MICRO FOCUS

GroupWise Disaster Recovery

Version 5.1.1

November 2017

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Contents

Preface

GroupWise Disaster Recovery powered by Reload.

About This Guide

This GroupWise Disaster Recovery Installation and User Guide helps you integrate this software into your existing GroupWise system.

Audience

This manual is intended for IT administrators in their use of GroupWise Disaster Recovery or anyone wanting to learn more about GroupWise Disaster Recovery. It includes installation instructions and feature descriptions.

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

Online documentation can be found on the GWAVA (http://support.gwava.com/documentation/Reveal/index.html) website and the Micro Focus (https://www.microfocus.com/products/) website.

Knowledge Base articles can be found on the GWAVA Support (http://support.gwava.com/) website and the Micro Focus Knowledge Base (https://www.microfocus.com/support-and-services/knowledge-base/) website.

1 Chapter Title GroupWise Disaster Recovery version 5.1 / Title

Sect1 Title Overview / Title

Para GroupWise Disaster Recovery is a disaster recovery, hot backup, and quick restore system for Novell GroupWise. GroupWise Disaster Recovery integrates with GroupWise post offices and domains on NetWare, Linux and Windows to provide reliable backups. All the mail in those backups can then be examined using any Novell GroupWise client. GroupWise Disaster Recovery backs up post offices and domains from GroupWise 8 or greater. / Para

Para GroupWise Disaster Recovery is a Disaster and Recovery solution for GroupWise mail systems that provides live backups and recovery for GroupWise post offices and domains. In the event of a disaster where the post office or domain is unusable or lost, GroupWise Disaster Recovery can provide a temporary post office and domain for the GroupWise system to run off of, making messages flow seamlessly, even in a crisis. / Para

Para GroupWise Disaster Recovery performs this function by creating backup copies of the post office and domain databases, which it then can load with GroupWise agents. GroupWise Disaster Recovery also can load post office agents against any post office backup, allowing users to transparently restore deleted or lost mail to the live post office, directly from the user's GroupWise client. With GroupWise Disaster Recovery, losing mail in a system is no longer a crisis, and in most cases, not even an inconvenience. / Para

Para Multiple GroupWise Disaster Recovery servers can also be tied together to add multiple redundant layers of protection for complete offsite backups of the GroupWise message system. / Para

Para GroupWise Disaster Recovery only runs on the Linux platform and requires that one setting in GroupWise Administration be enabled, as well as on the host machine for both the GroupWise system and the GroupWise Disaster Recovery Server. GroupWise Disaster Recovery does not require eDirectory, Active Directory or any TSA components. / Para

Para Setting-up GroupWise Disaster Recovery can seem to be an intimidating process, but this guide will walk you through the process. There also is online documentation, an extensive knowledgebase, full support, and consulting services available to aid you in customizing and perfecting your GroupWise Disaster Recovery system. / Para

Micro Focus GWAVA Family of Message Handling Products

- *Secure Messaging Gateway* is a message scanning product that protects your system from malware and spam.
- *Retain Unified Archiving* is an archive storage product that is designed to keep messages from GroupWise, Exchange/O365, GMail, BlackBerry, Bloomberg, Notes, mobile, social and other messaging platforms for the long term to meet data retention legal requirements and has powerful search capabilities for eDiscovery.
- *GroupWise Disaster Recovery powered by Reload for GroupWise* is a hot-backup and disaster recovery product for GroupWise. It keeps a few weeks of data and can easily restore messages, calendar items, address books, and even whole users. It can also act as a fully functional Post Office in times when the GroupWise POA is down.
- *Reload for Retain* is a hot-backup product for Retain. The Retain archive keeps items for the long term and often becomes the only repository of an item. Without a backup you can leave yourself open to legal liability if the items are lost before the retention period has passed. Reload for Retain provides high speed backups of your Retain archive.
- *GroupWise Reporting & Monitoring powered by Redline* is a comprehensive, customizable, monitoring and reporting tool for GroupWise.
- *GroupWise Forensics powered by Reveal* provides essential auditing and oversight capabilities that legal, human resources, and auditing personnel need within GroupWise.
- *GroupWise Mailbox Management powered by Vertigo* is the Enterprise Mailbox Management tool for GroupWise.

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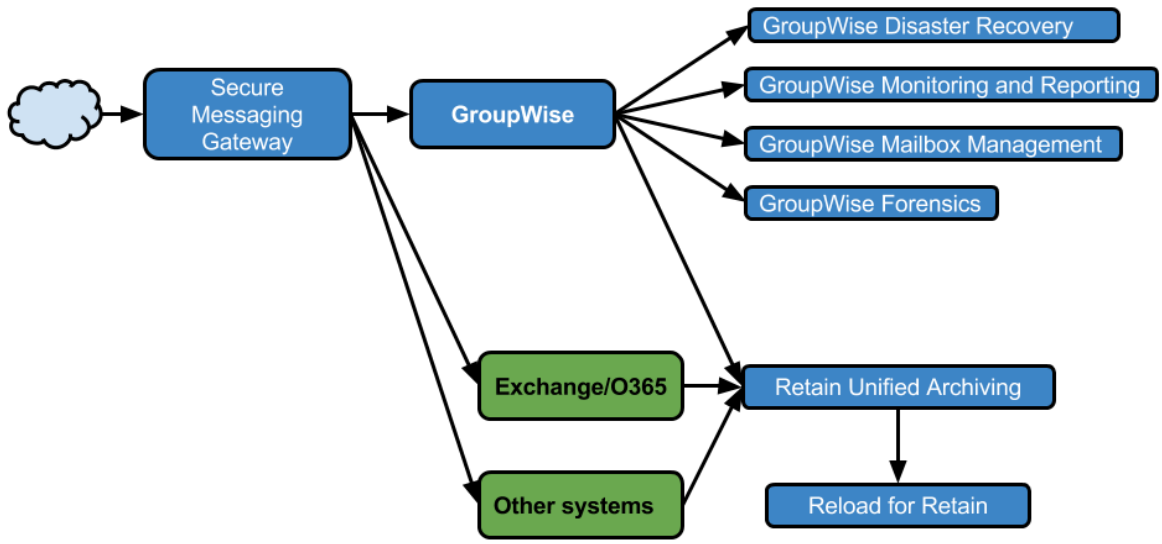

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/ ImageObject / MediaObject / InformalFigure / Sect2

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2 System Requirements

GroupWise Disaster Recovery is a backup system and will use significant amounts of disk space.

GroupWise Versions

- GroupWise 2014 R2
- GroupWise 2014
- GroupWise 2012
- GroupWise 8.0.3

Supported OS versions

The GroupWise Disaster Recovery server must be run on the Linux platform, but it backs up GroupWise post offices on NetWare, Linux or Windows platforms.

- SUSE Linux Enterprise Server 12 (SLES12) 64-Bit.
- SUSE Linux Enterprise Server 11 (SLES11) 32-Bit or 64-Bit.

Memory

2 gigabytes of available RAM should be sufficient for most environments. More memory is helpful.

CPU

Type

The GroupWise Disaster Recovery server only supports the Intel Platform x-86 Platform

Speed

The faster the better; SMP is not to be considered a requirement, however, testing of GroupWise Disaster Recovery on SMP has shown that GroupWise Disaster Recovery is benefited by SMP.

Disk

Disk space must be carefully considered for each GroupWise Disaster Recovery Server. When the GroupWise Disaster Recovery server reaches the error threshold for disk space, it will no longer create backups. Make sure the target system has plenty of space to accommodate the needs of your GroupWise Disaster Recovery backups.

GroupWise Disaster Recovery backs up GroupWise post offices and domains according to profiles that the administrator specifies, which tells GroupWise Disaster Recovery what to backup, where it is located, and where to store the data. The Profile can also keep track of disk space and when to expire the backups it creates. After the initial backup, each successive backup takes an average of 12% the full size of the live post office, also saving network and disk resources.

Disk speed directly impacts GroupWise Disaster Recovery performance. A disk that is tuned for fast writes to disk is highly recommended and will improve performance. When considering disk space requirements, also take into account future growth of GroupWise post offices, and the space that will be required to sustain that growth.

If GroupWise Disaster Recovery runs out of hard disk space, backups will no longer be created. A GroupWise Disaster Recovery profile has a threshold of days to keep in hot backups. This can help prevent systems from running out of disk space.

Server Only Backup Method

This backup method in with the GroupWise Disaster Recovery Server gets a client connection via a Linux mount point to the post office or domain to be backed up. GroupWise Disaster Recovery would then copy data from the live server to the GroupWise Disaster Recovery server via the mount point it had established to the live server housing GroupWise. Prior to GroupWise Disaster Recovery 5, this was the only method of performing backups. In this scenario, the GroupWise Disaster Recovery Server should be in close network proximity to the GroupWise servers that are being backed up with GroupWise Disaster Recovery. If a GroupWise Disaster Recovery Server and some GroupWise post offices are on a Gigabit switch, it would be best to have a network card in the GroupWise Disaster Recovery server that supports a Gigabit speed.

Paired Collector/Server Model

This backup method is new to GroupWise Disaster Recovery 5. A “Collector” runs on the server that houses a GroupWise post office or domain. The Collector then uses Rsync as the transport to get data from the GroupWise server to the GroupWise Disaster Recovery Server. This model requires the following disk space on the GroupWise server:

Post Office

2 times the size of the post office OFUSER, OFMSG and GWDMS directories. But not including the OFUSER/INDEX directory.

So for example, if the OFUSER directory contents was 1.5 GB and the OFMSG directory was 2.5 GB and the GWDMS directory was 1 GB the total space needed to service the Collector would be 1.5+2.5+1 = 5 X 2 = 10 GB needed somewhere on the GroupWise server to sustain the GroupWise Disaster Recovery Collector.

Disk Space on The GroupWise Disaster Recovery Server

The disk space may reside on the GroupWise Disaster Recovery server or on a SAN. The requirements of the disk solution are as follows:

- The disk solution should always be mounted for use with GroupWise Disaster Recovery.
- The disk solution should be formatted with a Linux based file system, specifically a file system that supports symbolic links.
- If the disk is not a SAN, but a NAS solution for example, the mount should be an NFS mount. No other protocol other than NFS.

Calculating Disk Space

The rule of thumb is 2.5 times the post office size per profile.

The GroupWise Disaster Recovery server requires the following disk space per profile:

- Initial backup: 100% of the size of the post office.
- Then 14 days of backups (on average) will be retained: 150% of the size of the post office.
- Remember to take Post Office growth and the host Operating system into account while calculating disk space needs.

For example: A 100 gigabyte post office, for example, would require approximately 250 GB of disk space to retain 14 days worth of backups.

3 System Design

How you implement your GroupWise Disaster Recovery system depends on what your GroupWise is hosted on.

GroupWise Disaster Recovery is a backup system and recovery system. It is built around the idea that 2 is 1 and 1 is none, in other words. if you have two copies of your data then if something happens you still have one copy available.

GroupWise Disaster Recovery can be configured save a backup of your production system, send a copy to an off-site server and to a cloud host to maximize data safety.

GroupWise Disaster Recovery

GroupWise Disaster Recovery backs up your domain and post offices so you can restore items and users. There is also a disaster recovery mode that allows you to use the GroupWise Disaster Recovery server as a POA if a POA goes down.

On the GroupWise Disaster Recovery server you need to create a profile for each domain and post office.

On the GroupWise server you need to set up a restore area.

You should expect to allocate 150% of the space your current GroupWise Post Office is taking up on the GroupWise Disaster Recovery server to accommodate 14 days worth of backups.

The databases and other files are copied to the GroupWise Disaster Recovery server into ~/<profile>/backup/weeknow/<day>

The BLOB (Binary Large OBject) files are copied to the GroupWise Disaster Recovery server into ~/<profile>/blobs

GroupWise on Linux

If GroupWise is on Linux, there are two models for backing up the data:

- Collector/Server
- Server Only

Collector/Server Model

The collector model is built for speed. Backups that take too long to create are not very useful.

The collector agent sits on the GroupWise server, uses DBCopy to make a local copy of the post office databases, then sends the databases, BLOBs and other files to one or more GroupWise Disaster Recovery servers with rsync. This is fast and has minimal impact on the server.

Server Only

The server model uses DBCopy across NFS to copy the production POA across the network to the GroupWise Disaster Recovery server. This is slow and requires a lock on the database for the duration of the transfer.

Restore Options

Restore Mode Restore

With GroupWise on Linux, you have the option to restore emails using the GroupWise Restore Area, which allows users to restore items themselves just by going to File | Open Backup, if the item is in the latest backup. This sets up the links in ~/<profile>/connect/restore for GroupWise to use.

Access Mode Restore

When a backup is loaded a POA is activated. The client can connect to the GroupWise Disaster Recovery Access Mode POA. Items can be saved to a local archive and unarchived to the production GroupWise server.

Restore all items for a user from GroupWise Disaster Recovery via GroupWise Administration

With a Restore Area in place, you can restore all items for a user from GroupWise Administration.

Restore all items for all users from GroupWise Disaster Recovery, via a bash script

With Disaster Recovery setup, you can use a bash script to restore all items back to the production GroupWise Post Office.

GroupWise on Windows

Server Only Model

If GroupWise is on Windows, you may only use the Server model for backing up the data.

Restore Options

Restore Mode Restore

With GroupWise on Linux, you have the option to restore emails using the GroupWise Restore Area, which allows users to restore items themselves just by going to File | Open Backup, if the item is in the latest backup.

Access Mode Restore

When a backup is loaded a POA is activated. The client can connect to the GroupWise Disaster Recovery Access Mode POA. Items can be saved to a local archive and unarchived to the production GroupWise server.

4 Installation

Installation performs the following tasks:

1. Installs the GroupWise Disaster Recovery System software to the path: /opt/beginfinite/reload.
2. Creates initialization scripts to start the GroupWise Disaster Recovery Daemon on server bootup.
3. Creates various GroupWise Disaster Recovery initialization scripts such as "reload, reloadd, reloadm, and reloadj" in the /usr/sbin directory, so that they are available to the Linux administrator "root".
4. Sets up a default GroupWise Disaster Recovery System configuration.
5. Starts the GroupWise Disaster Recovery Daemon.
6. If needed, the installation also installs the GroupWise DBCOPY and GroupWise Agent packages, unless these packages have been installed before, or if the installation determines that other GroupWise agent software is already installed.
7. If the GroupWise Disaster Recovery server has a connection to the Internet and can browse the web, then the GroupWise Disaster Recovery server will attempt to install a piece of software called Xdialog. The Xdialog is used to view GroupWise Disaster Recovery log files in a graphical user interface. It cannot be bundled with GroupWise Disaster Recovery, because of licensing issues, so GroupWise Disaster Recovery downloads it to the GroupWise Disaster Recovery server if the server has a connection to the Internet. Xdialog is not required.
8. Installs a GroupWise Disaster Recovery Administration icon to the root user's Xwindows desktop. If you are in an XWindows type session, you should see an icon on the root user's desktop. This icon is compatible with a basic GNOME or KDE installation. The icon is for convenience, and may not work in all Linux desktop environments.

Prerequisites

GroupWise 2014 or 2014 R2: To successfully integrate with GroupWise 2014 or 2014 R2, GroupWise server needs to be installed on the GroupWise Disaster Recovery server for necessary utilities to be installed. It is necessary to install openmotif for GroupWise.

1. Open YaST, then Software Management and install motif.
2. Install GroupWise 2014 server RPM.

Install GroupWise Disaster Recovery

Download GroupWise Disaster Recovery http://download.gwava.com/download.php?product=Reload&version=rpm or

```
wget "http://download.gwava.com/download.php?product=Reload&version=current"
```

Unzip the archive

```
unzip reload5.zip
```

If installing under SLES 12, install rpm-32bit from YaST.

Install GroupWise Disaster Recovery by running the following command in the same directory the download is in:

```
rpm -ivh reload5.rpm
```

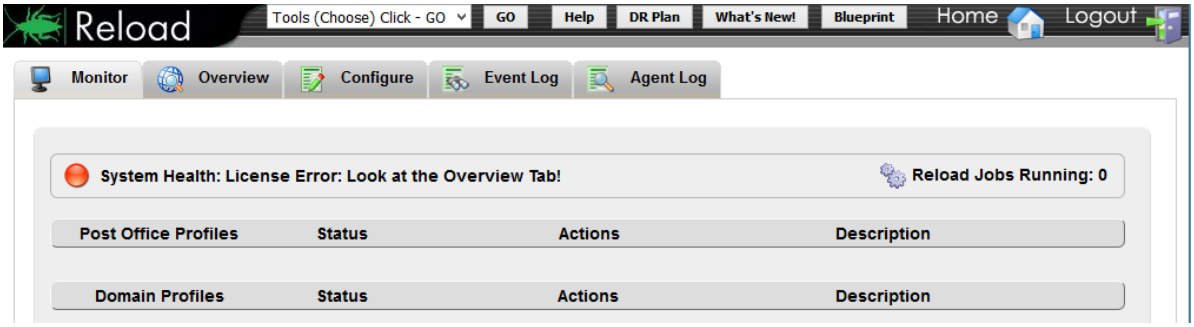
```
reload172:~ # rpm -ivh reload5.rpm
Preparing...                ########################################### [100%]
   1:beginfinite-reload     ###                                        ( 10%)
```

License GroupWise Disaster Recovery

License GroupWise Disaster Recovery by browsing to the https://licenses.gwava.com/ Licensing Website, entering your validation keys and downloading the PEM file.

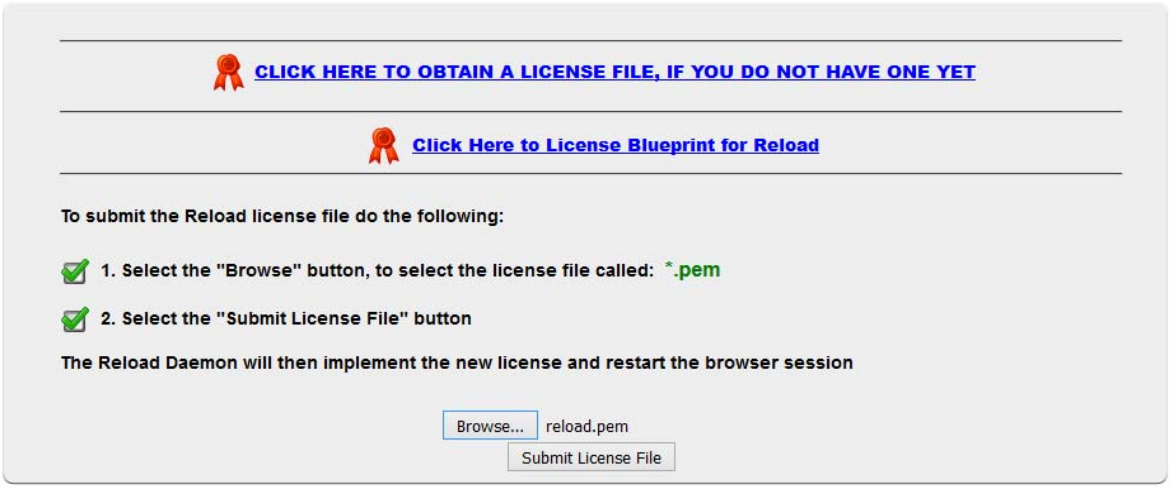
Browse to the GroupWise Disaster Recovery Web Administration console

http://<GroupWise Disaster Recovery_Server_Address>:5555



On the Toolbar, select Tools | License

Browse to the license PEM file



Submit the license file by clicking the *Submit License File* button.

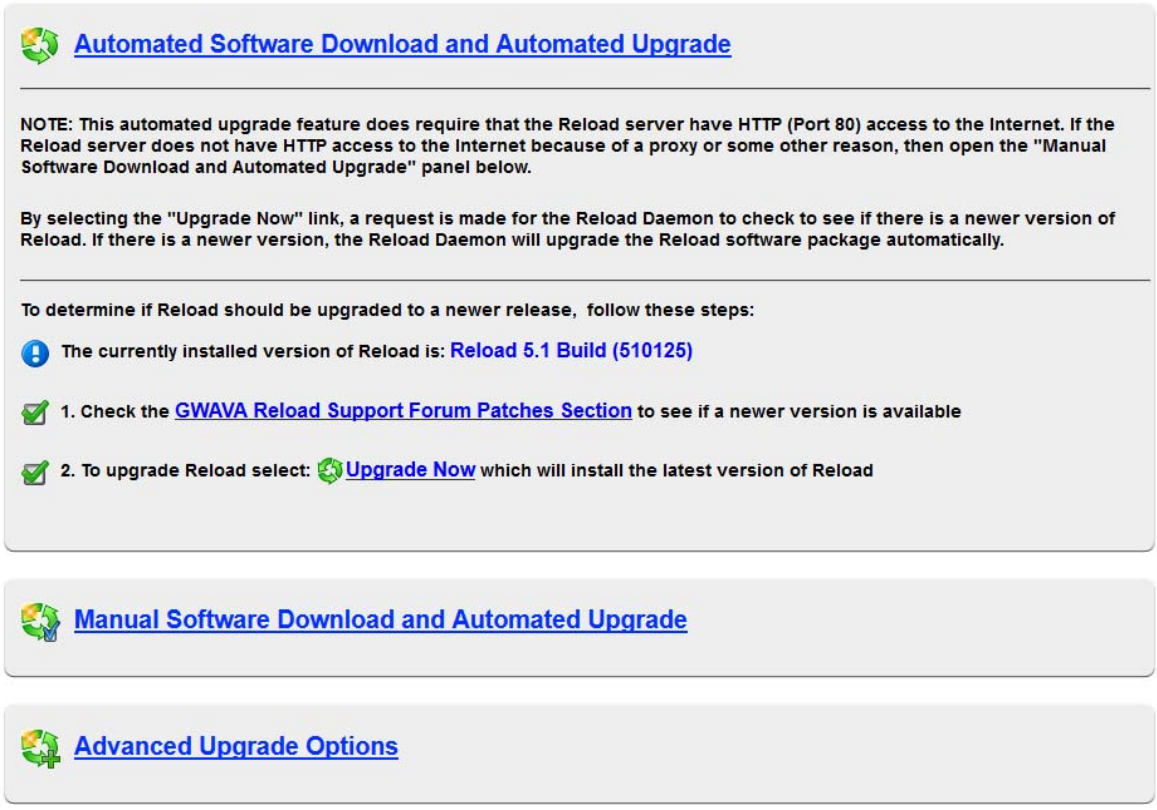
Wait for GroupWise Disaster Recovery to consume the license.

Upgrading GroupWise Disaster Recovery

Web Console

To upgrade GroupWise Disaster Recovery from the Web Console, choose upgrade from the Tools dropdown menu, press Go.

