Using Reload 3.1 to Migrate a Post Office to a New Server

Prerequisites: Upgrade to the latest version of Reload 3.1: **Reload 3.1 Build (310028)** or better.

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Once a post office is backed up to a Reload server, Reload can assist in the migration of the post office data to a new server. This is particularly helpful for the many customers that intend to migrate their GroupWise post offices from the NetWare platform to the Linux platform.

If you are migrating a post office to the Linux platform, it is recommended that you first upgrade your GroupWise post office to GroupWise 8. Migration of earlier versions of GroupWise post offices will work, however a routine called "Storelowercase" will not work. The Storelowercase routine isn't entirely necessary, but it is more convenient to have this routine run.

The Advantages of Using Reload for Migration

The advantages to using Reload to migrate a GroupWise post office are:

- Pre-Migration is done from the Reload server, and not the current production server. Following are some notes on Pre-Migration:
    - Pre-Migration copies the OFFILES directory contents and represents about 90% of the size of the post office.
    - Pre-Migration is a required step whether you use Reload or the GroupWise Server Migration Utility provided by Novell.
    - When you use the Reload server for a post office migration, the Pre-Migration of the OFFILES directory is pushed from the Reload server to the new production server.
    - Since the Reload server is pushing the OFFILES directory contents to the new production server, there is **zero impact on the production server** during the Pre-Migration.
    - Reload's Pre-Migration is faster than the GroupWise Server Migration Utility provided by Novell. One reason for this is because Reload does not require DBCOPY to take a second pass at the OFFILES directory contents.
- The Final Migration is done from the Reload server, and all data is backed up to the Reload server prior to the migration of the post office. Following are some notes on Reload's Final Migration functionality:
    - Reload's Final Migration is **significantly faster** than the Final Migration in Novell's GroupWise Server Migration Utility. The reason migration speed is important is so that

the downtime window is shortened. Using Reload to migrate a post office to the Linux platform will generally be between 200% and 300% perfect faster than using Novell's GroupWise Server Migration Utility. Here's why:

- The Reload migration agent runs two simultaneously running DBCOPY instances. One DBCOPY instance is copying the databases and the other DBCOPY instance is copying the OFFILES directory contents. Novell's GroupWise Server Migration Utility only runs one instance of DBCOPY.

- Reload's method of migrating data does not require DBCOPY to take a second pass at the OFFILES directory. The processing of the OFFILES directory generally does not copy over a whole lot of data, but it takes a long time to correlate what needs to be copied. Since Reload does not require the correlation to happen twice (as Novell's utility does) then the Reload migration of OFFILES is much faster.

- Migration with the NFS protocol is at least two times faster than using the NCPFS protocol. The Novell GroupWise Migration Utility uses the NCPFS protocol when migrating a post office from the NetWare platform to Linux. Reload uses the NFS protocol when migrating a post office to Linux. Since the NFS protocol is at least two times faster, the file transfer rate is twice as fast.

Setting up an NFS Export on The New Production Server

If you are going to be migrating a post office to the Linux platform, then you need to set up an NFS mount to the new post office directory location that will be housed on the Reload server. Here are example steps for doing this, your steps might be different based on the version of Novell's SuSE Linux you are using on the new production server.

In this example we will be demonstrating setting up an NFS mount on a SLES10 server with a graphical session.

1. Determine exactly where you are going to house the new GroupWise post office. For example, let's say the post office will be on a partition on your Linux server that is mounted at /data, and the post office directory is going to be called "po1". The path to the post office then should be **/data/po1**. So off of the /data directory, **make the po1 directory**.

   IMPORTANT NOTE: Do not make the directory name for a post office any longer than 8 characters. This is a limitation with GroupWise that is best to comply with.

