with Linux paths.

Action: Properly configure the remote document storage area.

1 Start the POA with the /noconfig switch so that the POA ignores the troublesome configuration settings and starts successfully.

2 Because of the /noconfig switch, manually configure the link between the POA and the MTA for the domain. See “Messages are not flowing between the migrated POA and the MTA for the domain” on page 51

3 Allow time for the configuration information to replicate from ConsoleOne to the post office database (wphost.db) so that the POA has the correct configuration settings.

4 Start the POA again.

It should start successfully this time.

The POA starts with SSL errors

Problem: The POA starts, but messages indicate that SSL is not available.

Possible Cause: The POA SSL certificate and key file paths have not yet been reconfigured.

Action: Properly configure the SSL certificate and key files for the POA

1 In ConsoleOne, browse to and right-click the POA object, then click **Properties**.

2 Click **GroupWise > SSL Settings**.

3 Remove the path information from the **Certificate File** and **Key File** fields.

The information pertains to the source NetWare or Windows server, not the Linux server, and is therefore not needed.

The Server Migration Utility places certificate files and key files in their default location on Linux (`/opt/novell/groupwise/agents/bin`).

4 Click **OK** to save the settings.

5 Allow time for the configuration information to replicate from ConsoleOne to the post office database (wphost.db).

When the POA has the correct configuration settings, SSL is enabled as usual.

The POA starts with TCP/IP errors

Problem: The POA starts with the error:

```
TCP/IP services on your system may not be configured or installed
```

Possible Cause: The /ip startup switch in the POA startup file (`/opt/novell/agents/share/post_office.poa`) still has the IP address of the source NetWare or Windows server.

This would happen only if you manually copied the startup file to the Linux server, because the Server Migration Utility comments out the /ip switch in order to avoid this problem.

Action: Edit the POA startup file and update the IP address to match the Linux server.