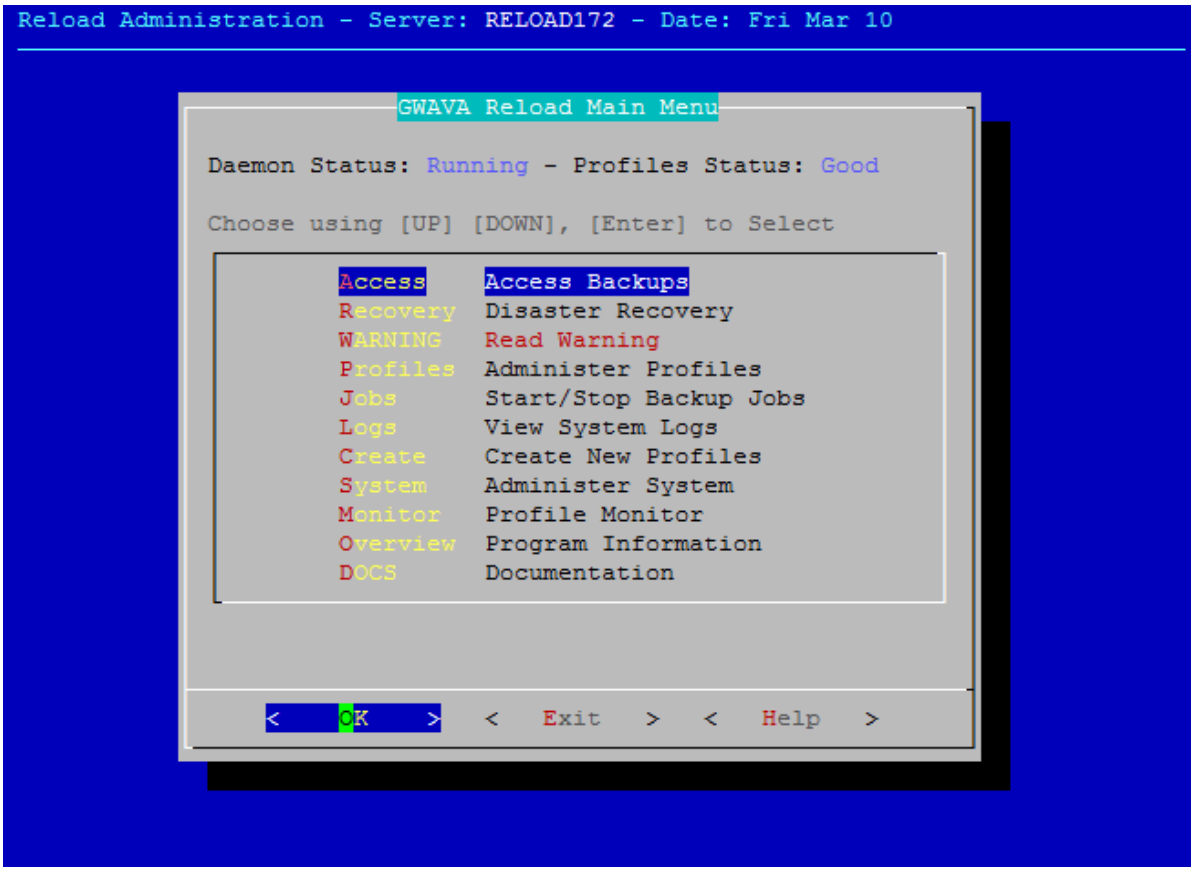
Select Upgrade Now



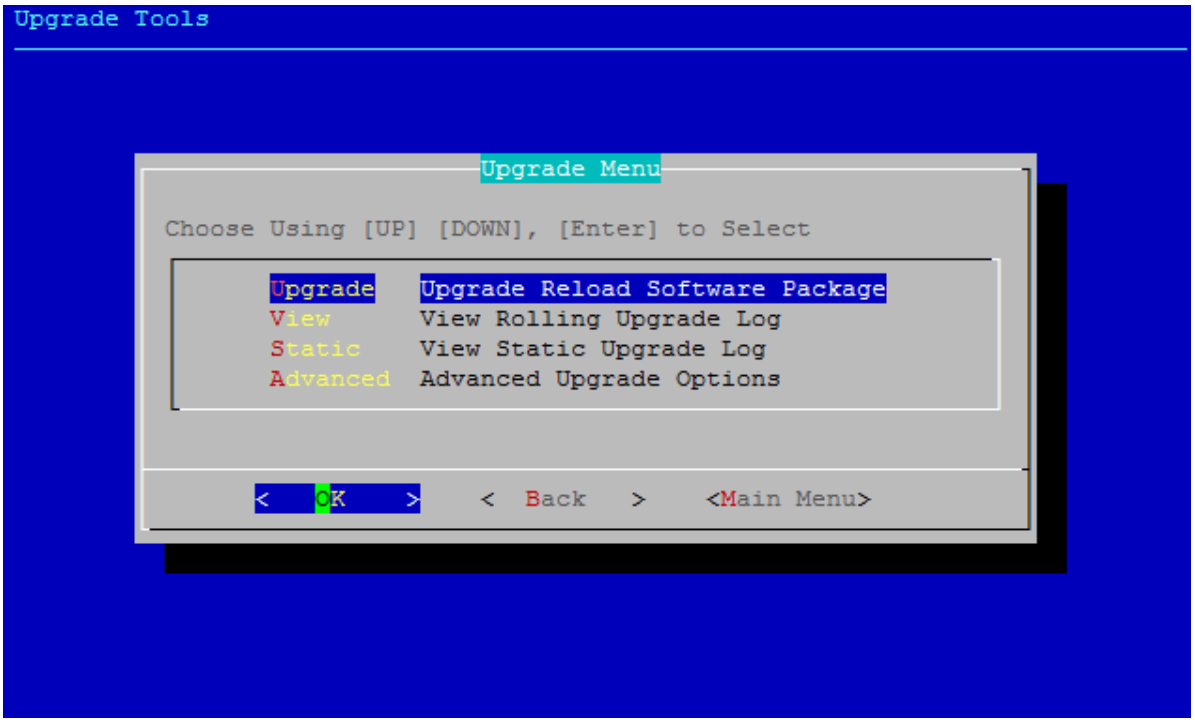
GroupWise Disaster Recovery Administration

To upgrade GroupWise Disaster Recovery from the Retain Administration, run:

```
reload
```



Choose *System* | *Tools* | *Upgrade* | *Upgrade*



Progress will be shown onscreen.

Command Line

To upgrade GroupWise Disaster Recovery from the command line, run:

```
reloadu
```

`reloadu -r` will force a download of the available version even if you previously downloaded it.

`reloadu -h` shows a help page

If the GroupWise Disaster Recovery server does not have access to the internet then the update can be downloaded from http://download.gwava.com/download.php?product=Reload&version=current

Copy the file to the GroupWise Disaster Recovery Server and place in

`/opt/beginfinite/reload/upgrade`

At a command prompt, type:

```
reloadu
```

Automatic Upgrades

To have GroupWise Disaster Recovery automatically upgrade itself, create a cron job:

```
crontab -e
```

and enter

```
00 1 * * 3 root /usr/sbin/reloadu
```

Upgrading the Collector

If you are using the Collector/Server Model, the collector will upgrade itself from the server when the next job begins:

When the GroupWise Disaster Recovery server is upgraded it dumps the upgrade rpm in:

```
/reload/[POprofile]/gre_data/sync/gre_data/proc/upgrade
```

When a backup job runs the collector uses rsync to check for an rpm upgrade file. If it does it transfers the rpm to:

```
/opt/beginfinite/reload/upgrade
```

If successful the collector upgrades itself, then corrupts of the rpm on the GroupWise Disaster Recovery server so it can’t upgrade again. The GroupWise Disaster Recovery server will check the rpm for corruption and if it is, deletes the corrupt rpm since the upgrade has been completed.

Uninstall GroupWise Disaster Recovery

This only removes the GroupWise Disaster Recovery Software Package. The configuration data, profiles and profile backups are left in their storage directories. The data can be removed manually.

To uninstall the GroupWise Disaster Recovery Software Package, run:

`/opt/beginfinite/reload/uninstall`

Reinstall GroupWise Disaster Recovery

To reinstall GroupWise Disaster Recovery Software Package, run:

```
reloadu
```

5 Configuration

Post-Install Tasks

There are a few post-install tasks that need to be taken care of once GroupWise Disaster Recovery has been installed.

1. Setting the GroupWise version in GroupWise Disaster Recovery so GroupWise Disaster Recovery uses the correct GroupWise software
2. Enable Maintenance Purge in GroupWise so messages are not deleted from disk before GroupWise Disaster Recovery is able to backup all messages
3. Configure Notifications of system status
4. Configure GroupWise Disaster Recovery Backup Profiles for each GroupWise Domain and Post Office
5. Configure the Restore Area between GroupWise Disaster Recovery and GroupWise so items can be easily restored
6. Configure Auto-GroupWise Disaster Recovery so the most recent backup is always available
7. Configure Tape Backup for long term storage

Set the GroupWise version in GroupWise Disaster Recovery Administration

To run most effectively GroupWise Disaster Recovery should use the version of GroupWise software that the GroupWise server is using

Select GroupWise Version

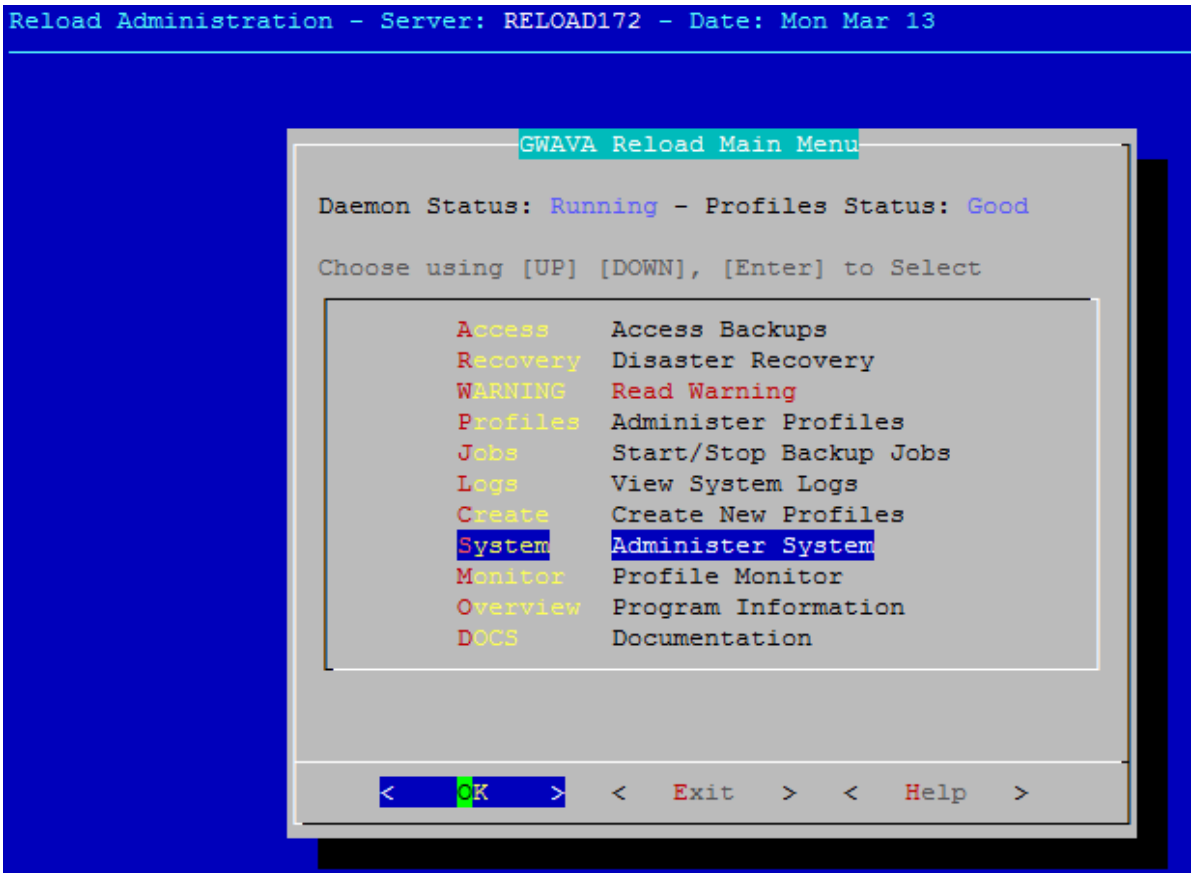
Go to GroupWise Disaster Recovery Administration by running:

```
reload
```

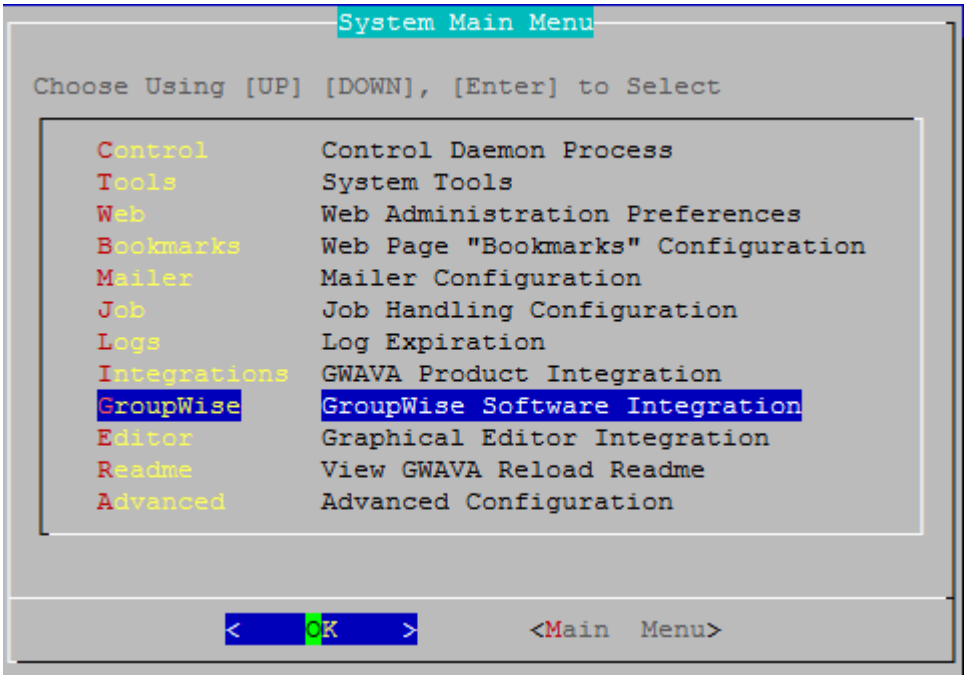
The first time it is run you will be shown the readme page.

Then go to *System* | *GroupWise* | *Version* and press Space to select the appropriate version of GroupWise.

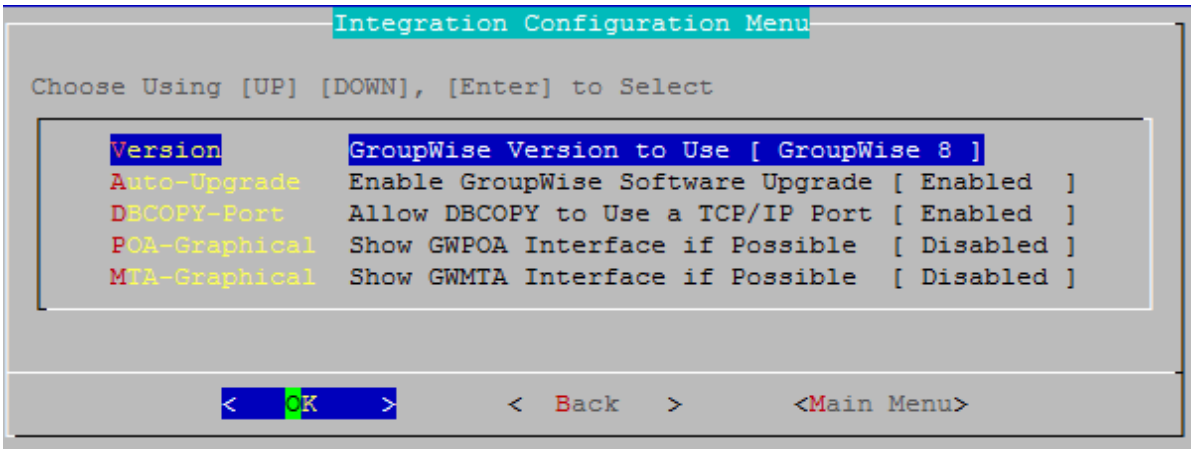
Select System: Administer System



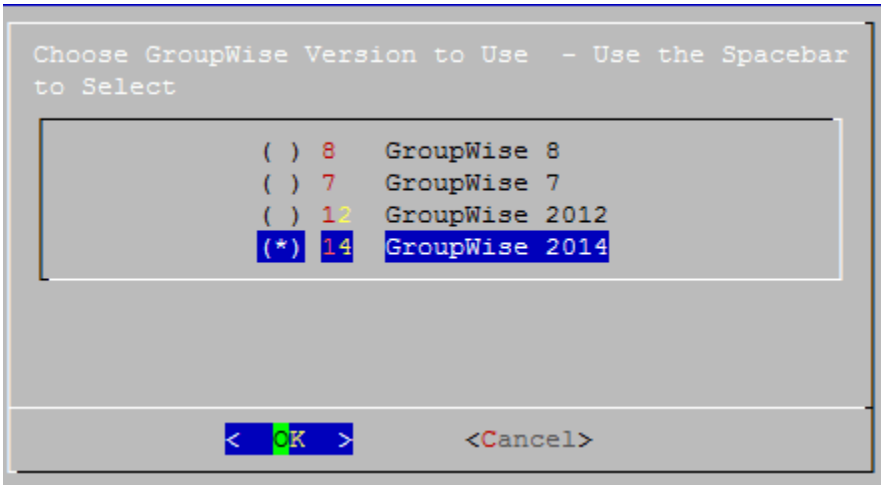
Select GroupWise: GroupWise Software Integration



Select Version: GroupWise Version to Use



Press Space to select your GroupWise version



Manually installing the GroupWise software

Should that fail the GroupWise software can be added manually:

Determine what, if any, GroupWise software is already loaded. Get a list of installed GroupWise software by running:

```
rpm -qa | grep groupwise
```

This will return a list of GroupWise components already installed or just return to the command line if nothing is installed. For example, novell-groupwise-dbcopy and novell-groupwise-agents

Uninstall existing software by running:

```
rpm -e <software>
```

To uninstall GroupWise 8 and 2012:

```
rpm -e novell-groupwise-dbcopy
```

```
rpm -e novell-groupwise-agents
```

To uninstall GroupWise 2014:

```
rpm -e novell-groupwise-server
```

Install the GroupWise software:

For GroupWise 8 and 2012, DBCopy and the agent software must be installed from the GroupWise installation software package. DBCopy is found in the "admin" directory and the agent software is found in the "agents" directory.

For example, GroupWise 2012:

```
rpm -ivh novell-groupwise-agents-12.0.2-108211.i586
```

```
rpm -ivh novell-groupwise-dbcopy-12.0.2-108211.i586
```

For GroupWise 2014 and 2014R2, install the server software found in the "server" directory.

```
./install_server.sh
```

NOTE: Once the GroupWise software is installed, GroupWise Disaster Recovery and Blueprint can immediately use the version of software that you install. The version of GroupWise will eventually be reported correctly in the GroupWise Disaster Recovery Web Administration and GroupWise Disaster Recovery Console menu. It can take up to an hour because GroupWise Disaster Recovery only checks the version of the GroupWise software that is installed every hour.

Configure Maintenance Purge

This is optional but without it, you will only get a snapshot and not a complete backup.

To prevent items from being deleted from GroupWise before they are backed up, it is recommended to enable Message Retention Services across the Domain.

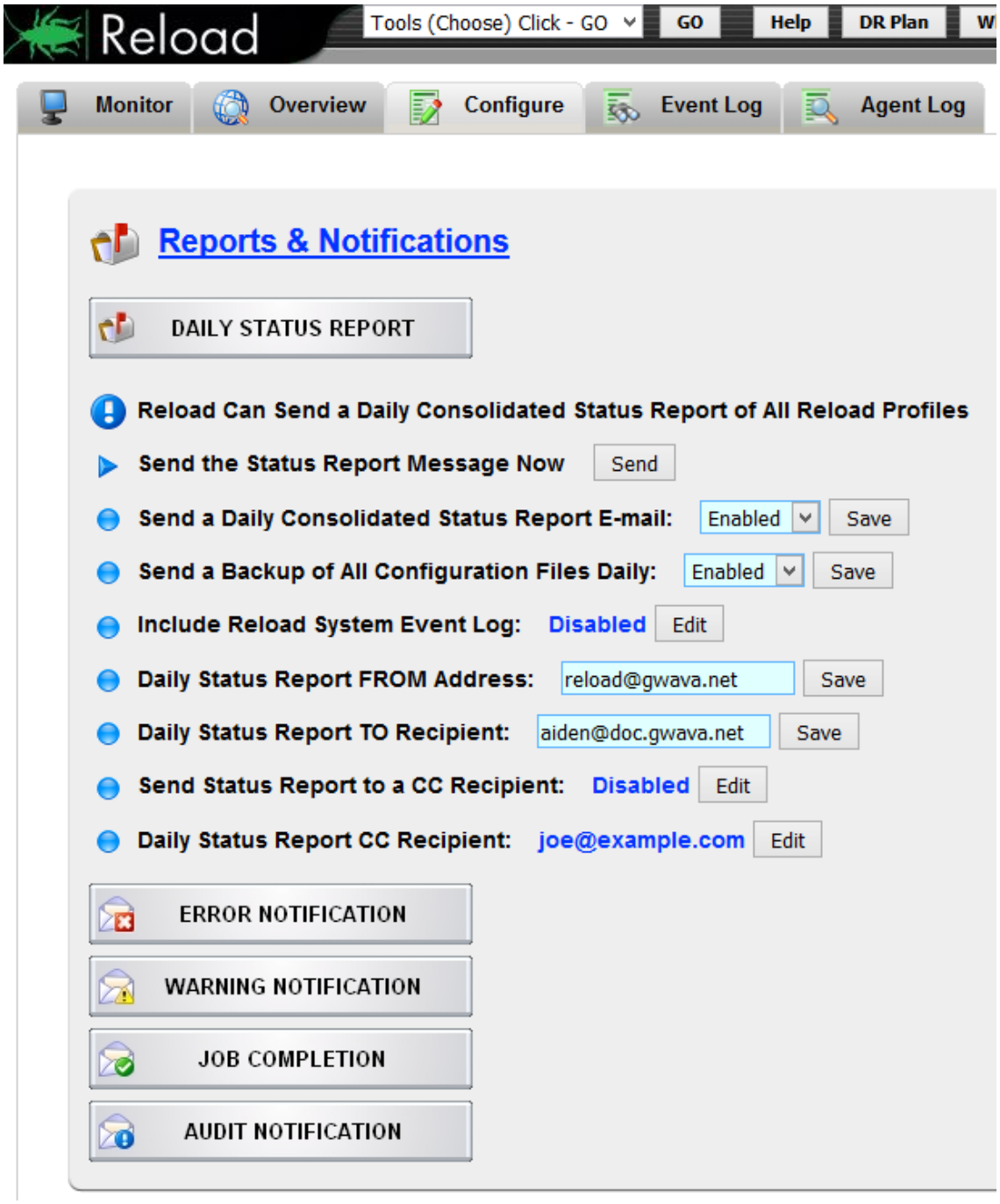
1. Go into *GroupWise Administration* | *Domain* | *<specific system>* | *Client Options* | *Environment* | *Cleanup* | *Maintenance*
2. Enable "*Do not purge items until they are backed up*"

Configure Notifications

GroupWise Disaster Recovery will send notifications about Daily Status, Errors, Warnings, Job Completion and Audit events.

Configure Reports & Notifications

1. Browse to the GroupWise Disaster Recovery Web Administration Console
2. Select the Configure tab
3. Open the "*Reports & Notifications*" section



4. Configure each section:
    a. Enable each type of notification you wish to receive
    b. Enable each section with a Notification TO Recipient

Confirmation

To see if this worked, press the Send button for each section and check your mailbox.