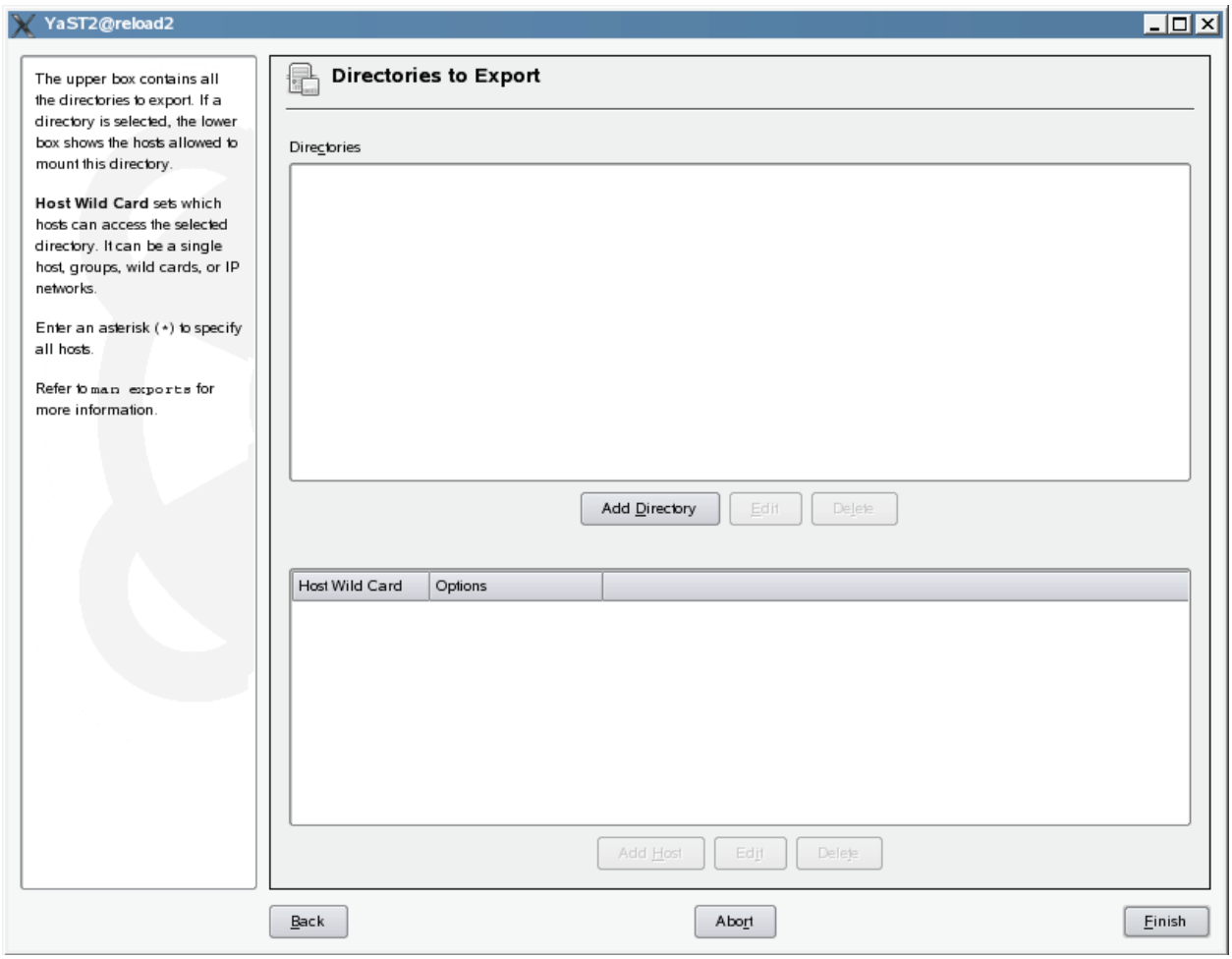
Now you need to **create an NFS Export of the /data/po1 directory**. An NFS Export is similar to a Windows Share. Here are example steps to creating an NFS Export.