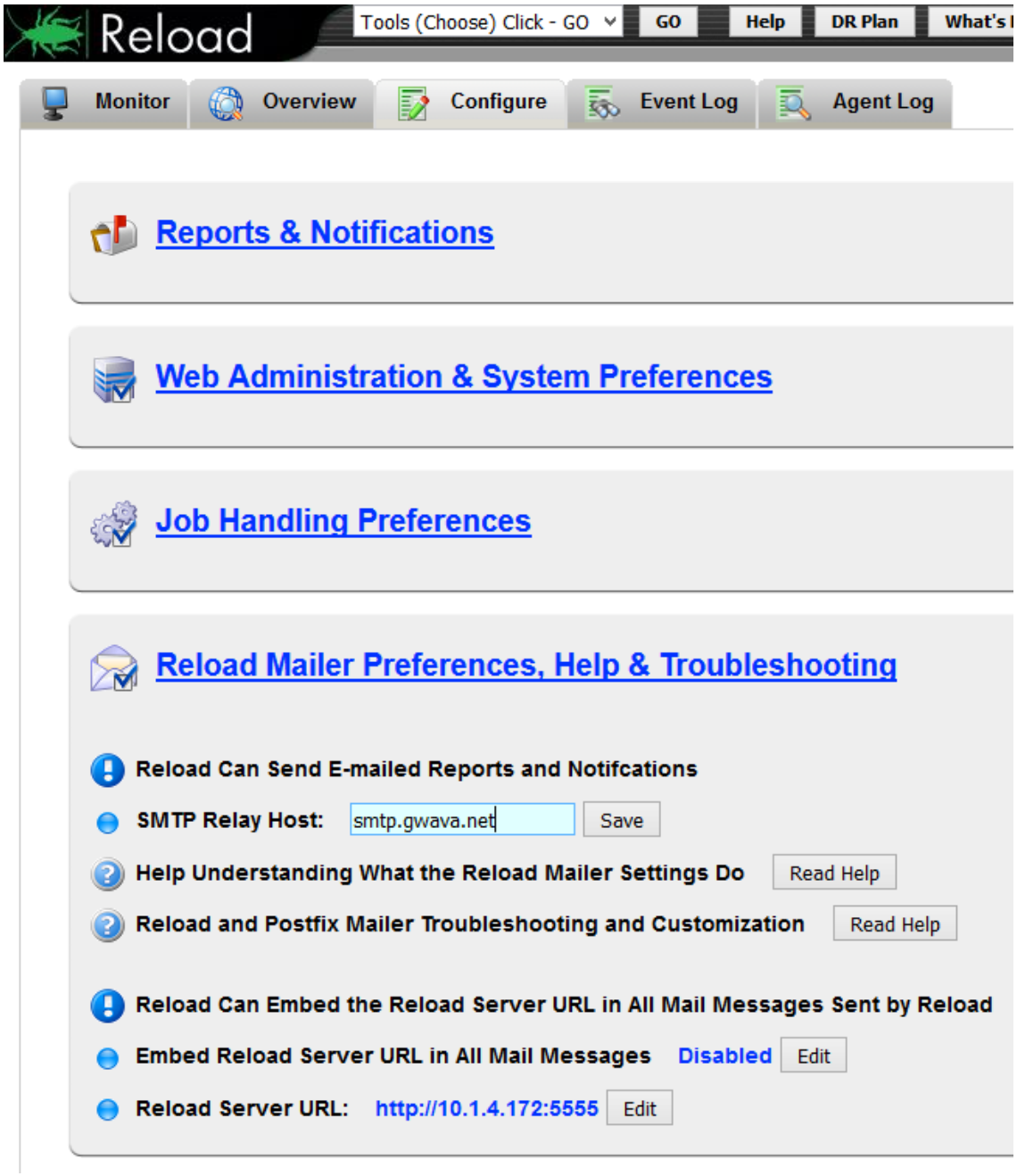
TIP: You can change the From address for each section. You may want to consider using different From addresses and filtering the status messages to go to a folder while errors and warnings go to your inbox to make managing your inbox easier.

Troubleshooting Notifications

If you are unable to receive messages from GroupWise Disaster Recovery you can check the Agent log for errors. GroupWise Disaster Recovery uses postfix to send mail. Searching for postfix in the log may help you find out what is happening.

A common issue is that the GroupWise Disaster Recovery server cannot find the SMTP relay host. You can set this manually.

1. Browse to the GroupWise Disaster Recovery Web Administration Console
2. Select the Configure tab
3. Open the "*GroupWise Disaster Recovery Mailer Preferences, Help & Troubleshooting*" section
4. Set the "*SMTP Relay Host*" to your mail server, and save

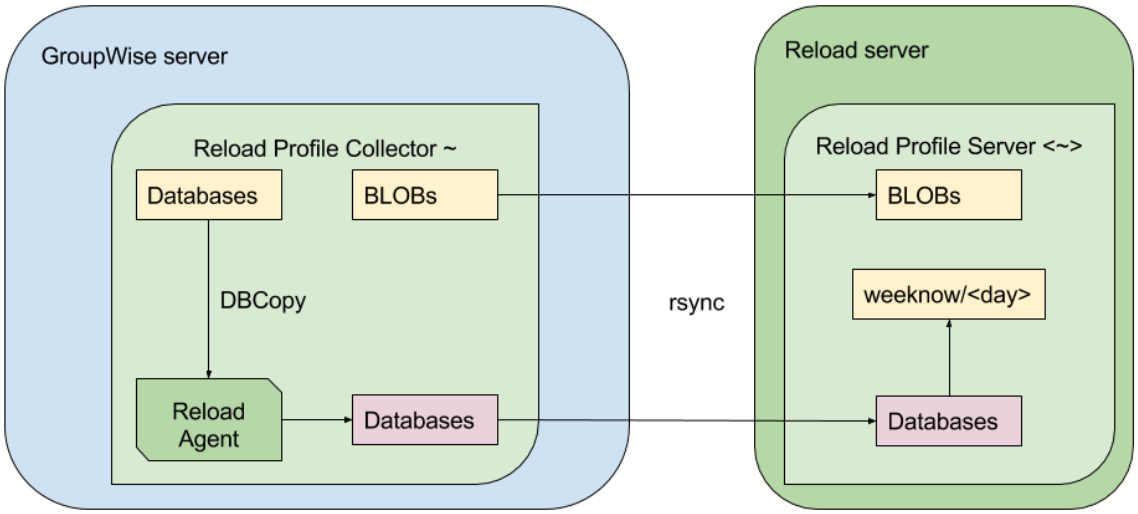


5. Send another test message.

GroupWise on Linux

Collector/Paired Server Profiles

The Collector model creates a software agent called a collector that handles transferring the data to the GroupWise Disaster Recovery server.

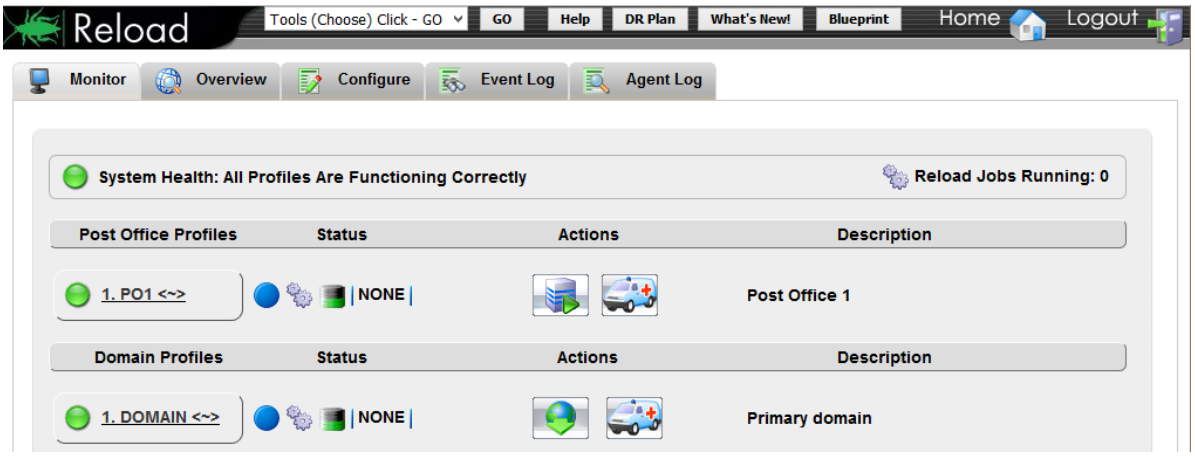


It is faster than the Server Only model and can send the data to up to three different GroupWise Disaster Recovery server.

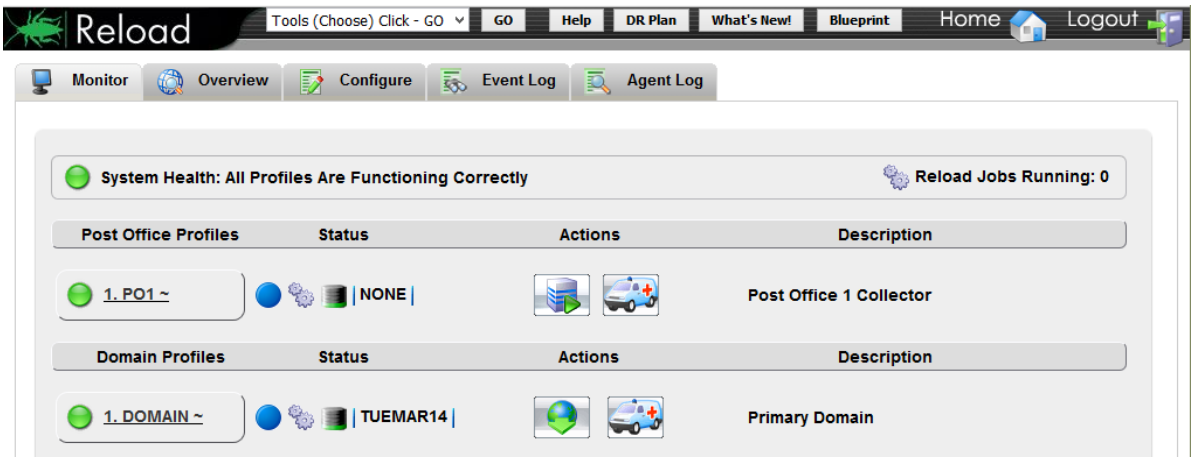
The BLOB files are copied to the GroupWise Disaster Recovery server via rsync.

Because database files need to be locked during copy operations the GroupWise Disaster Recovery agent will use DBCopy to make a copy of the databases locally on the GroupWise server to minimize the impact of the copy, then transfer the databases to a temporary directory on the GroupWise Disaster Recovery server. Once successfully transferred to the GroupWise Disaster Recovery server the databases are moved to the appropriate backup directory.

You first set up a receiving server profile (marked with a <~>) on the *GroupWise Disaster Recovery server*.



Then setup a sending collector profile (marked with a ~) on the *GroupWise server*.



Prerequisites

You will need to create a directory on the GroupWise Disaster Recovery and the GroupWise server for the backup data. The name of the profile will be used to create sub-directories for each profile. For example:

```
/reload/
```

You will need to know the directories on the GroupWise server for the live data. For example:

```
/groupwise/domain
```

```
/groupwise/po1
```

Configure Profiles

There are two kinds of Collector/Server Model profiles: Domain (Collector_Model_Domain_Profiles.htm) and Post Office (Collector_Model_Post_Office_Profiles.htm).

Troubleshooting Collector Connectivity Issues

That are occasionally issues with the Collector connecting properly to the GroupWise Disaster Recovery server during profile testing and an error like this appears:

The authenticity of host `<ip address>` can't be established. ECDSA key fingerprint is `<numeric value>` [MD5]

Are you sure you want to continue connecting (yes/no)?

On the server with the GroupWise Disaster Recovery Collector:

1. Go to the directory:

   ```
   /root/.ssh
   ```
2. Delete all files in the directory
3. In the terminal, enter the command

   ```
   ssh-keygen -t rsa
   ```
4. Take the default values or enter your own, if desired

5. Exchange the ssh keys with the GroupWise Disaster Recovery server by entering the command:

   ```
   ssh-copy-id -i /root/.ssh/id_rsa.pub <address of Paired GroupWise Disaster Recovery Server>
   ```

   For example, `ssh-copy-id -i /root/.ssh/id_rsa.pub 10.1.1.123`
6. Return to the GroupWise Disaster Recovery Console and retest the Profile

Collector Model Domain Profiles

Paired Collector/Paired Server Model

The Collector model creates a software agent called a collector that handles transferring the data to the GroupWise Disaster Recovery server.

You first set up a receiving server profile (marked with a <~>) on the GroupWise Disaster Recovery server, then a sending collector profile (marked with a ~) on the GroupWise server.

It is faster than the Server Only model and can send the data to up to three different GroupWise Disaster Recovery server, but requires copying parts of the domain or post office to another directory before sending the data so it has a snapshot of the data.

Prerequisites

You will need to create a directory on the GroupWise Disaster Recovery and the GroupWise server for the backup data. The name of the profile will be used to create sub-directories for each profile. For example:

```
/reload/
```

You will need to know the directories on the GroupWise server for the live data. For example:

```
/groupwise/domain
```

```
/groupwise/po1
```

Configure Profiles

Domain Profile: Collector/Paired Server Model

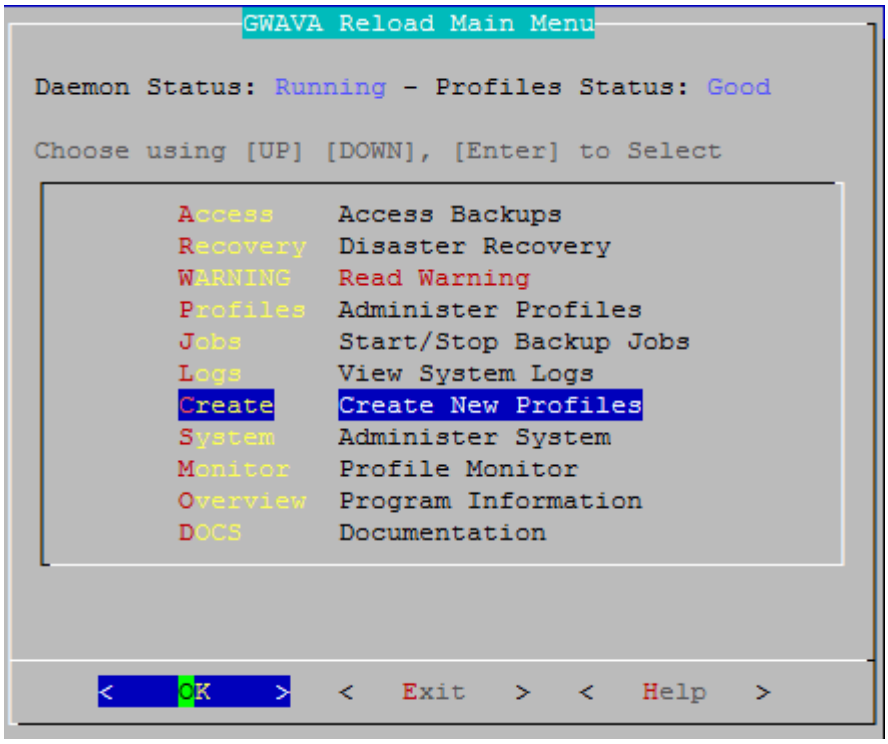
Create a Paired Server to receive the data sent by the Collector:

On the GroupWise Disaster Recovery Server, create the Paired Server:

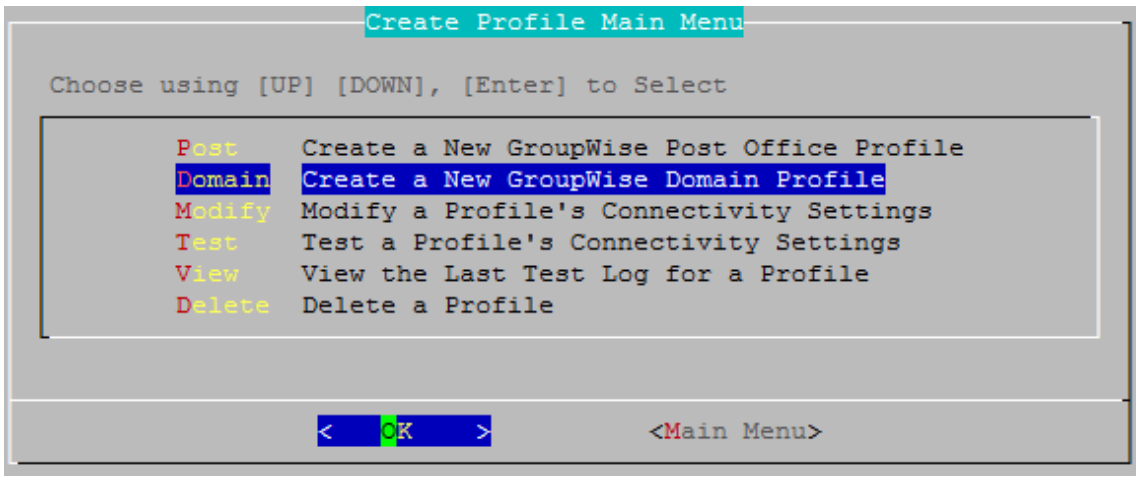
1. Create a directory for the backup data. For example:

   mkdir /reload
2. Start the GroupWise Disaster Recovery Administration Console by typing on the command line:

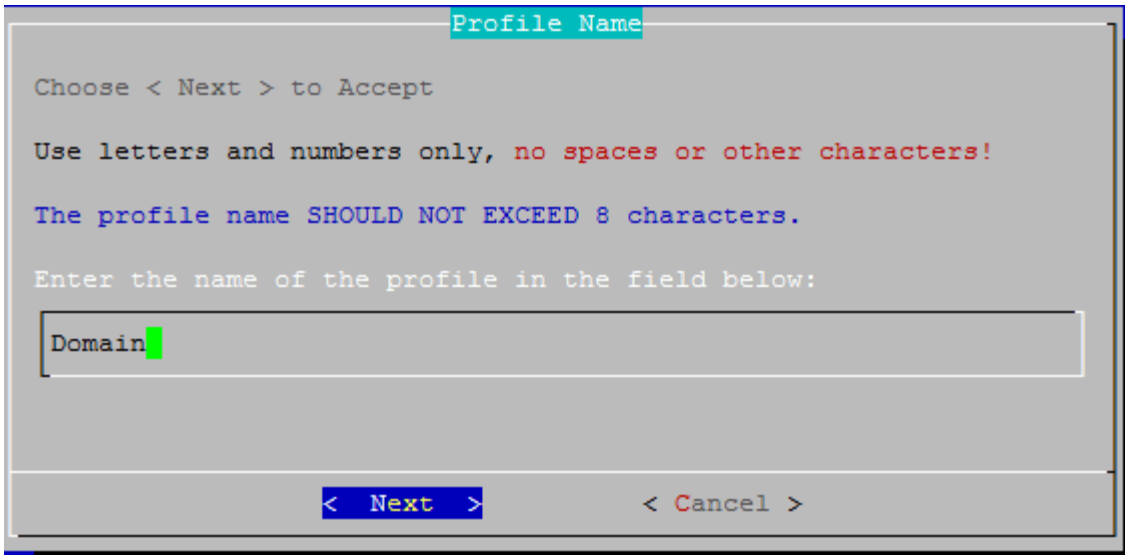
   reload
3. Select "Create (Create Profile)"



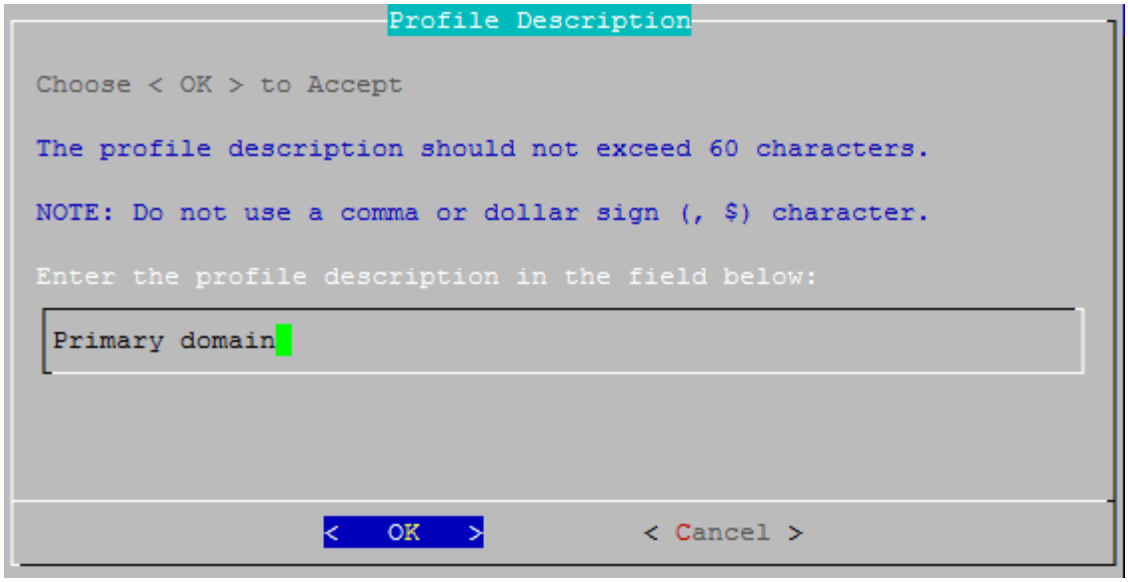
4. Select "Domain (Create a New GroupWise Domain Profile)"



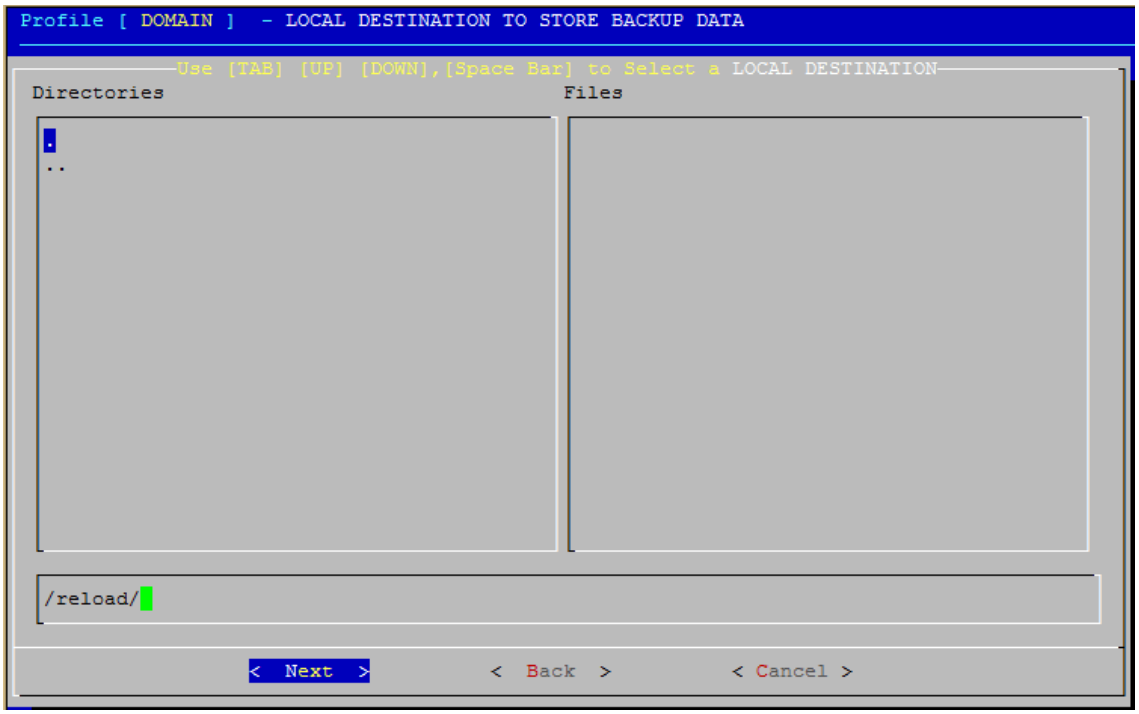
5. Give the Profile a Name. The profile name should not exceed eight characters. Use letters and numbers only, no spaces or other characters. For example: Domain Be aware, that a profile cannot be renamed, once it has been created. Choose the name wisely. Perhaps you will want to name the profile so that its name is the same as the GroupWise post office or domain that the profile represents. Select the Next button.



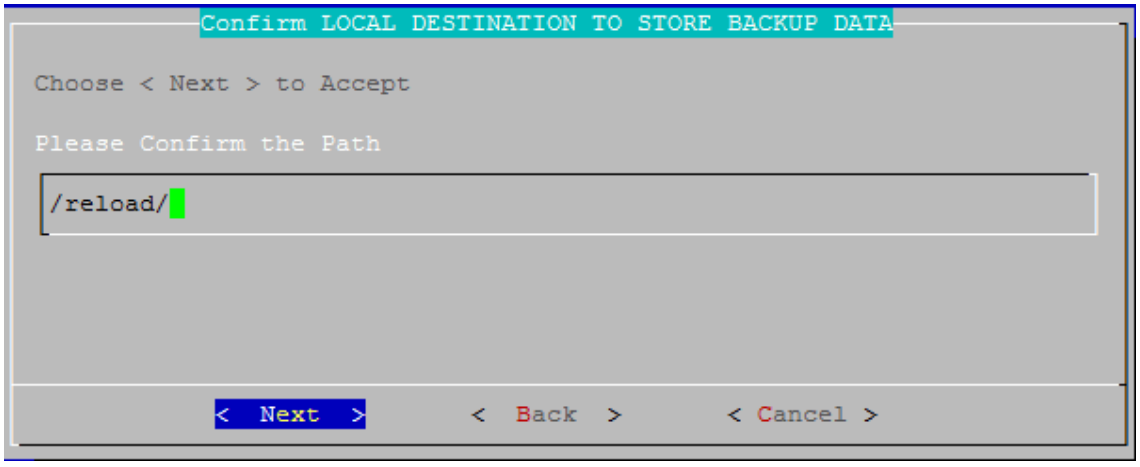
6. Give the Profile a Description. The profile description should not exceed 60 characters and should not have comma(,), nor dollar sign($) characters. For example: Primary Domain. The description of the profile will be added to the Agent Log when backup jobs are run for the profile. Select the Next button.



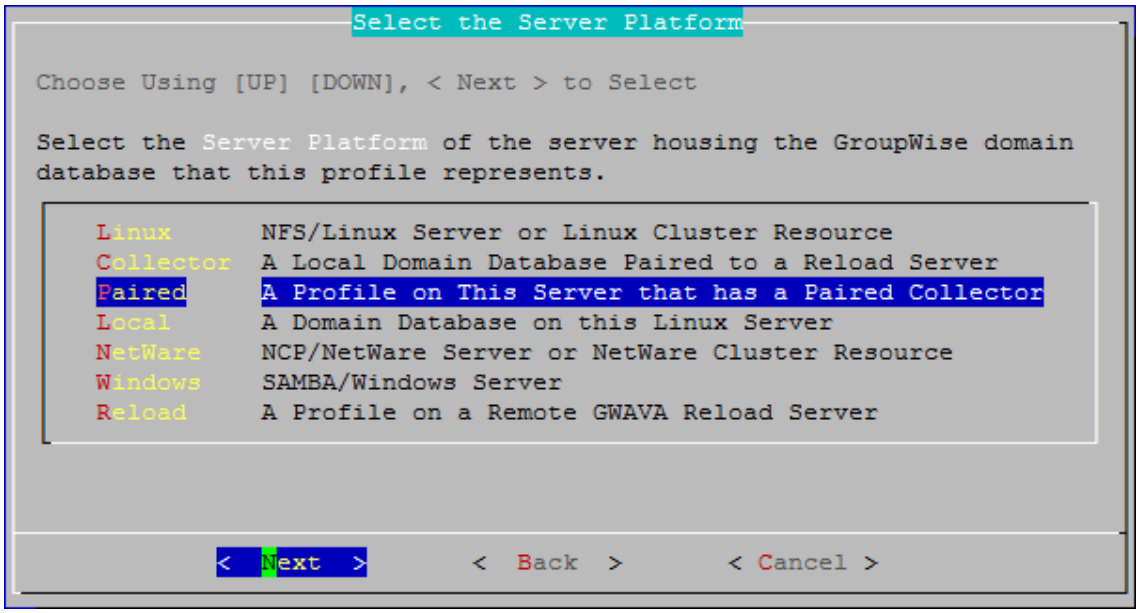
7. Backup Path: Enter the path or browse to the local destination directory to store the backup data. For example: /reload. This path can be a location on the Linux server, or an NFS mount to another Linux/Unix server, or to a SAN. Do not use a NAS as it doesn't allow the right kind of access. The path should always be available; GroupWise Disaster Recovery is not configured to mount paths in order to access stored data. Also, the path should be to a location that has a lot of disk space available. Select the Next button.



8. Confirm the path to the local destination directory

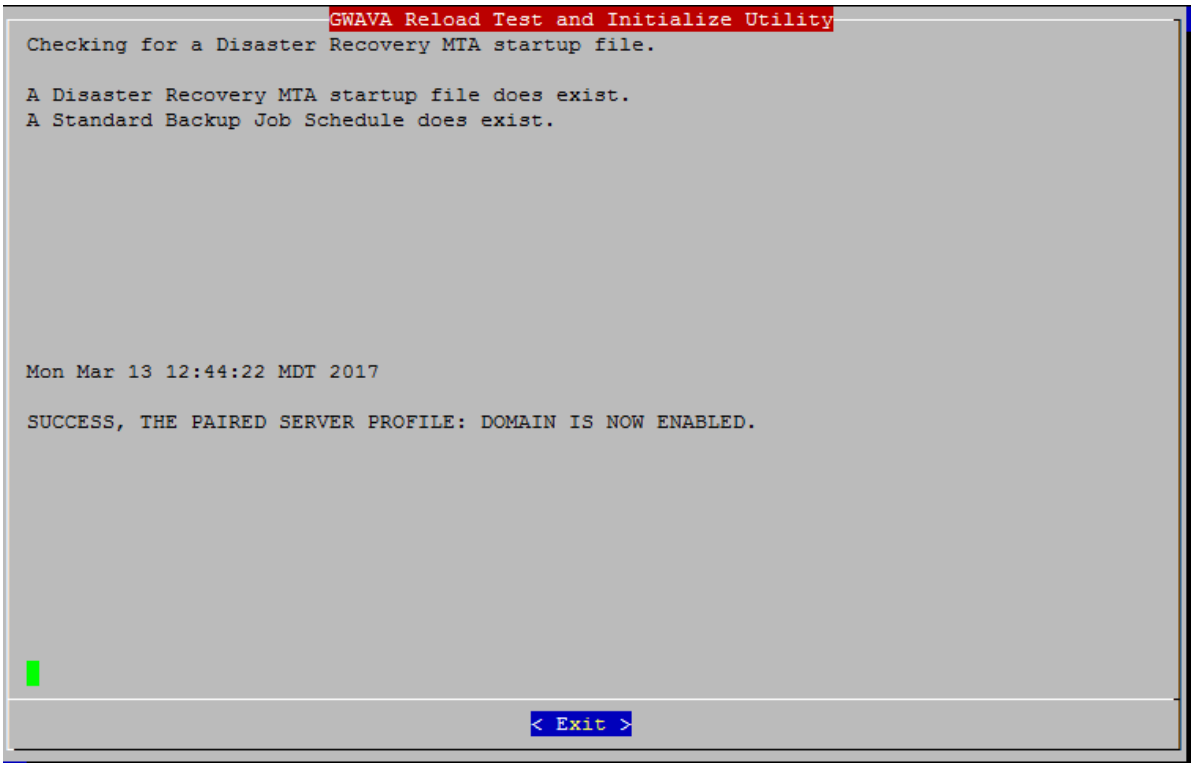


9. Choose the server type: "Paired (A Profile on This Server that has a Paired Collector)". Select the Next button.



10. The profile creation wizard tests and initializes the newly created profile and prepares it to accept a pairing request from a Paired Collector, and initializes the newly created profile and prepares it to accept a pairing request from a Paired Collector.

Testing and initializing a profile does not backup the post office or domain in any way.



Once a profile is tested and initialized successfully, the profile is available to be configured further. The default configuration of a profile is sufficient for making quickly accessible backups with GroupWise Disaster Recovery. Further configuration of the profile should be done in GroupWise Disaster Recovery Web Administration.

To be able to backup the data, a collector needs to be created on the GroupWise server.

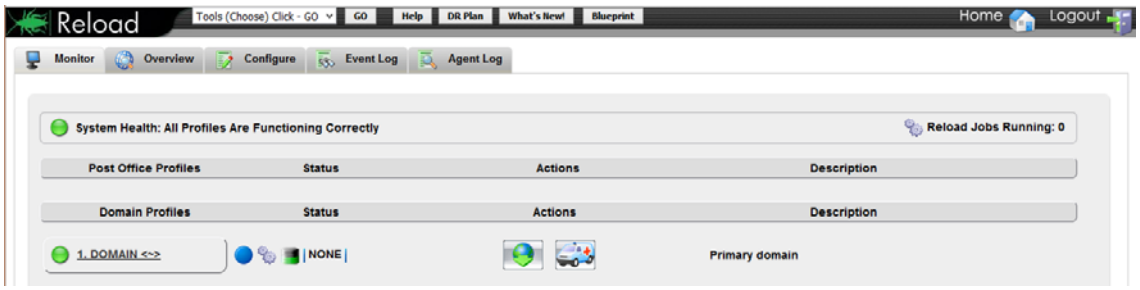
On the GroupWise Server, create the Collector:

- On the GroupWise server, the collector will need to be downloaded, installed and configured to connect to the GroupWise Disaster Recovery server.

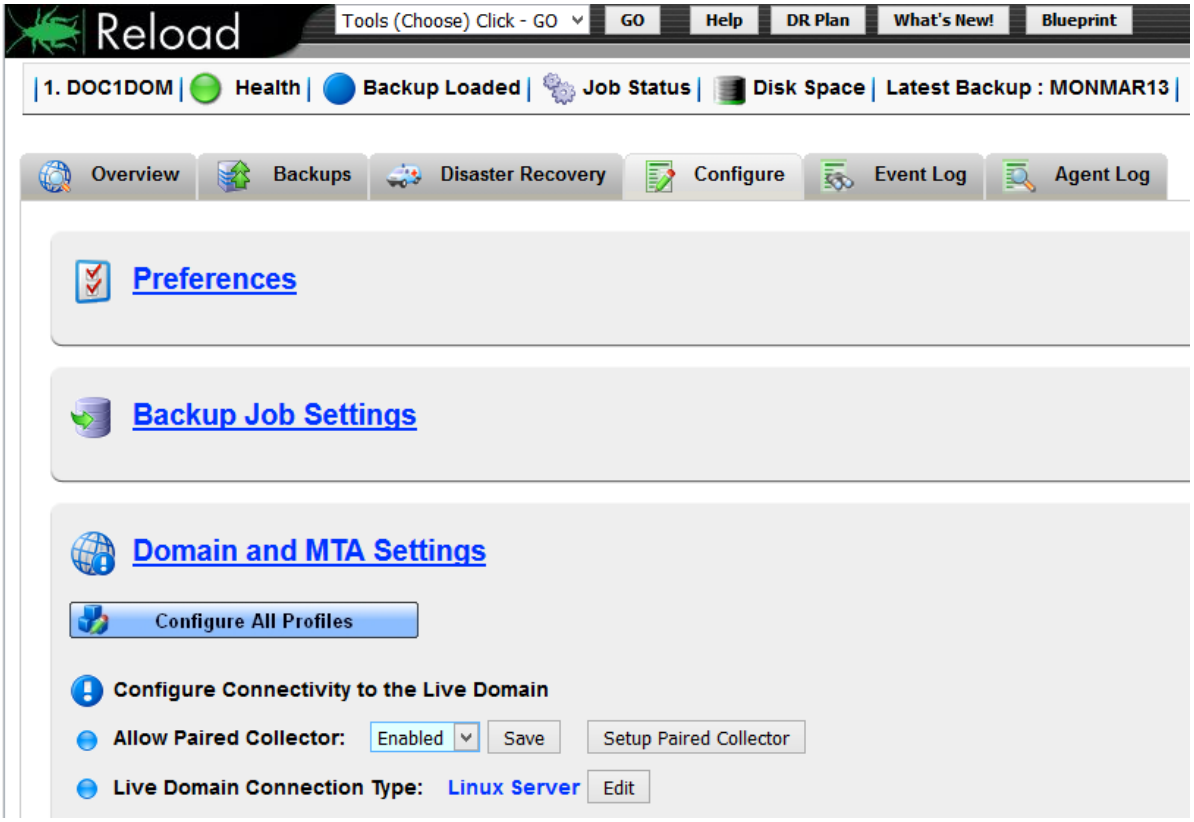
If this is an *existing GroupWise Disaster Recovery installation* with an existing Server model connection for the profile:

On the GroupWise Disaster Recovery server, browse to the GroupWise Disaster Recovery Web Administration Console: http://<GroupWise Disaster Recovery_Server_IP_or_Hostname>:5555

1. Select the profile



2. Click on the Configure tab
3. Open the Domain and MTA Settings panel
4. Enable "Allow Paired Collector", press Save, and click on "Setup Paired Collector" to have GroupWise Disaster Recovery copy the Collector Agent software to the GroupWise server.



On the GroupWise server, in the Domain directory a new directory (/collect) will be created and the file "reload_collector.rpm" will be created.

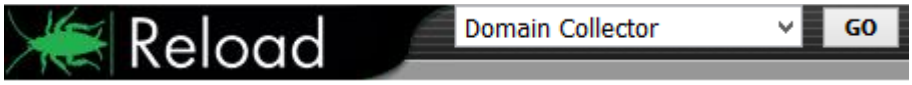
- Open a terminal window, go to where the file is and run:

  ```
  rpm -i reload_collector.rpm
  ```

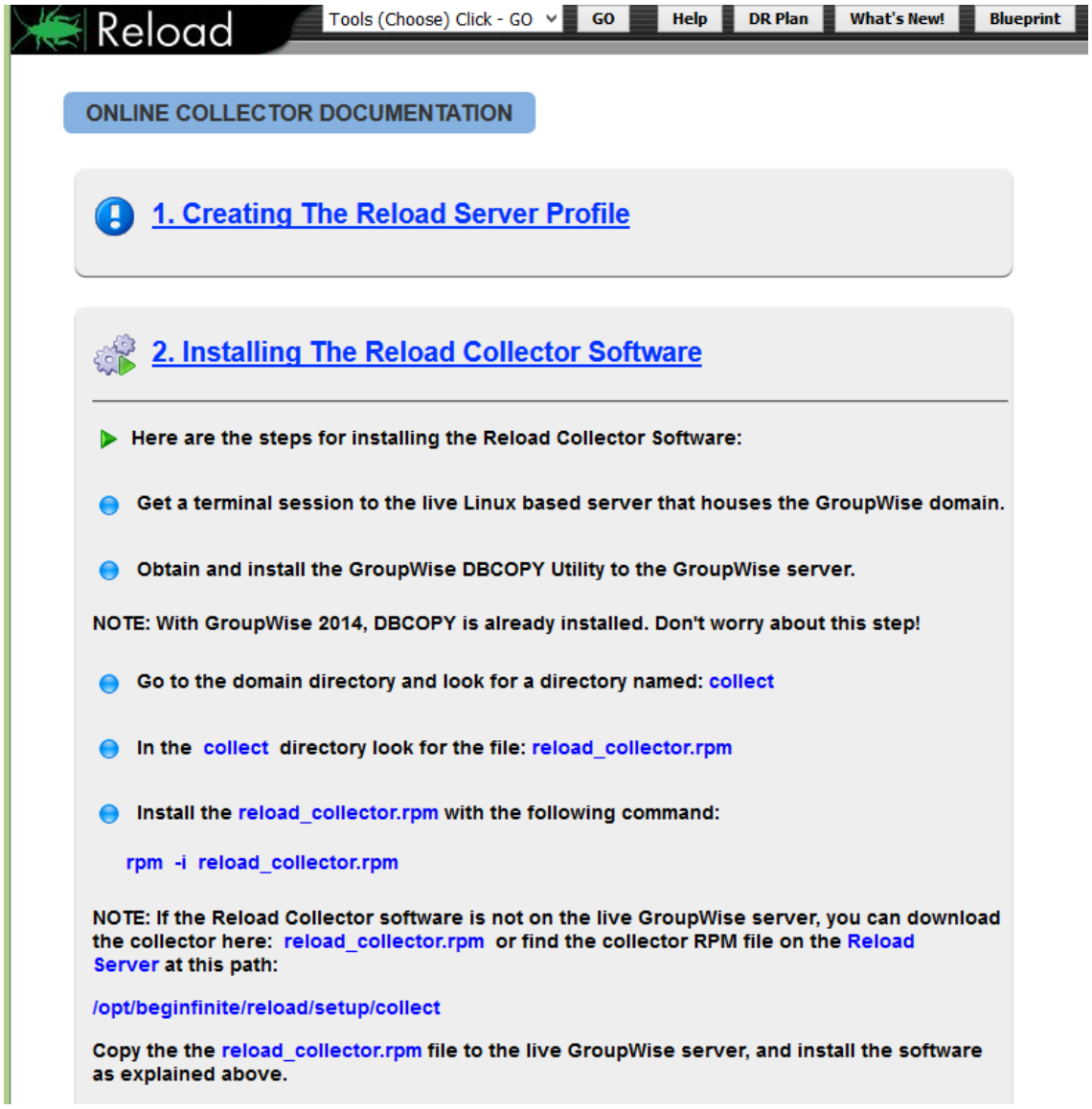
If this is a *new installation* with no preexisting connection:

On the GroupWise server, browse to the GroupWise Disaster Recovery Web Administration Console. http://<GroupWise Disaster Recovery_Server_IP_or_Hostname>:5555

1. From the Tool dropdown menu select Domain Collector



2. Click on 2. Installing the GroupWise Disaster Recovery Collector Software to open the section



3. Click on reload_collector.rpm to download
4. Open a terminal window, go to where the file is and run:

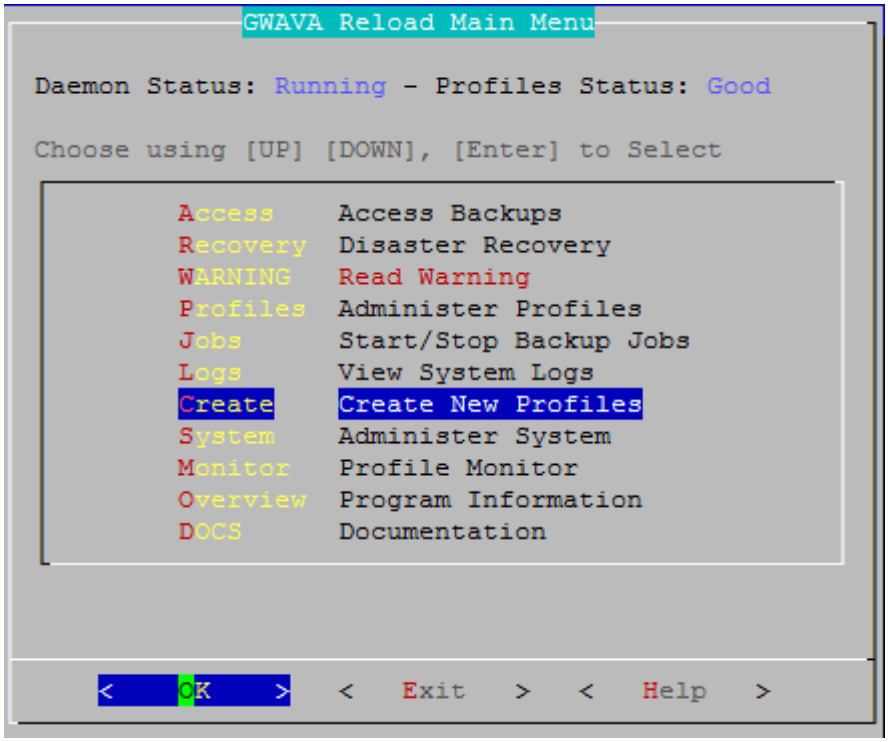
   ```
   rpm -i reload_collector.rpm
   ```

Configure Collector Agent

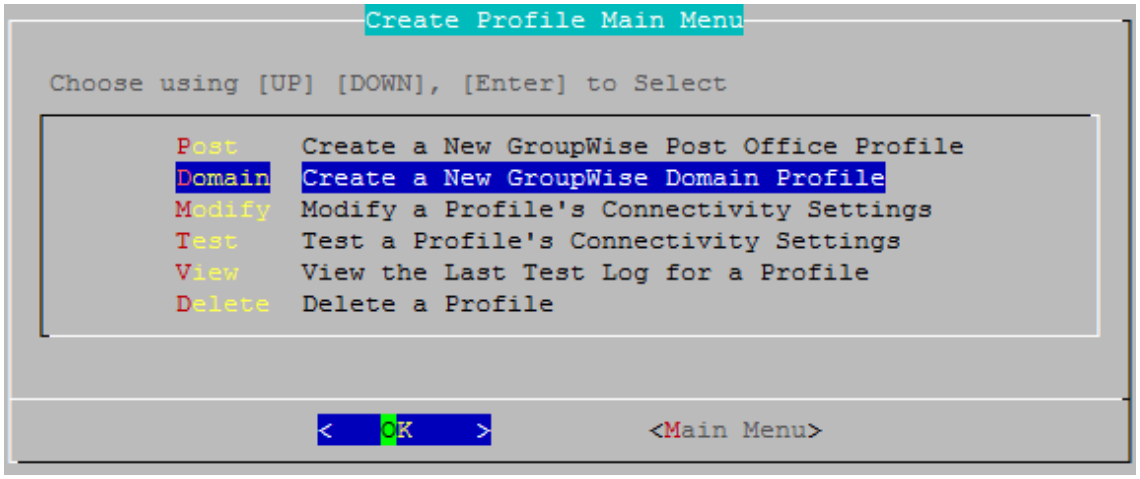
Once the collector is installed, on the GroupWise server, start the GroupWise Disaster Recovery Administration Console by typing on the command line:

reload

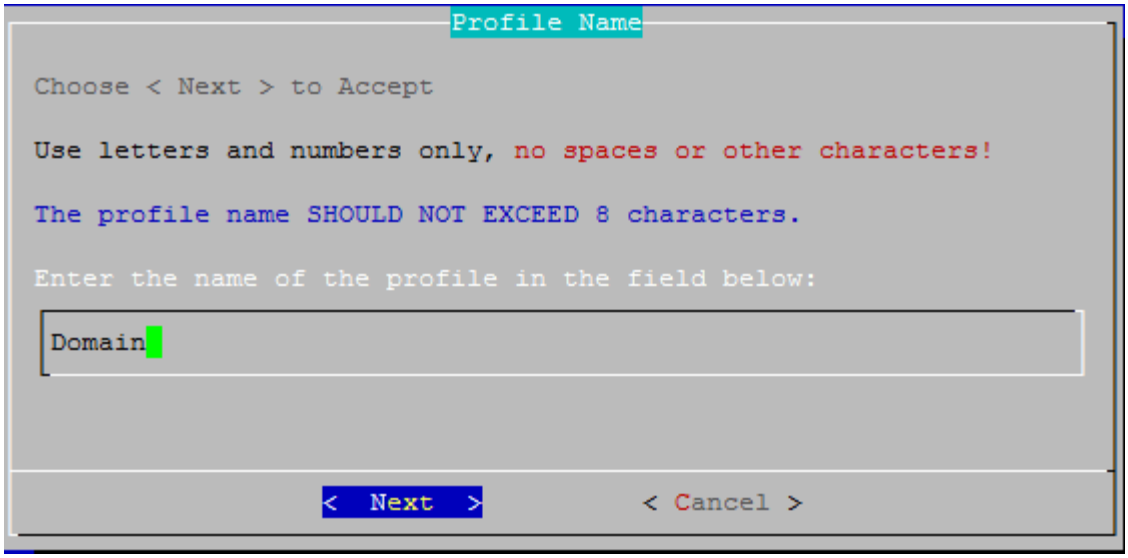
1. Select "Create (Create Profile)"