2. In the **"YaST2" Contol Center**, select **Network Services**

3. Then select **NFS Server**

4. Make sure to **Start** the NFS Server and select **Next** to create the NFS Directory to Export

Figure 1: Directories to Export in YaST

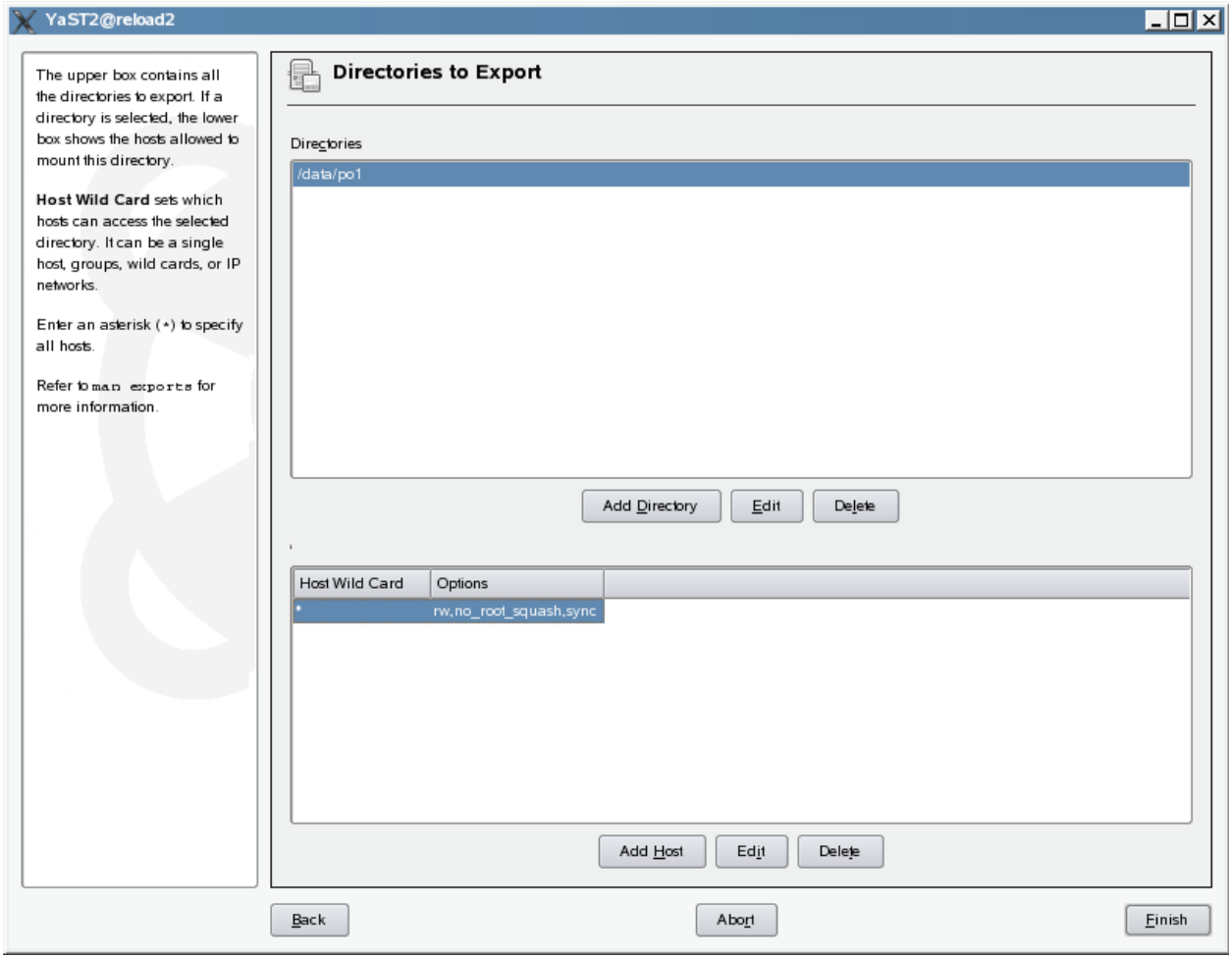


5. Choose **Add Directory** and indicate the directory where the post office will be created. For example: /data/po1

6. When prompted for the Host Wild Card and Options you can keep the Host Wild Card at * if you would like, and generally this is best at first. The most important change to make is to the Options. *Make sure to change the Read Only setting:* **`ro`** *to* ***Read Write:*** **`rw`** . *Also make sure to change the* **`root_squash`** ***setting to*** **`no_root_squash`** . There might be other options that YaST fills in, these are perfectly fine to keep. Just makes sure that the changes to