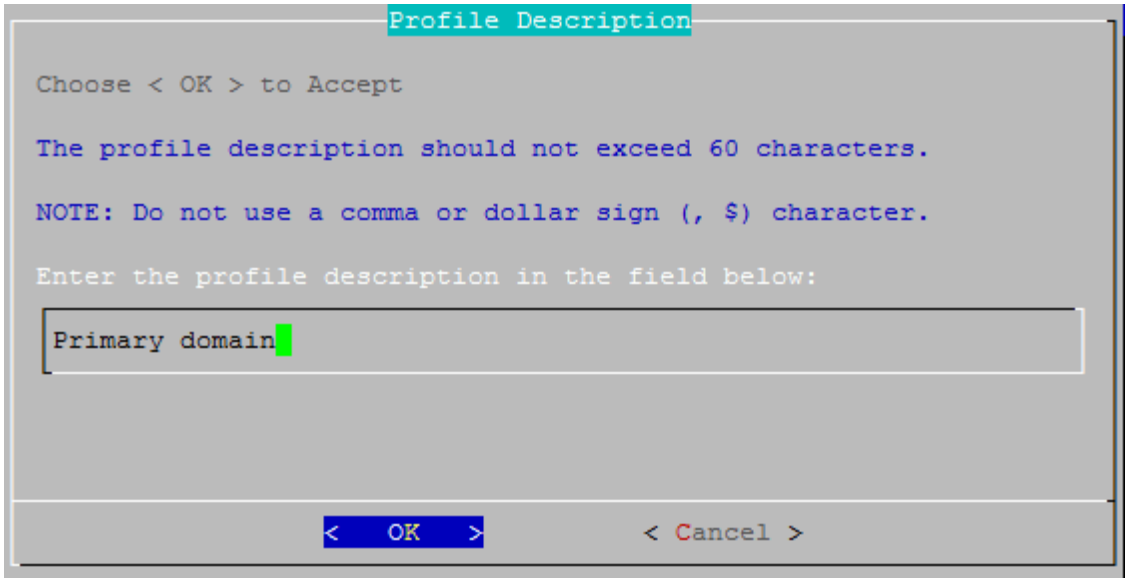
2. Select "Domain (Create a New GroupWise Domain Profile)"



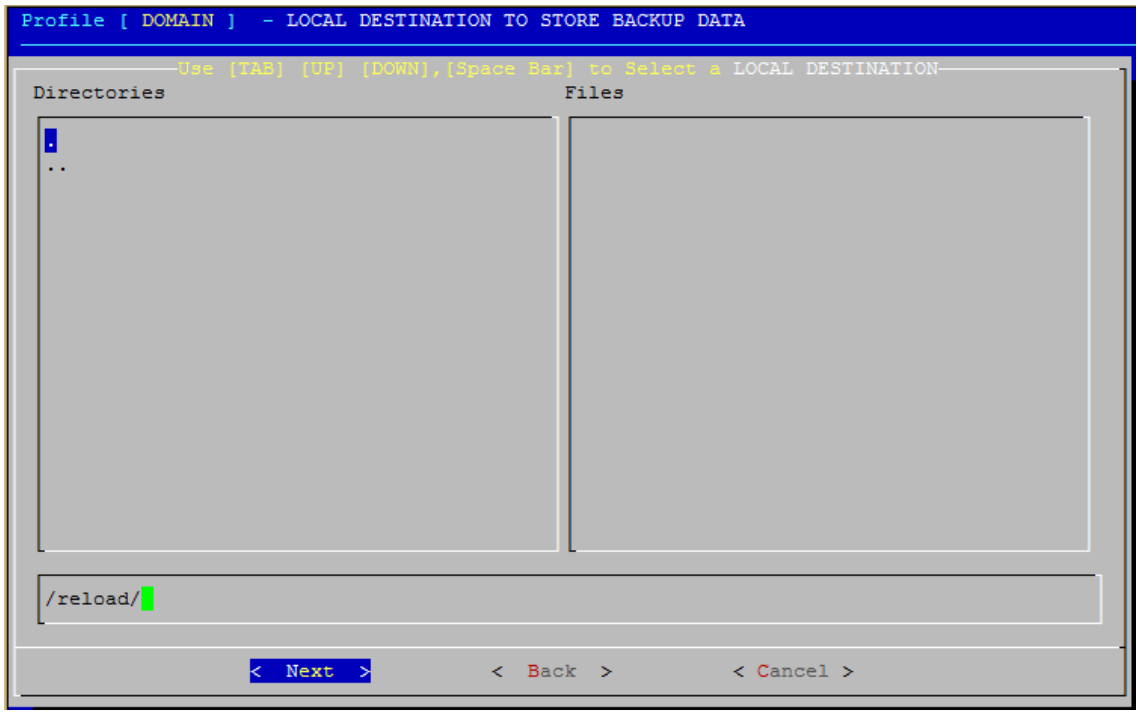
3. Give the Profile a Name. The profile name should not exceed eight characters. Use letters and numbers only, no spaces or other characters. For example: domain. Be aware, that a profile cannot be renamed, once it has been created. Choose the name wisely. Perhaps you will want to name the profile so that its name is the same as the GroupWise post office or domain that the profile represents. Select the Next button.



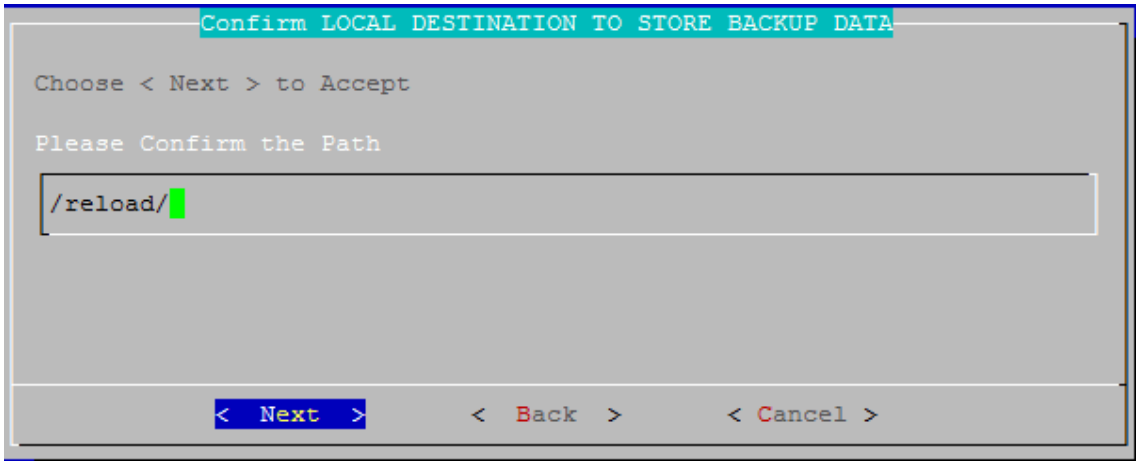
4. Give the Profile a Description. The profile description should not exceed 60 characters and should not have comma(,), nor dollar sign($) characters. For example: Domain Collector. The description of the profile will be added to the Agent Log when backup jobs are run for the profile. Select the Next button.



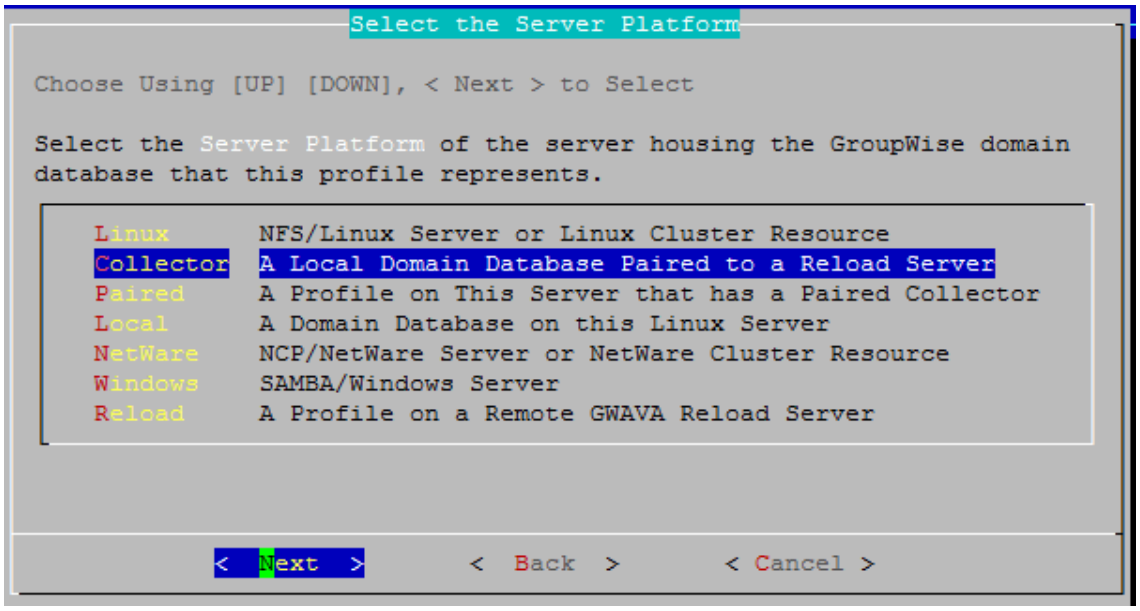
5. Backup Path: Enter the path or browse to the local destination directory to store the backup data. For example: /reload. The profile directory will be added to this path. This path can be a location on the Linux server, or an NFS mount to another Linux/Unix server, or to a SAN. The path should always be available; GroupWise Disaster Recovery is not configured to mount paths in order to access stored data. Also, the path should be to a location that has a lot of disk space available. Select the Next button.



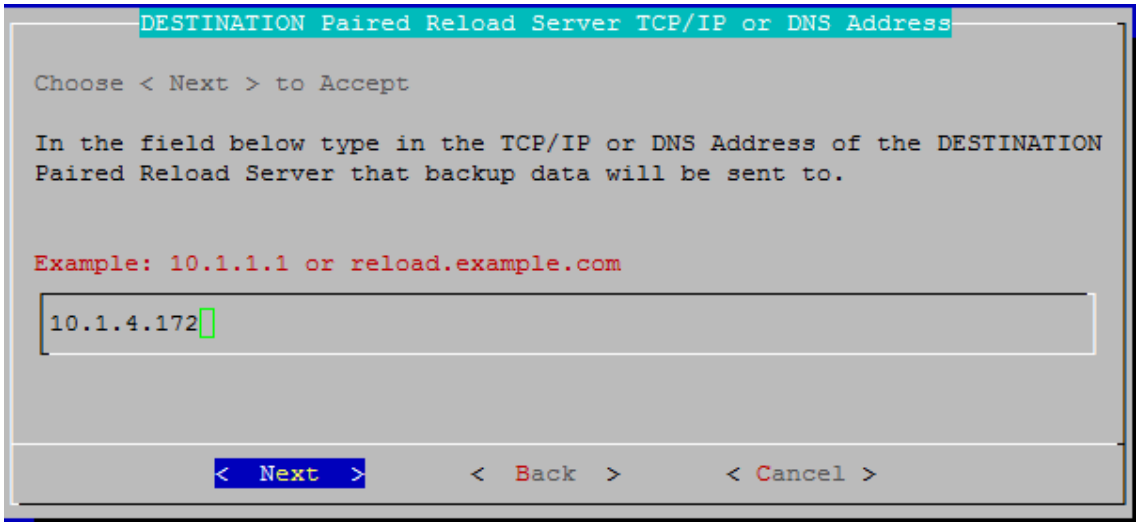
6. Confirm the path to the local destination directory



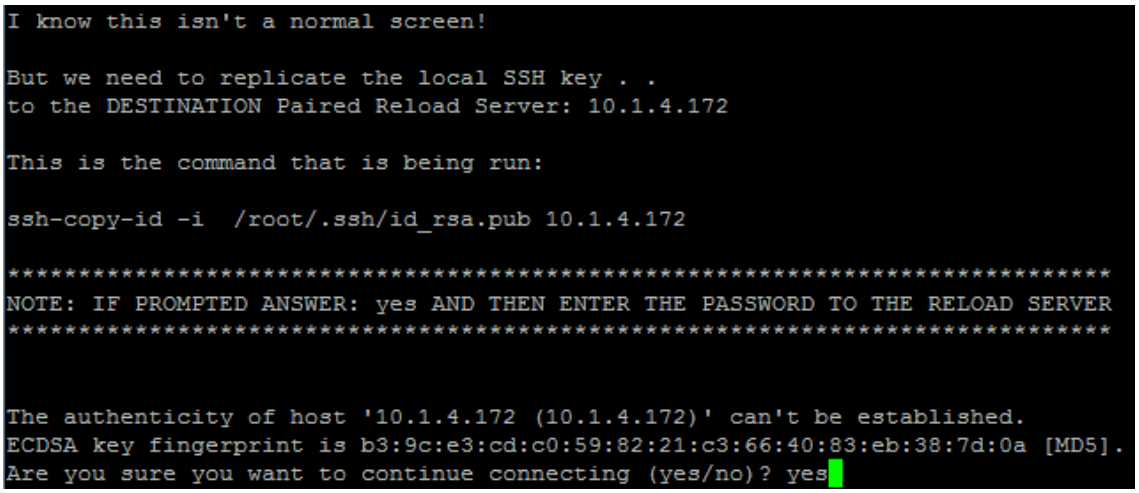
7. Choose the server type: "Collector (A Local Post Office/Domain Paired to a GroupWise Disaster Recovery Server)". Select the Next button.



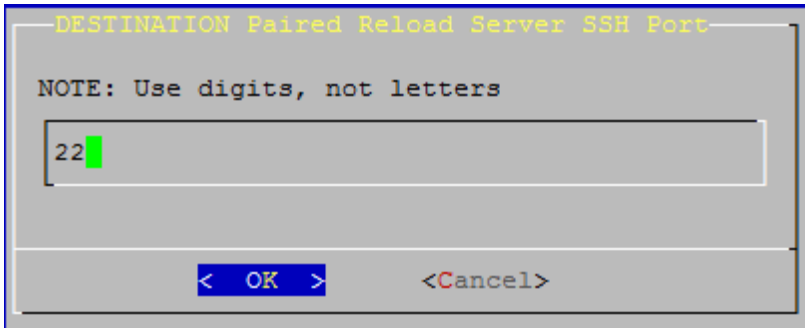
8. Enter the TCP/IP Address or DNS hostname for the GroupWise Disaster Recovery server this collector will be paired with. (Do not use the number pad.) Select the Next button.



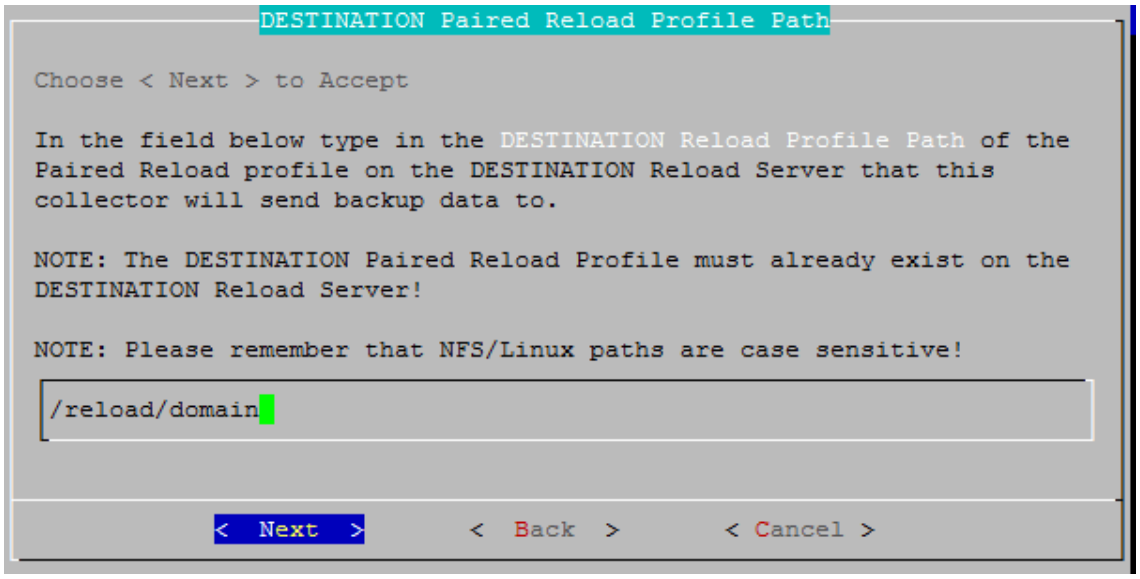
9. A terminal session will appear to prompt you to accept an SSH key and enter the password for the GroupWise Disaster Recovery server. If another profile was created to the same server it will only update.



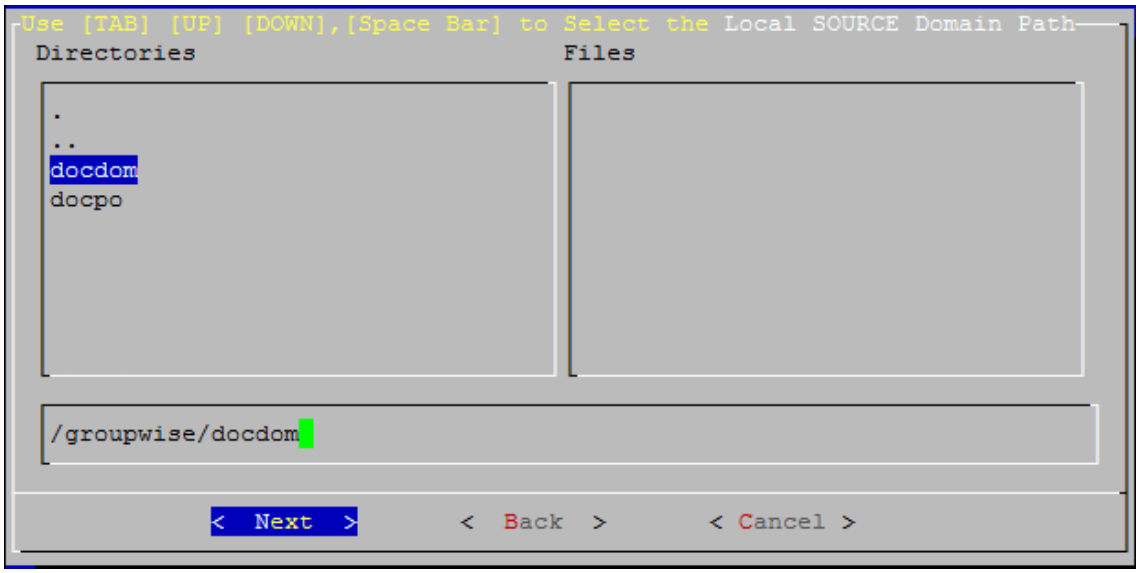
10. Enter the SSH port used by the GroupWise Disaster Recovery server (default port: 22)



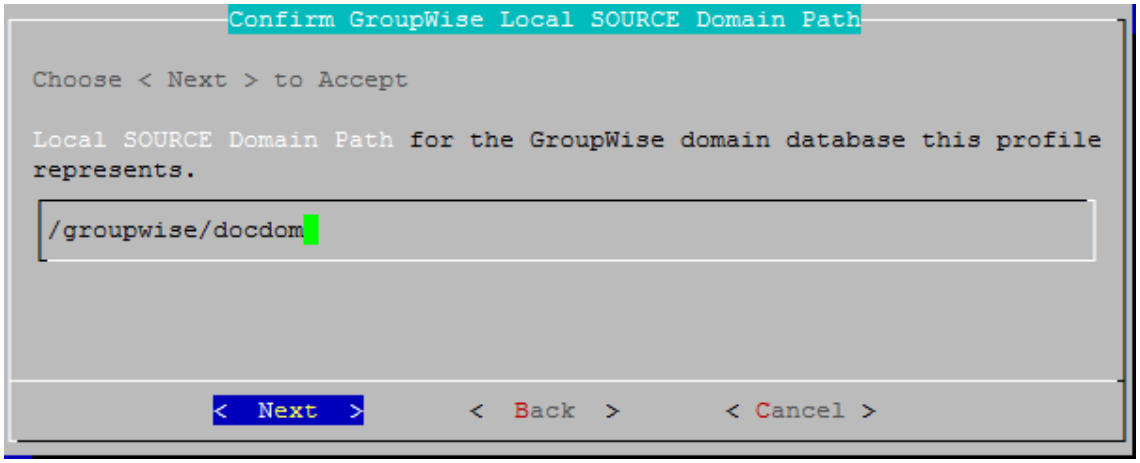
11. Backup Path: Enter the destination path the data will be stored in on the GroupWise Disaster Recovery server. This is the destination directory you entered when creating the Paired Server on the GroupWise Disaster Recovery server.



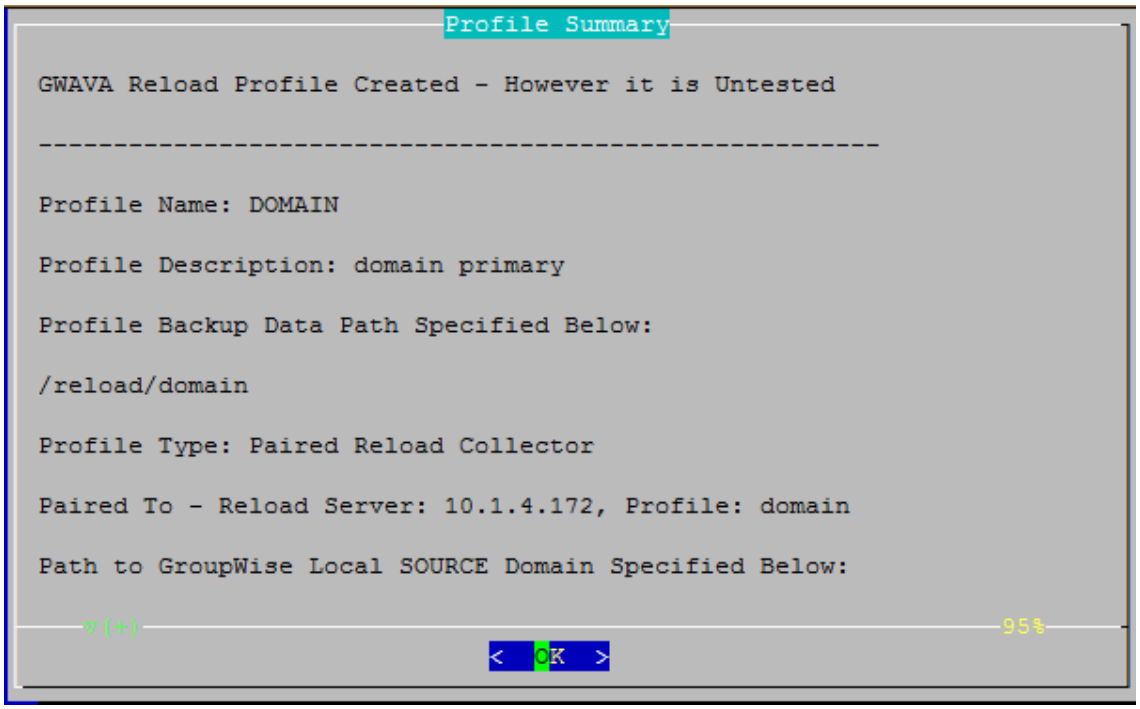
12. Source Path of the GroupWise files: Enter the source path to the local destination directory entered earlier on the GroupWise server. For example: /groupwise/domain



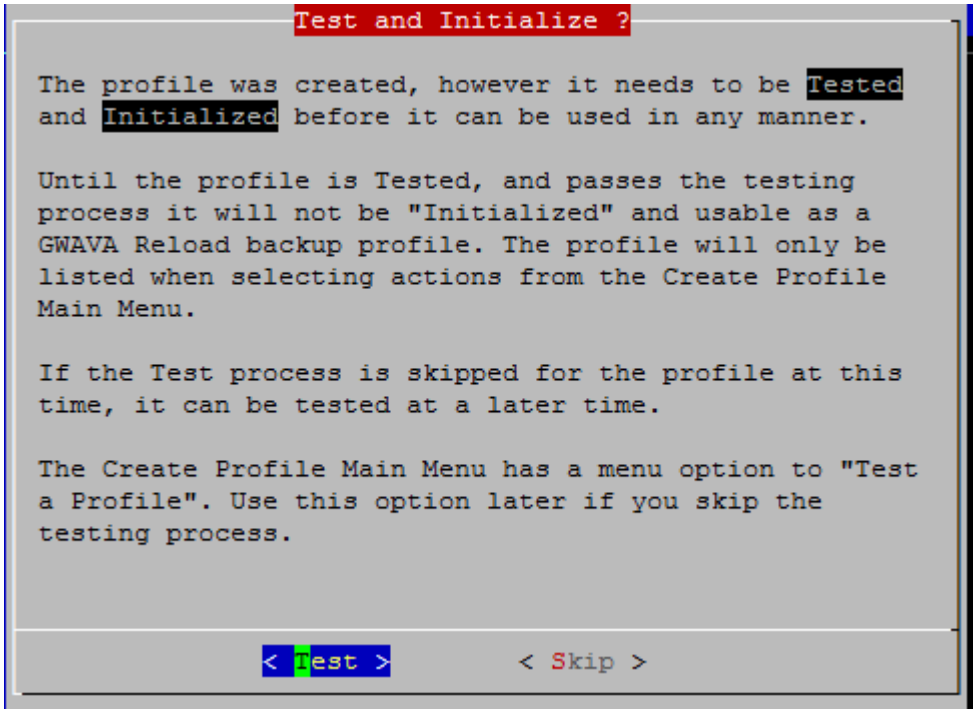
13. Confirm the path to the local source directory



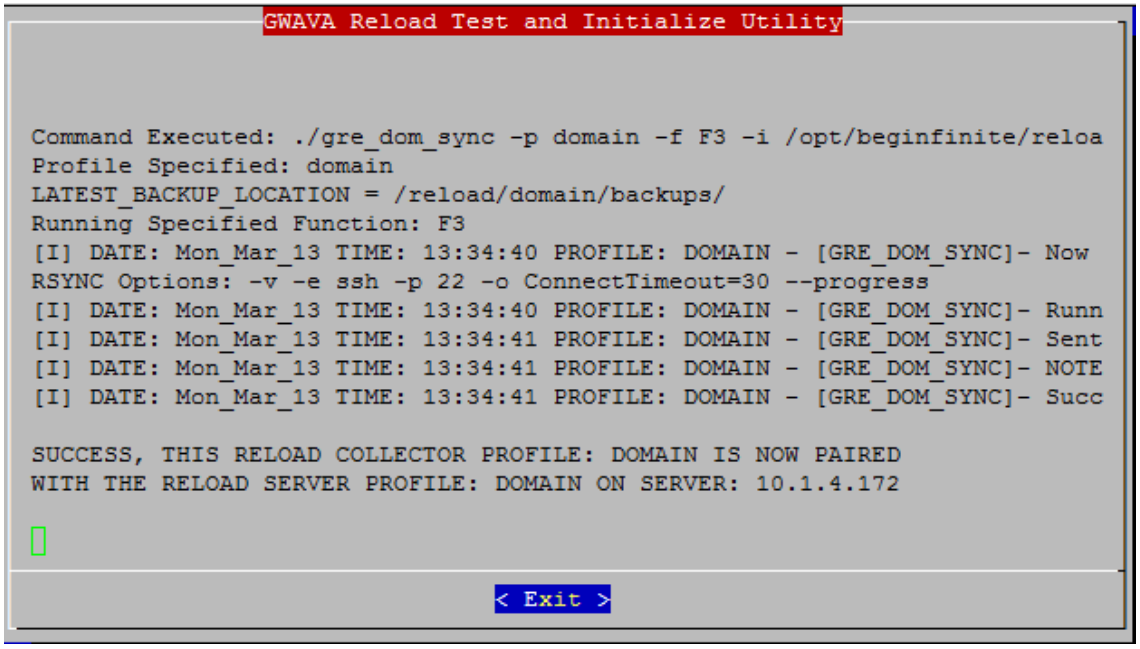
14. A summary of the profile settings will appear. Select the OK button.



15. Test and Initialization:



16. If the profile is correct, select the Test button.
17. If the profile is not correct, select the Skip button.
18. The profile creation wizard tests and initializes the newly created profile and prepares it to accept a pairing request from a Paired Collector and initializes the newly created profile and prepares it to accept a pairing request from a Paired Collector.



19. The Collector should find the license from the Server. If it fails, then backups will not occur. The license file can be loaded to the Collector in the Web Console as during the install procedure.

Switching from Server model to Collector Model

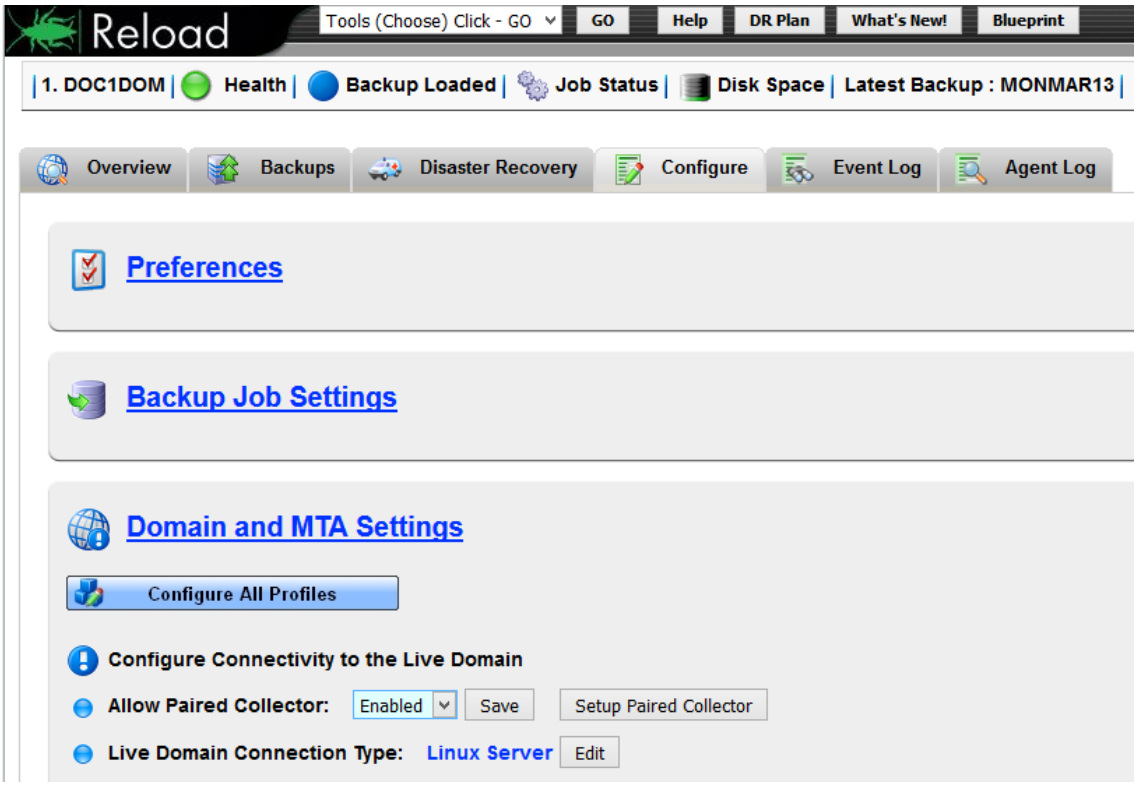
If you have been running GroupWise Disaster Recovery using the server model and the GroupWise Domain and/or Post Office is on Linux, then you can easily switch to the collector model.

- **On the GroupWise server,** create a directory for the GroupWise Disaster Recovery Agent to copy the databases to before sending to the GroupWise Disaster Recovery server. For example,

  ```
  mkdir /reload
  ```

If switching the Domain profile:

1. Browse to the GroupWise Disaster Recovery Web Administration console http://<GroupWise Disaster Recovery_Server_Address>:5555
2. Select the Domain Profile
3. Select the Configure tab and open "Domain and MTA Settings"
4. Enable "Allow Paired Collector" and press Save



5. Click on "Setup Paired Collector". This will create the directory /collect in the domain directory on the GroupWise server and copy the file "reload_collector.rpm" to it.
6. Connect to the GroupWise server and run

   rpm -ivh reload_collector.rpm
7. Setup up the collector by running

   reload
8. See Domain Profile: Collector/Server Model to complete the setup process
9. Start a backup job on the collector and the profile on the GroupWise Disaster Recovery will change to a Collector/Server with a <~> after the name

Collector Model Post Office Profiles

Paired Collector/Server Model

The Collector model creates a software agent called a collector that handles transferring the data to the GroupWise Disaster Recovery server.

You first set up a receiving server profile (marked with a <~>) on the GroupWise Disaster Recovery server, then a sending collector profile (marked with a ~) on the GroupWise server.

It is faster than the Server Only model and can send the data to up to three different GroupWise Disaster Recovery server, but requires copying parts of the domain or post office to another directory before sending the data so it has a snapshot of the data.

Prerequisites

You will need to create a directory on the GroupWise Disaster Recovery and the GroupWise server for the backup data. The name of the profile will be used to create sub-directories for each profile. For example:

/reload/

You will need to know the directories on the GroupWise server for the live data. For example:

/groupwise/domain

/groupwise/po1

Configure Profiles

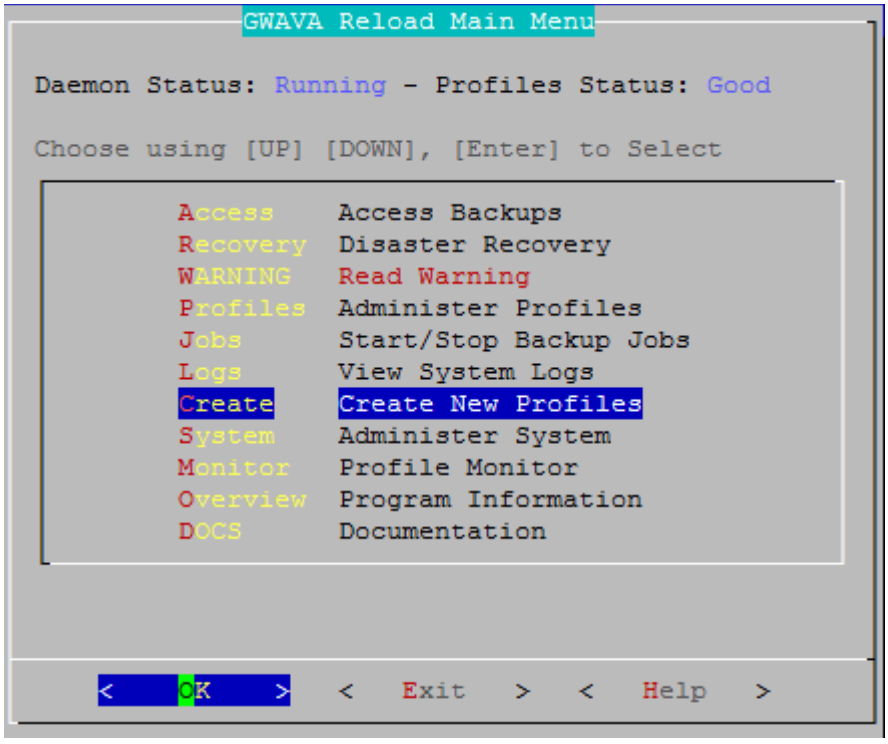
Post Office Profile: Collector/Server Model

On the GroupWise Disaster Recovery Server, create the Server:

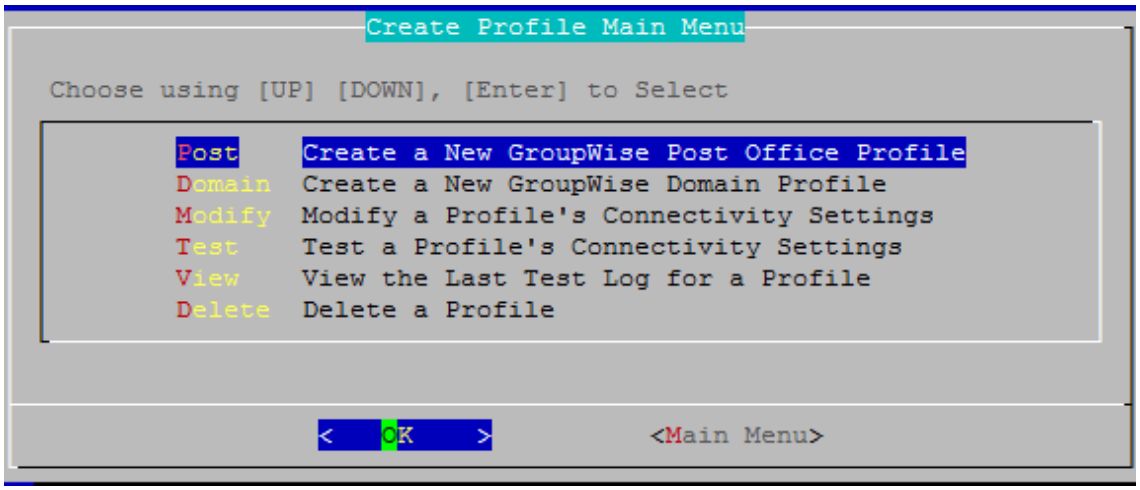
1. Create a directory for the backup data. For example:

   mkdir /reload
2. Start the GroupWise Disaster Recovery Administration Console by typing on the command line:

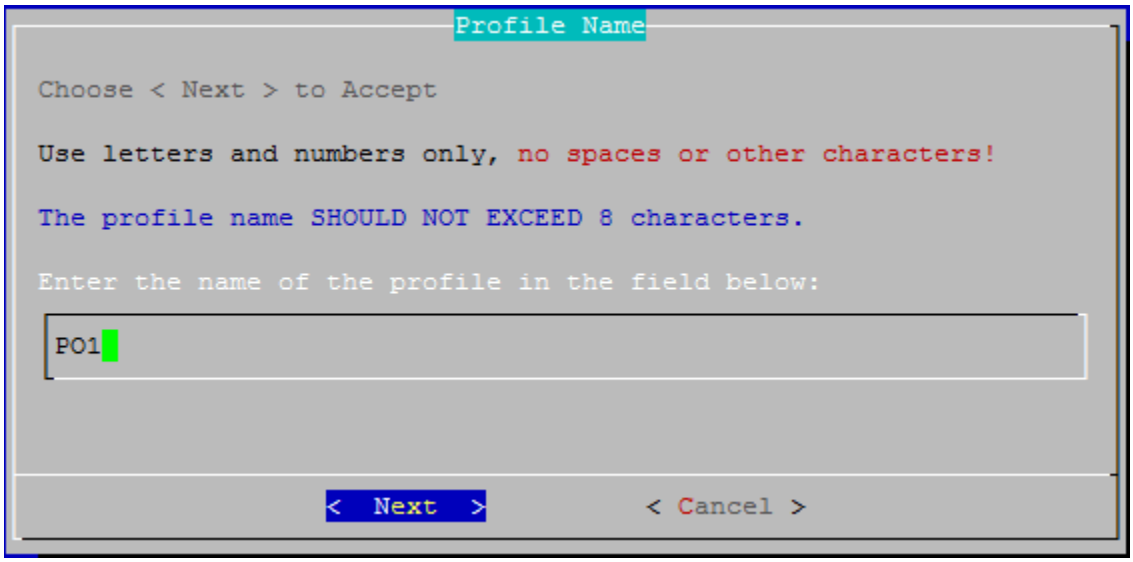
   reload
3. Select "Create (Create Profile)"



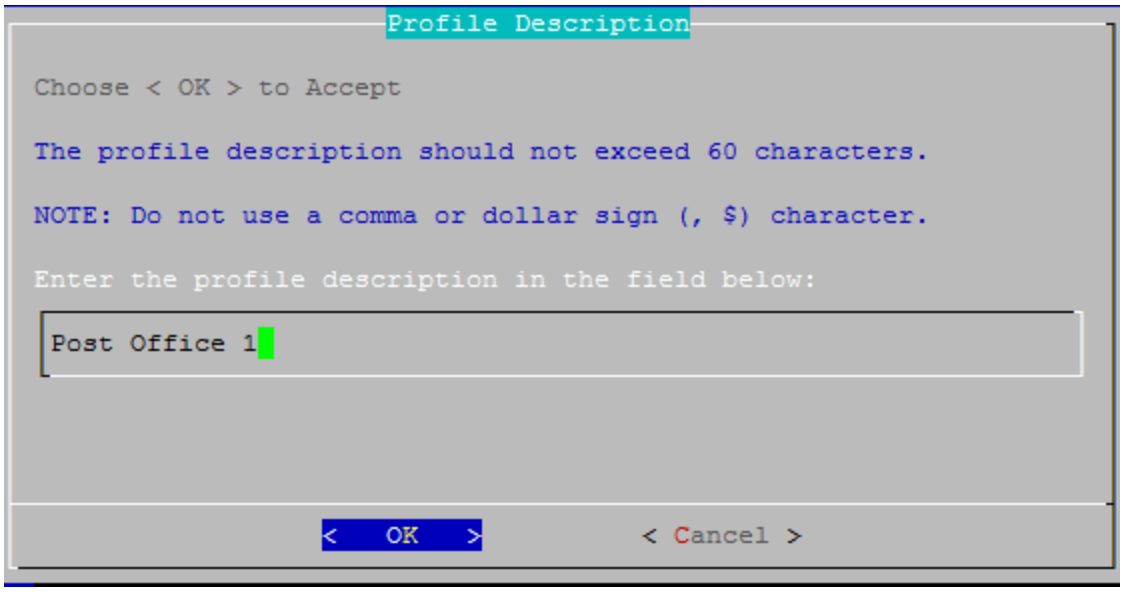
4. Select "Post Office (Create a New GroupWise Post Office Profile)"



5. Give the Profile a Name. The profile name should not exceed eight characters. Use letters and numbers only, no spaces or other characters. For example: Post Office. Be aware, that a profile cannot be renamed, once it has been created. Choose the name wisely. Perhaps you will want to name the profile so that its name is the same as the GroupWise post office or domain that the profile represents. Select the Next button.

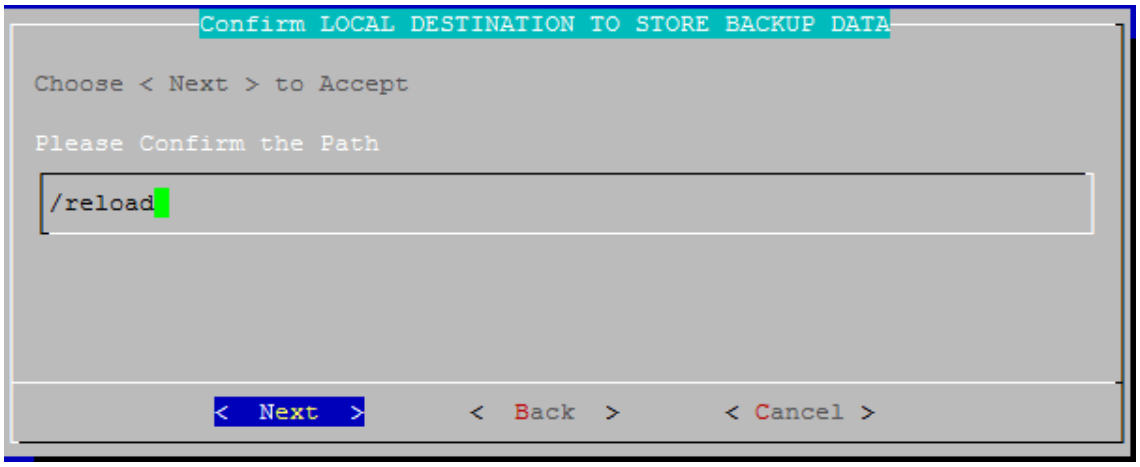


6. Give the Profile a Description. The profile description should not exceed 60 characters and should not have comma(,), nor dollar sign($) characters. For example: Primary Post Office. The description of the profile will be added to the Agent Log when backup jobs are run for the profile. Select the Next button.