the options are made as mentioned earlier. See the next figure to observe an example of a properly configured NFS Directory Export of /data/po1.

Figure 2: NFS Directory Export of /data/po1



7. Now select Finish which should save the NFS Directory Export and restart the NFS Server on the new production server.

8. If the server is running a firewall, make sure to configure the firewall to allow the NFS Server and NFS Client services through the firewall.

Post Office Migration Steps Using the Reload

NOTE: Reload keeps a migration log that helps to keep track which migrations actions have happened. Also, Reload will send e-mail message to the Status Message Recipient defined in Reload Administration.

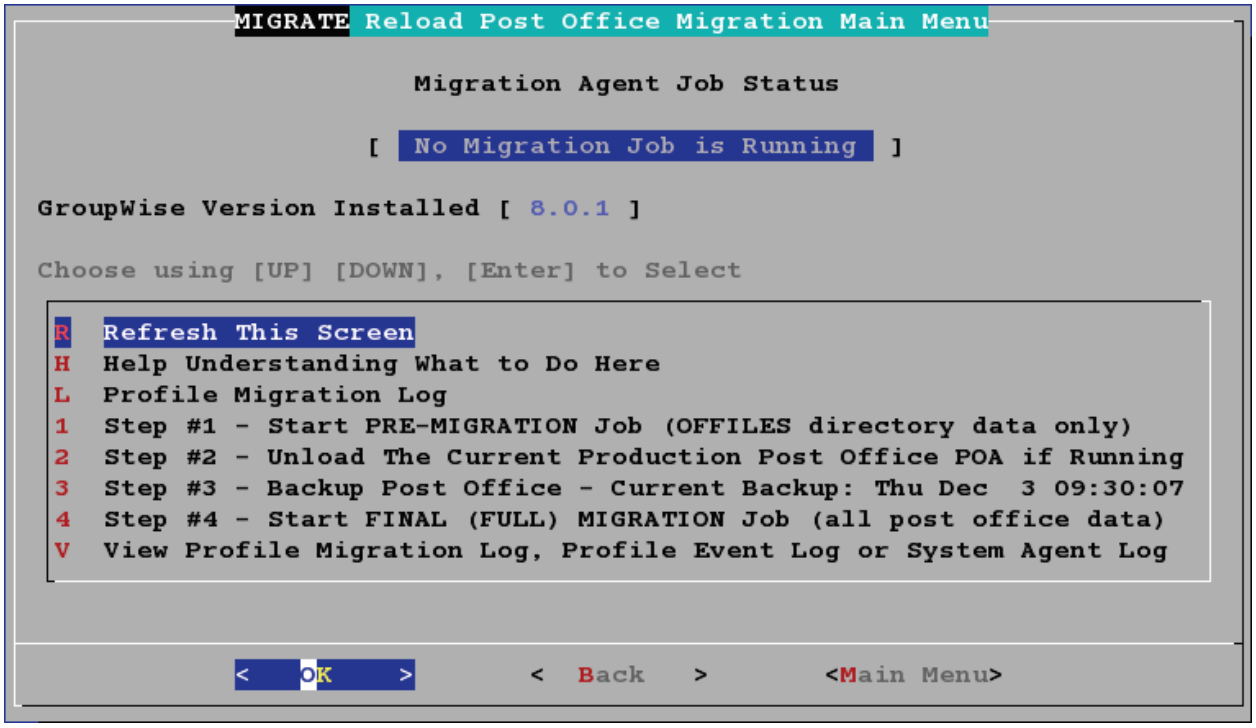
Make sure to reference the Reload Migration Log to help you to estimate how long a migration will take when the time comes to perform the migration.