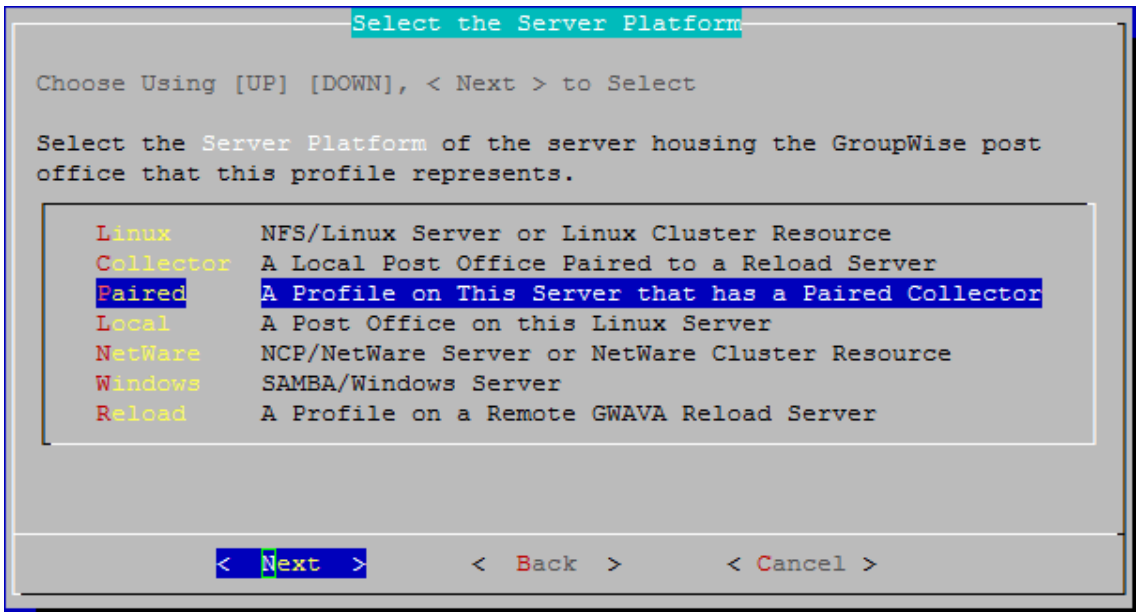


7. Enter the path or browse to the local destination directory to store the backup data. For example: /reload. The profile directory will be added to this path. This path can be a location on the Linux server, or an NFS mount to another Linux/Unix server, or to a SAN. The path should always be available; GroupWise Disaster Recovery is not configured to mount paths in order to access stored data. Also, the path should be to a location that has a lot of disk space available. Select the Next button.

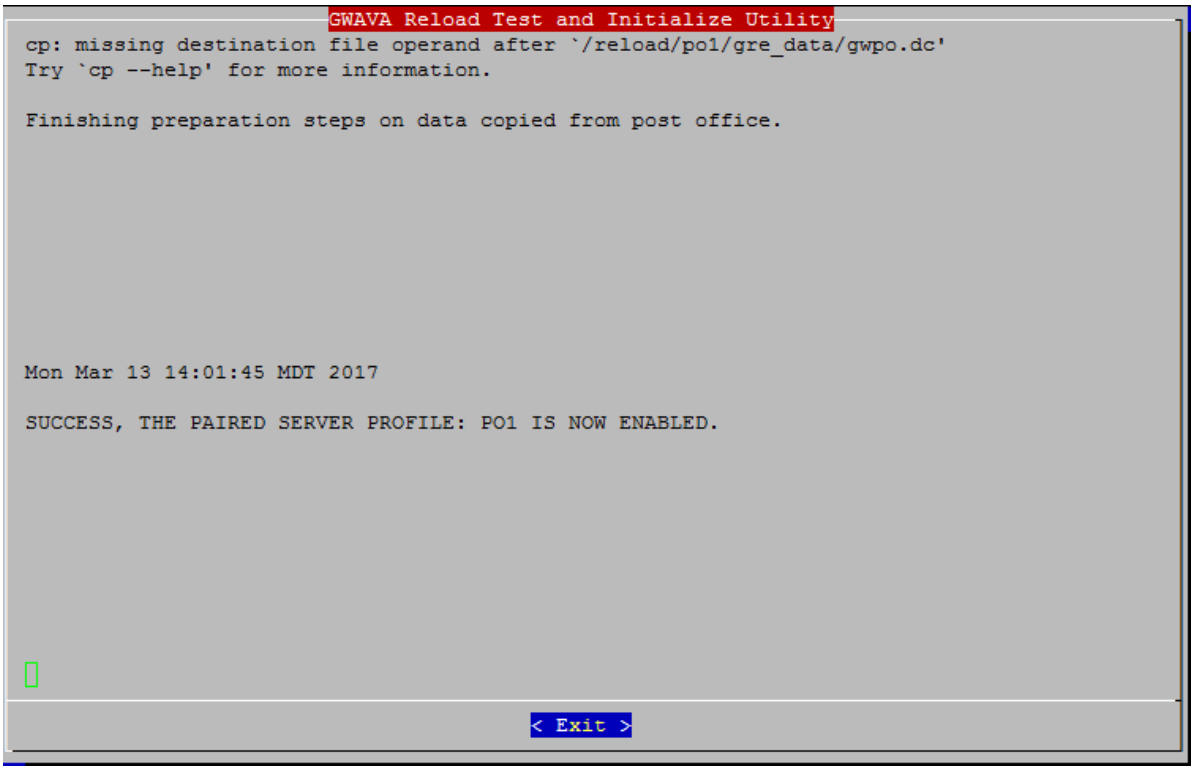
8. Confirm the path to the local destination directory



9. Choose the server type: "Paired (A Profile on This Server that has a Paired Collector)". Select the Next button.



10. The profile creation wizard tests and initializes the newly created profile and prepares it to accept a pairing request from a Paired Collector and initializes the newly created profile and prepares it to accept a pairing request from a Paired Collector.



Testing and initializing a profile does not backup the post office or domain in any way.

Once a profile is tested and initialized successfully, the profile is available to be configured further. The default configuration of a profile is sufficient for making quickly accessible backups with GroupWise Disaster Recovery. Further configuration of the profile should be done in GroupWise Disaster Recovery Web Administration.

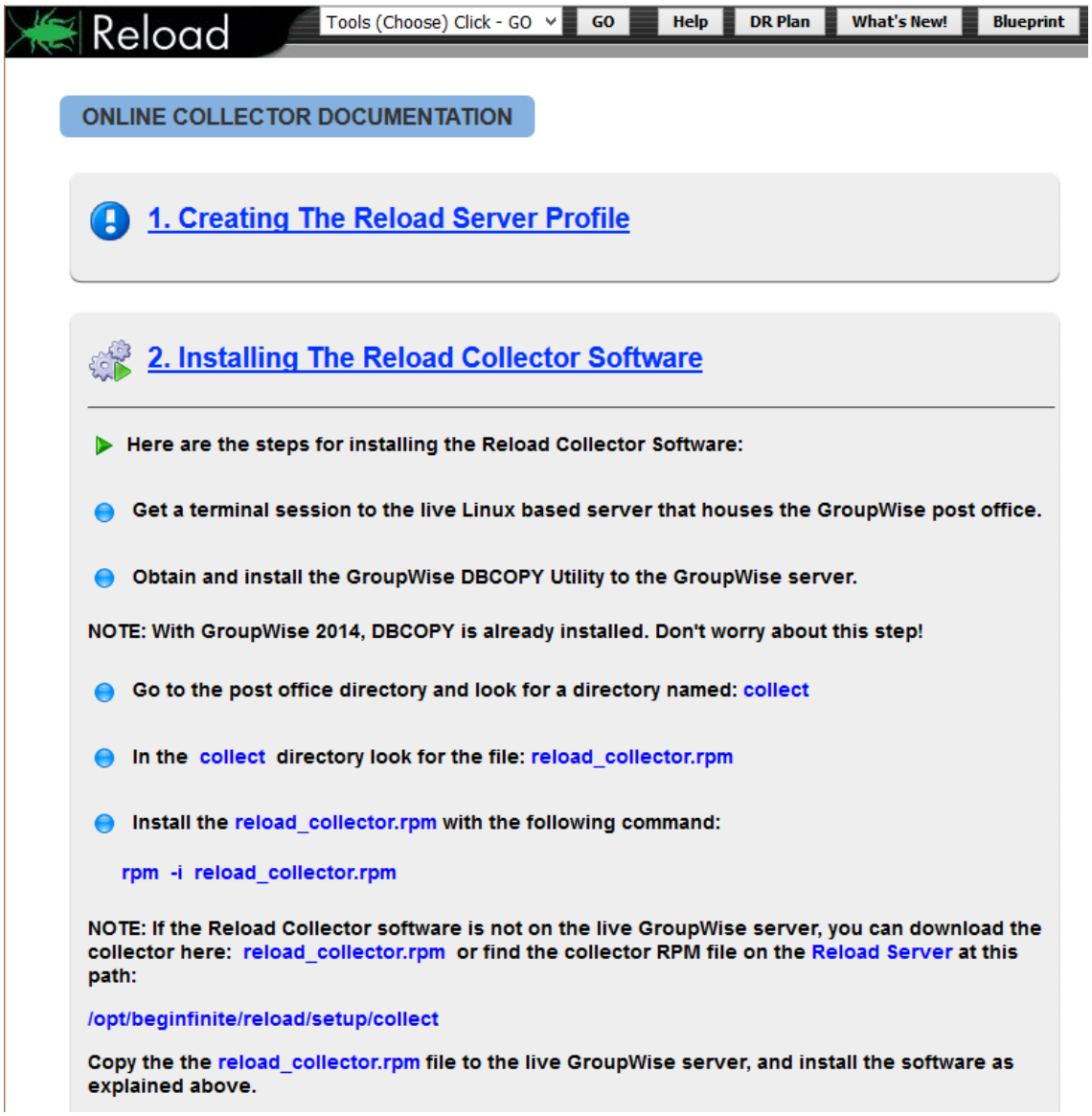
To be able to backup the data, a collector needs to be created on the GroupWise server.

On the GroupWise Server, the collector will need to be downloaded, installed and configured to connect to the GroupWise Disaster Recovery server.

If this is a *new installation* with no preexisting connection:

1. *On the GroupWise server*, browse to the GroupWise Disaster Recovery Web Administration Console. http://<GroupWise Disaster Recovery_Server_IP_or_Hostname>:5555
2. From the Tool dropdown menu select Post Office Collector

3. Click on 2. Installing the GroupWise Disaster Recovery Collector Software to open the section
4. Click on reload_collector.rpm to download



5. Open a terminal window, go to where the file is and run:

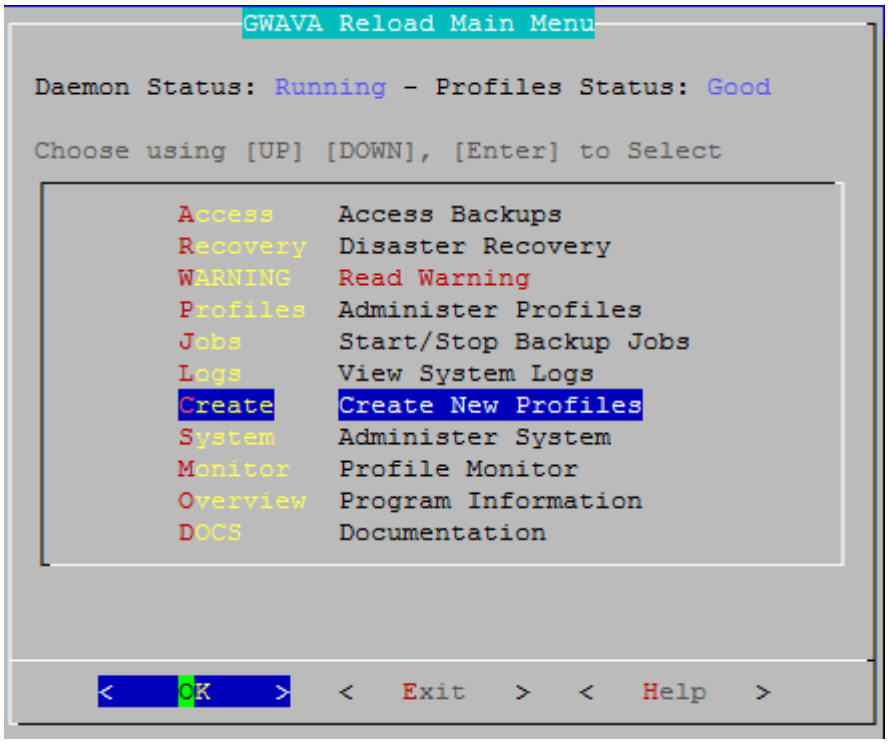
```
rpm -i reload_collector.rpm
```

Configure Collector Agent

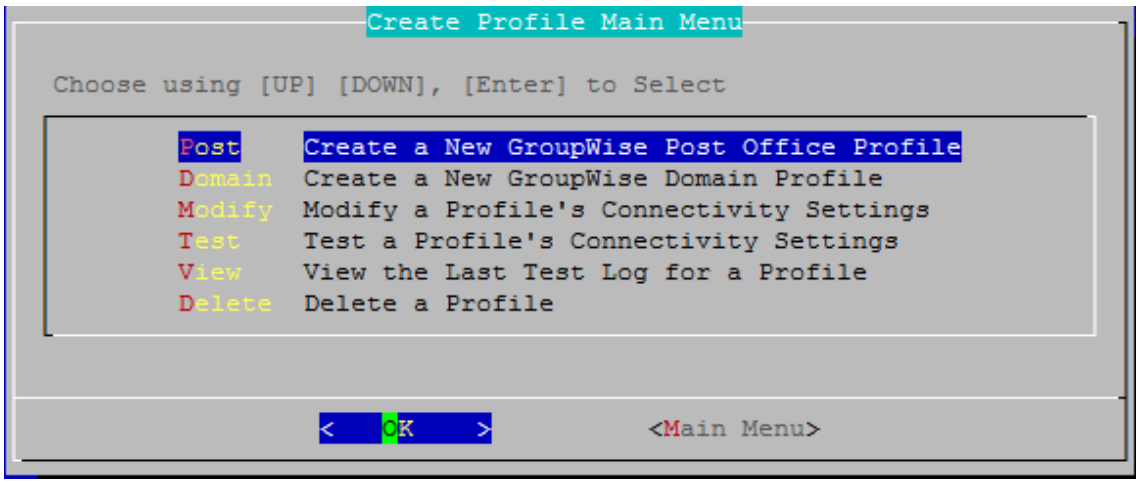
Once the collector agent is installed, on the GroupWise server, start the GroupWise Disaster Recovery Administration Console by typing on the command line:

reload

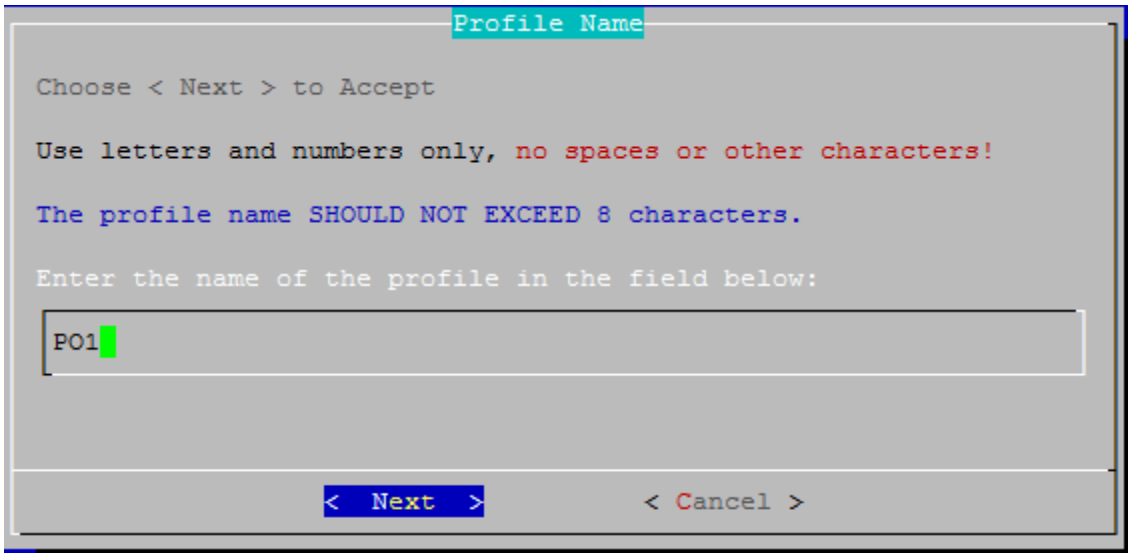
1. Select "Create (Create Profile)"



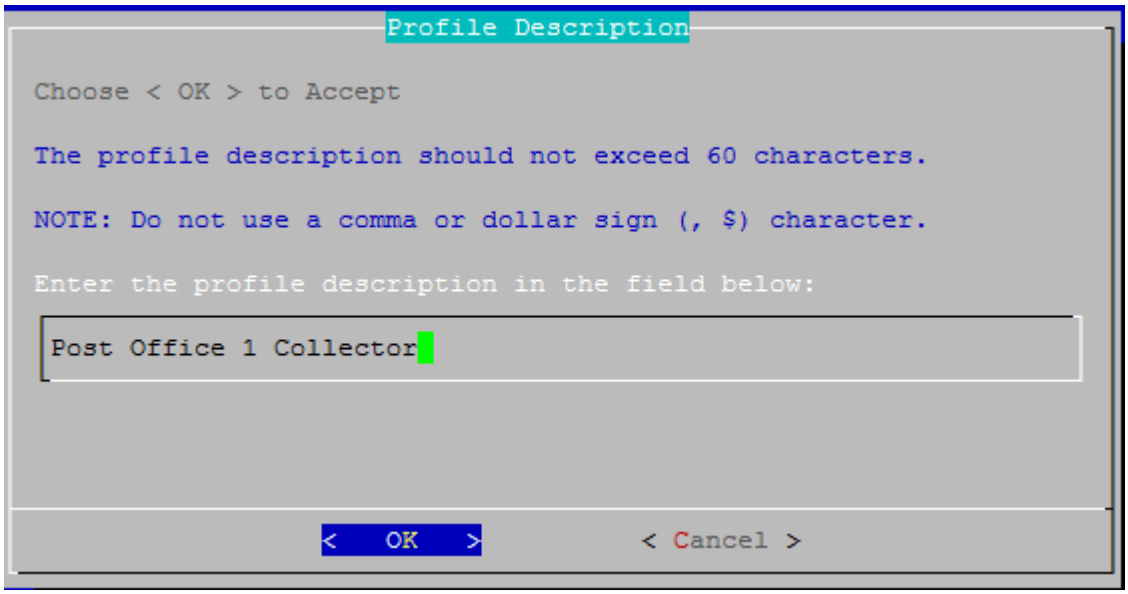
2. Select "Post Office (Create a New GroupWise Post Office Profile)"



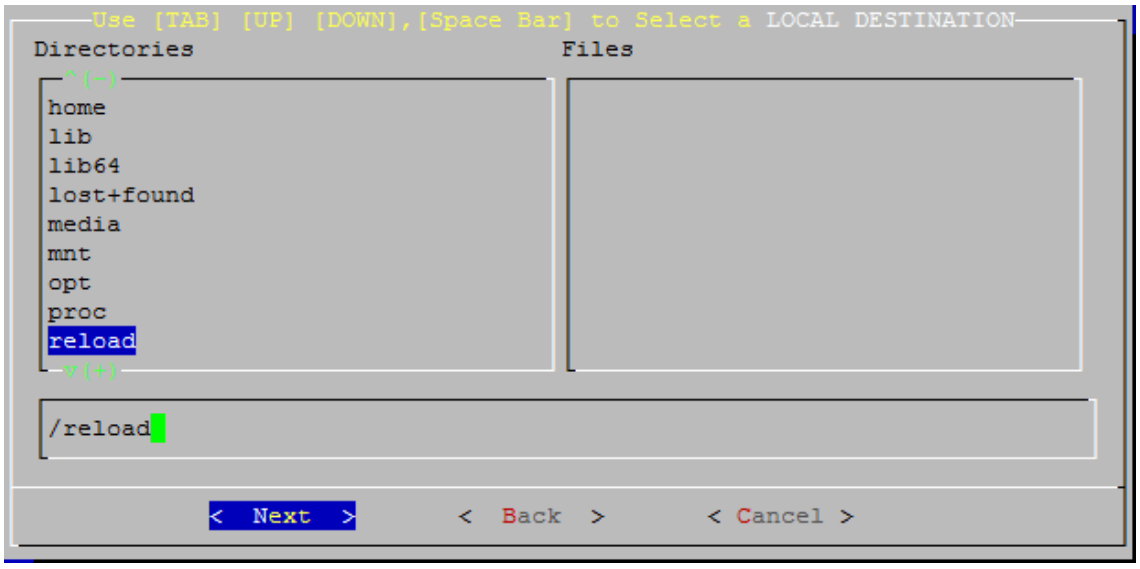
3. Give the Profile a Name. The profile name should not exceed eight characters. Use letters and numbers only, no spaces or other characters. For example: po. Be aware, that a profile cannot be renamed, once it has been created. Choose the name wisely. Perhaps you will want to name the profile so that its name is the same as the GroupWise post office or domain that the profile represents, but it does not have to match. Select the Next button.



4. Give the Profile a Description. The profile description should not exceed 60 characters and should not have comma(,), nor dollar sign($) characters. For example: Domain Collector. The description of the profile will be added to the Agent Log when backup jobs are run for the profile. Select the Next button.

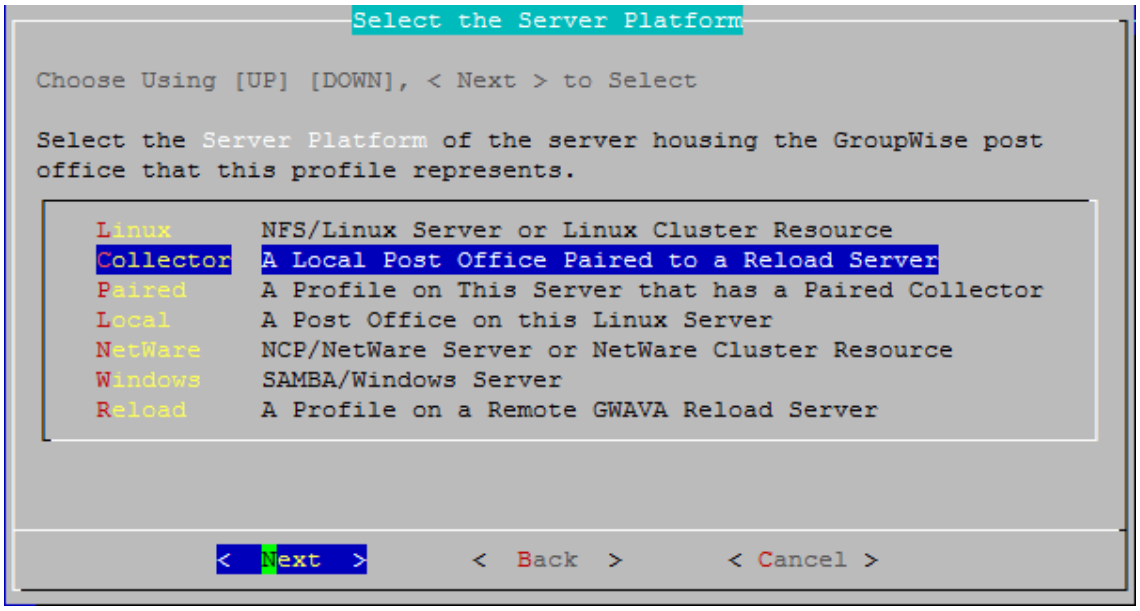


5. Enter the path or browse to the local destination directory to store the backup data. For example: /reload. This path can be a location on the Linux server, or an NFS mount to another Linux/Unix server, or to a SAN. The path should always be available; GroupWise Disaster Recovery is not configured to mount paths in order to access stored data. Also, the path should be to a location that has a lot of disk space available. Select the Next button.