Once a post office is backed up to the Reload server at least once, you can begin using the Reload Migration Wizard. The Reload Migration Wizard is available from Reload Console Administration. From the Reload Mail Menu in Console Administration select **Disaster Recovery**|<Choose **Post Office**>|<Choose **The Profile**>| **Migrate**. You will see the Reload Migration Main Menu as show in the next figure.

The Reload Migration utility is very flexible. If you would like to run steps out of their prescribed order you can do so during the testing phase of using this utility. So for example, you can perform step #1 and then perform Step #4, and migrate the post office without actually bringing down the production post office POA. You might want to do this so that you can test how the migration utility works. Or you might want to do this so that you can install the GroupWise Agents onto the new production server. During the testing phase, with the post office data migrated to the new production server, you will want to configure the GroupWise POA to run against the post office data in a testing manner. Then you can bring down the POA on the new production server, as it will inhibit using the migration utility while it is up. This is all perfectly fine to do. When it comes to the day of the final migration, you should follow the steps in their prescribed order as shown in the Reload Migration Main Menu shown in Figure 3.

When a migration job has been started, it can be stopped from within the Migration Menu. The option to stop a Migration job only shows when a migration job is actually running.

Figure 3: Reload Migration Main Menu



Step #1 – Start PRE-MIGRATION Job

A PRE-MIGRATION Job copies the contents of the OFFILES directory to the new post office location. This step has a simple wizard that asks which backup to migrate, and how to get connectivity to the new production server. If you are migrating the post office to Linux you will need to specify the NFS Directory Export of the post office (Example: /data/po1) as explained earlier. Once you proceed through the wizard, the PRE-MIGRATION job will be queued up to run. As long as no other migration jobs are running, Reload will start the PRE-MIGRATION Job within about a minute's time. The PRE-MIGRATION Job will take a longer time the very first time it runs. The PRE-MIGRATION Job can run while backups are going on, it will not conflict with the backups. A PRE-MIGRATION of the profile can also run while a backup of the profile is running. There is no harm done in this.

Step #2 - Unload the Current Production POA

This step is only necessary on the actual day that you truly intend to do the migration. This is an informational step only, it does not actually do anything other than explain that the Production POA needs to be taken down. The idea behind this step is that you want the production POA down, so that no changes are made to the GroupWise Message Store. With the GroupWise Message Store in a static state, a backup of the post office (which will happen in the next step, Step #3) will capture the complete state of the post office without any changes to the post office.

Step #3 – Backup Post Office

This step will queue up a Standard Backup Job. This Standard Backup Job is just like any other Standard Backup Job that regularly runs. Don't be confused by the fact that it is not a "Full Backup". Every Reload Standard Backup Job is actually a Full Backup, although it only copies 12% of the post office. Sounds strange, but that's one of the beauties to Reload! This step should be taken after Step #2 of bringing down the production POA. If you are getting familiar with the Reload Migration functionality and you aren't really doing a migration at the moment, you can still perform Step #3 without having performed Step #2 of bringing down the Production POA.

Step #4 - Start FINAL (FULL) MIGRATION Job

A FINAL (FULL) MIGRATION Job copies the entire contents of the post office location from the Reload server to the new production server. This step has a simple wizard that asks which backup to migrate, and how to get connectivity to the new production server. If you are migrating the post office to Linux, you will need to specify the NFS Directory Export of the post office (Example: /data/po1) as explained earlier. Once you proceed through the wizard, the FINAL (FULL) MIGRATION job will be queued up to run. As long as no other migration jobs are running, Reload will start the FINAL (FULL) MIGRATION Job within about a minute's time.

NOTE: If you are just doing migration testing, the FINAL (FULL) MIGRATION Job can run while backups are going on, it will not conflict with the backups. A FINAL (FULL) MIGRATION of the profile can also run while a backup of the profile is running. There is no harm done in this.

Migration Recommendations

It is recommended that you use the Reload Migration utility and become entirely familiar with how it works and how long migration will take. You should consider running through all of the steps, except for taking down the Production POA. This way you can become familiar with how it operates, and how the logging works and how long the migration will take. Then the day of the migration, run through steps 1 through 4 in order.

Other Considerations for Migration

Reload only migrates the post office data. It does not install GroupWise Agents and make configuration changes in ConsoleOne etc. This is not a comprehensive list of post-migration steps, but you may want to consider the following Post Migration steps:

- Change the TCP/IP Address of the POA object for the newly migrated post office in ConsoleOne. Have the address reflect the TCP/IP Address of the new production Linux server that hosts the GroupWise post office that was just migrated.
- The GroupWise Agent software should be installed to the new Linux production server. The GroupWise Agent software should be configured to start a GroupWise POA against the newly moved post office. Why not do a FINAL (FULL) MIGRATION during a testing phase, and then install the GroupWise POA software during the testing phase. Make sure the POA comes up, and that you can log into the GroupWise POA with a GroupWise client. If a firewall is running on the new production Linux server, you may need to open up some ports. For example, port 1677 and 7101 and maybe even the HTTP monitoring port, and the SOAP port.
- Prior to doing the migration, you may want to confirm that the POA is not configured to create log files at a specific UNC path on a NetWare server for example. If it is configured to do so, before the final backup of the post office, remove the UNC path and keep the field blank.
- If you are using LDAP authentication, with SSL certificates, take steps to make sure that the path to the *.der file does not reference a NetWare UNC path. Appendix B of the Reload product documentation explains LDAP and SSL on Linux.
- Other references.

- You may also want to consider obtaining the ***The Caledonia Guide to moving GroupWise*** from Caledonia Networks, available at http://www.caledonia.net
    - This guide is far more comprehensive then this document with regards to migrating a post office to Linux. The parts about installing DBCOPY, NCPFS and performing the migration of your post office can be disregarded as they are not needed because you are using Reload for the migration. There are a lot of other details in this guide that are very good to know.

Post Migration Steps

Once the post office has been moved to the new server and is up and running, the Reload connectivity settings need to be altered to backup the post office at the new production server rather than the old production server. To alter the connectivity settings of the post office profile, do the following in Reload Console Administation:

1. Edit the profile
2. Select **Advanced**
3. Select **Connectivity**
4. Proceed through the connectivity wizard which will then attempt to get connectivity to the new GroupWise post office location.

If you migrated the GroupWise post office from NetWare to Linux, there is a very powerful feature with regards to GroupWise Restore Areas. Read the Reload documentation and create a GroupWise Restore Area. By doing so, your users can restore items from Reload, without even having to exit their GroupWise client.

Cleanup

If you performed a Full (Final) Migration multiple times, you will observe files and directories with underscores in their names. The Reload Migration Agent creates these files and directories from an original GroupWise Message Store database or directory. When Reload migrates data, it does not want to override existing data; and so Reload creates these files and directories with underscores in them. These files and directories can be safely removed.

Conclusion

Using Reload for Migration greatly speeds up the GroupWise message store migration process. Reload does not make changes in ConsoleOne, and it does not install software to the new server. These steps need to be taken manually. Reload 3.1 is the biggest tool in your migration toolbox, however it is also recommended that you reference ***The Caledonia Guide to moving GroupWise*** . The goal behind using Reload for migration is to reduce downtime. Using Reload for Migration allows for testing all of the steps of migration before the actual day in which the migration goes on. You are highly encouraged to test and experience all of the steps of migration before the day that the migration is to happen.