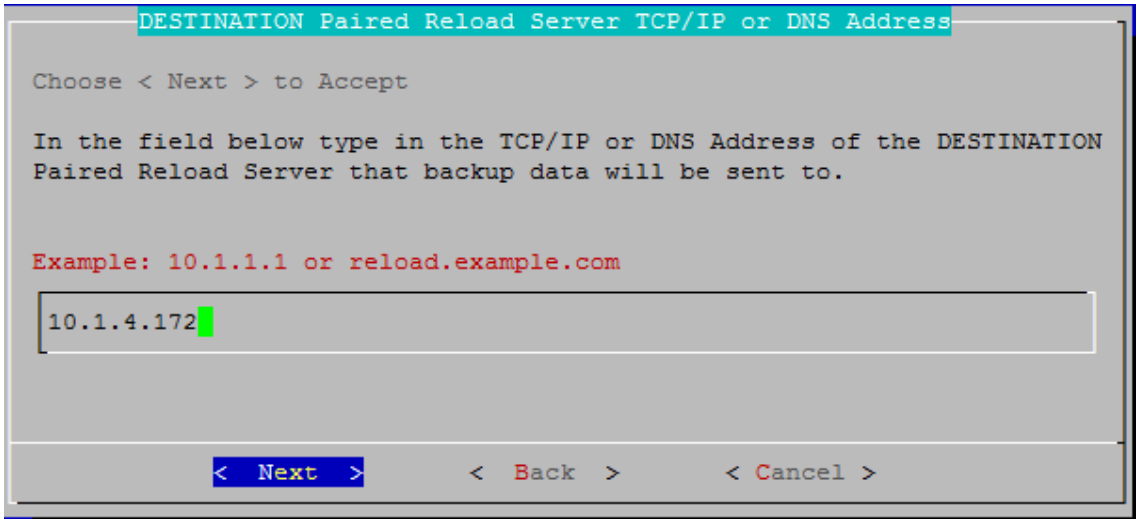


6. Confirm the path to the local destination directory

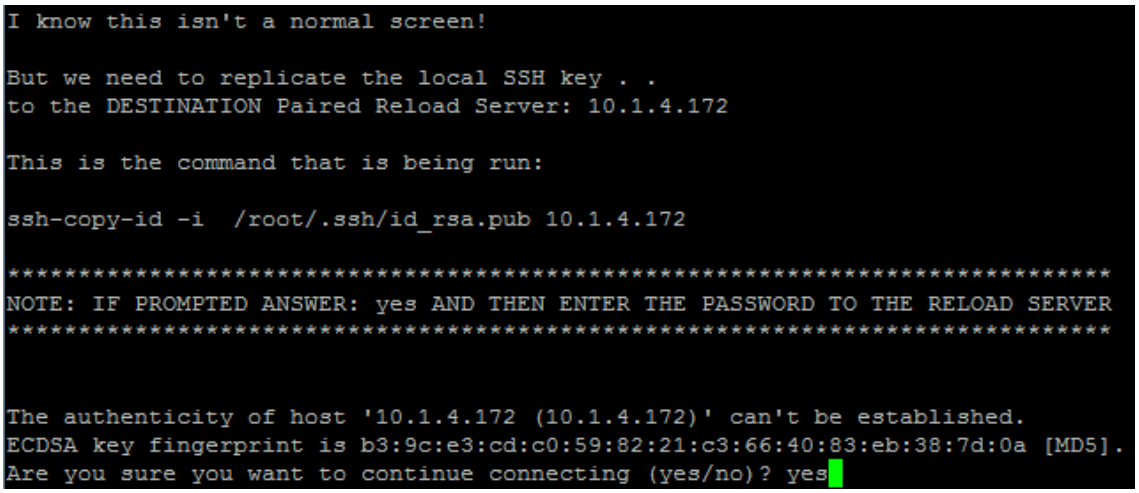
7. Choose the server type: "Collector (A Local Post Office/Domain Paired to a GroupWise Disaster Recovery Server)". Select the Next button.



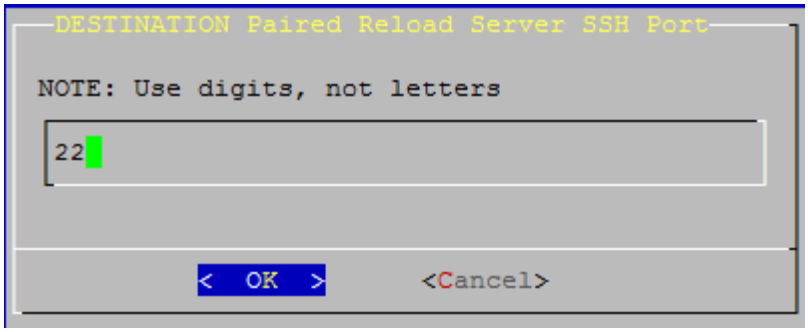
8. Enter the TCP/IP Address or DNS hostname for the GroupWise Disaster Recovery server this collector will be paired with. Select the Next button.



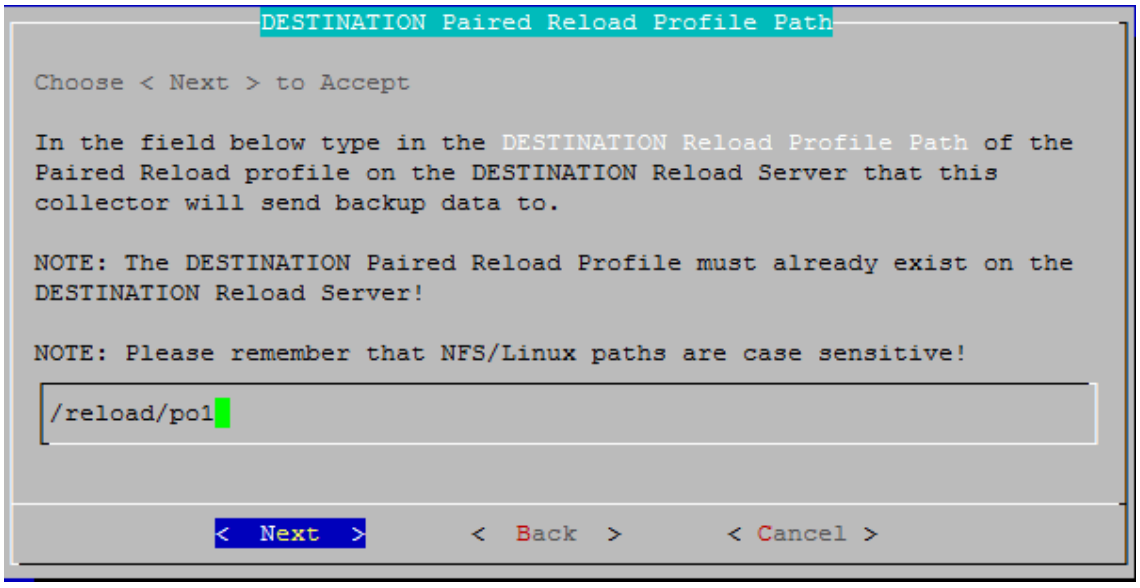
9. A terminal session will appear to prompt you to accept an SSH key and enter the password for the GroupWise Disaster Recovery server. If another profile was created to the same server it will only update.



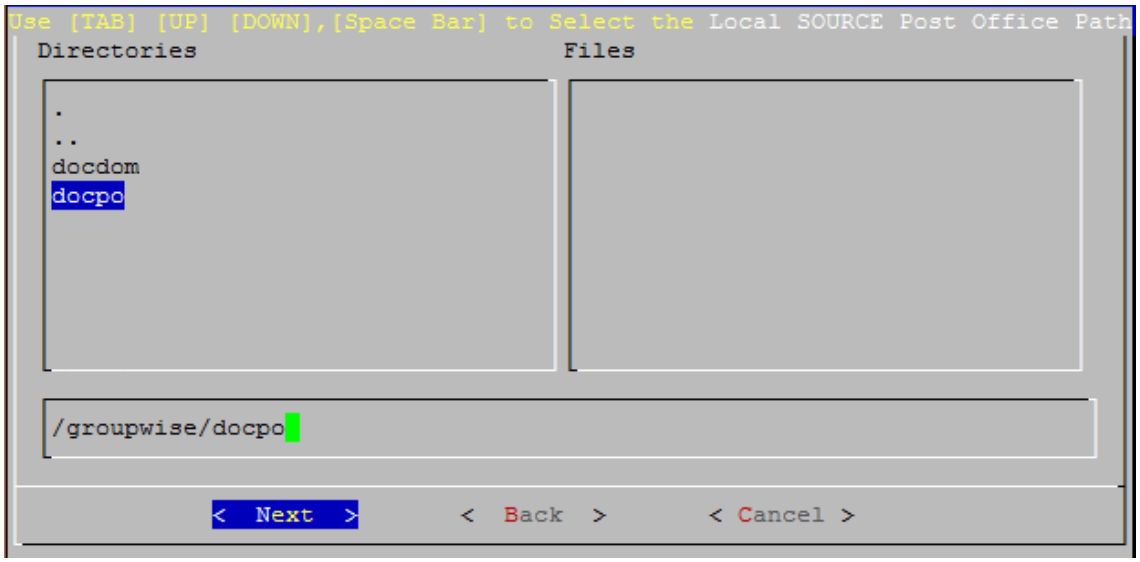
10. Enter the SSH port used by the GroupWise Disaster Recovery server (default port: 22)



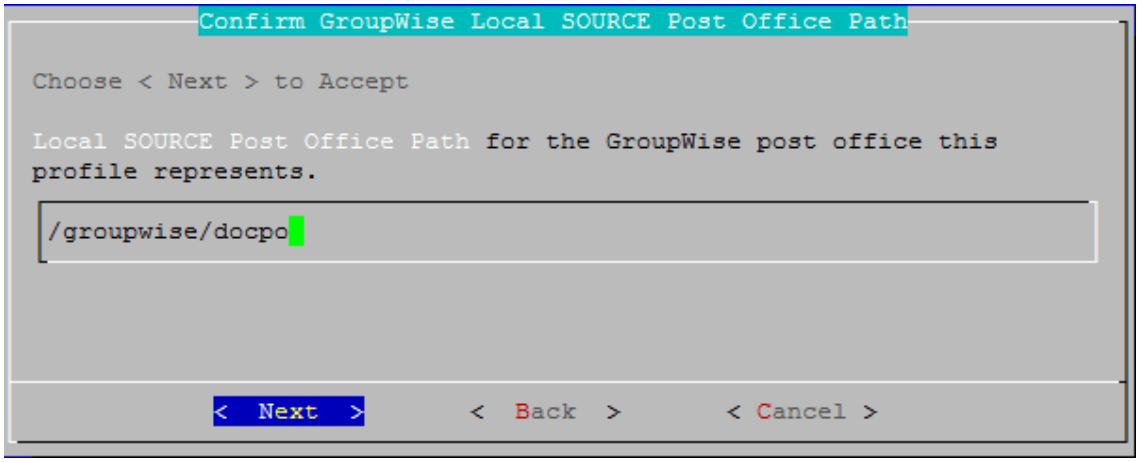
11. Enter the destination path the data will be stored in on the GroupWise Disaster Recovery server. This is the destination directory you entered when creating the Paired Server on the GroupWise Disaster Recovery server.



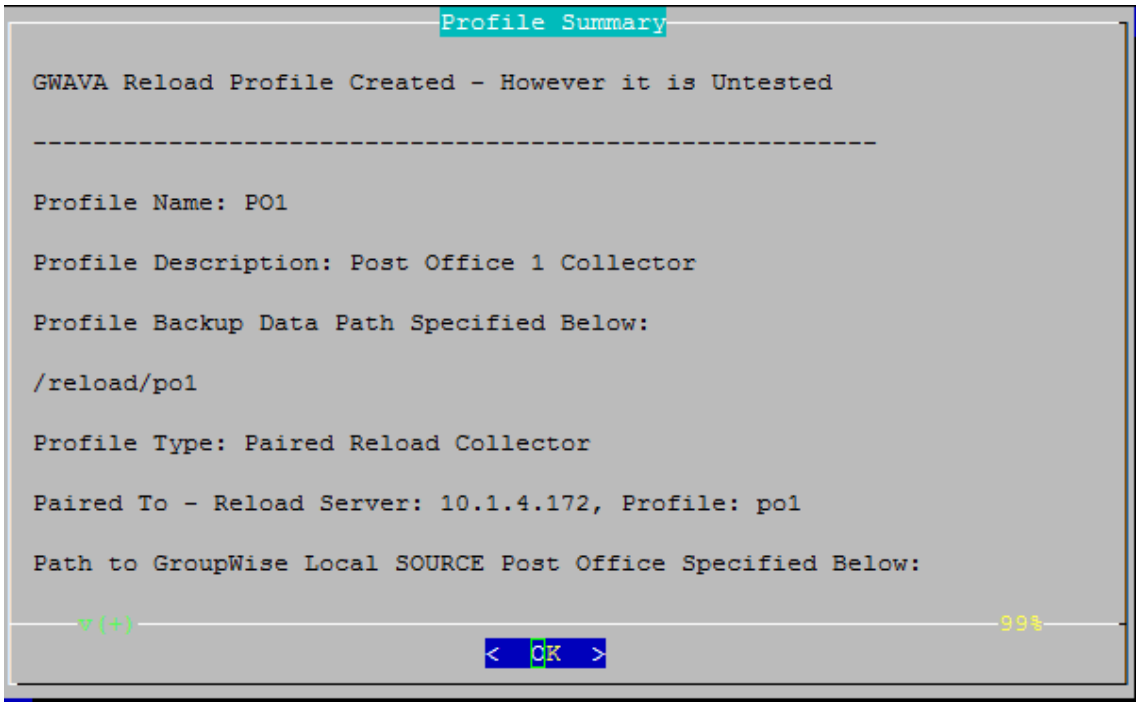
12. Source Path to the GroupWise files: Enter the source path to the local destination directory entered earlier on the GroupWise server. For example: /groupwise/po



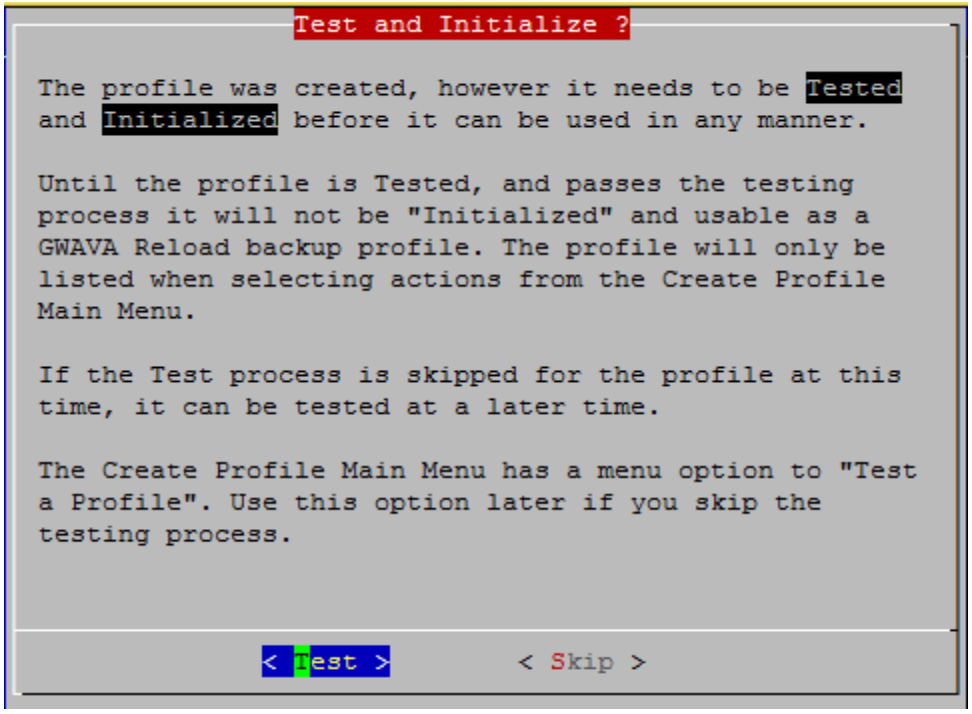
13. Confirm the path to the local source directory



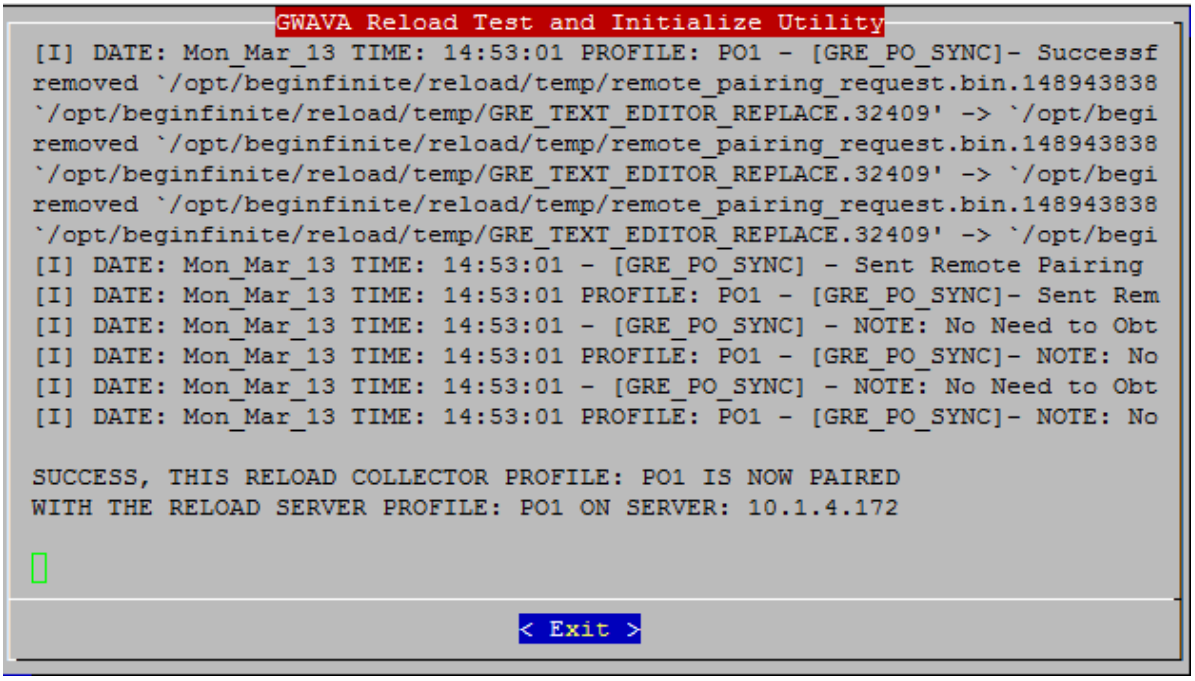
14. A summary of the profile settings will appear. Select the OK button.



15. Test and Initialization:

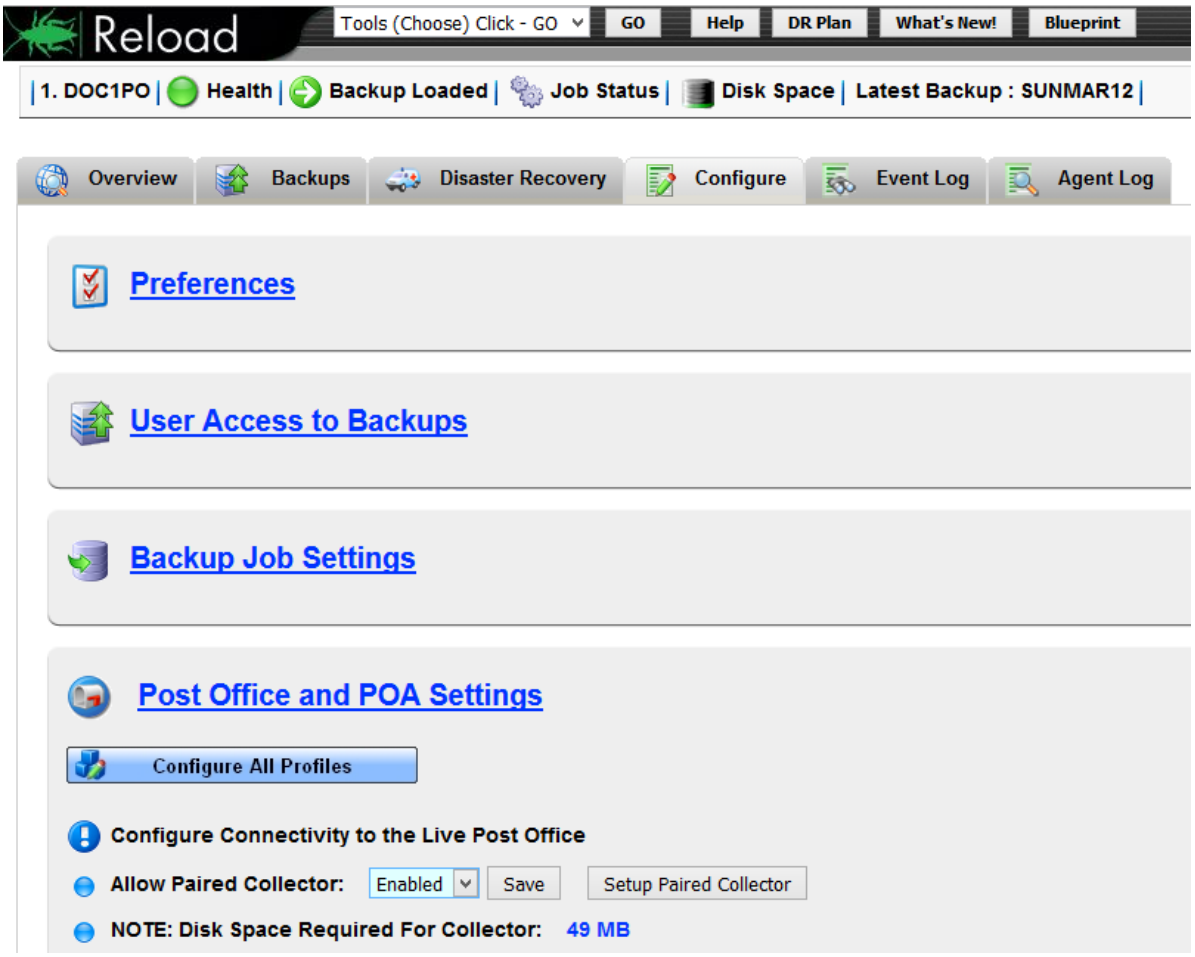


16. If the profile is correct, select the Test button.
17. If the profile is not correct, select the Skip button.
18. The profile creation wizard tests and initializes the newly created profile and prepares it to accept a pairing request from a Paired Collector and initializes the newly created profile and prepares it to accept a pairing request from a Paired Collector.



If this is an *existing* GroupWise Disaster Recovery installation with an existing Server model connection for the profile:

1. *On the GroupWise Disaster Recovery server*, browse to the GroupWise Disaster Recovery Web Administration Console. http://<GroupWise Disaster Recovery_Server_IP_or_Hostname>:5555
2. Select the profile
3. Click on the Configure tab
4. Open the Post Office and POA Settings section
5. Enable "Allow Paired Collector"



Click on "Setup Paired Collector" to have GroupWise Disaster Recovery copy the collector agent to the GroupWise server.

1. *On the GroupWise server*, in the Post Office directory a new directory (/collect) will be created and the file "reload_collector.rpm" will be created.
2. Open a terminal window, go to where the file is and run:

```
rpm -i reload_collector.rpm
```

Switching from Server model to Collector Model

If you have been running GroupWise Disaster Recovery using the server model and the GroupWise Domain and/or Post Office is on Linux, then you can easily switch to the collector model.

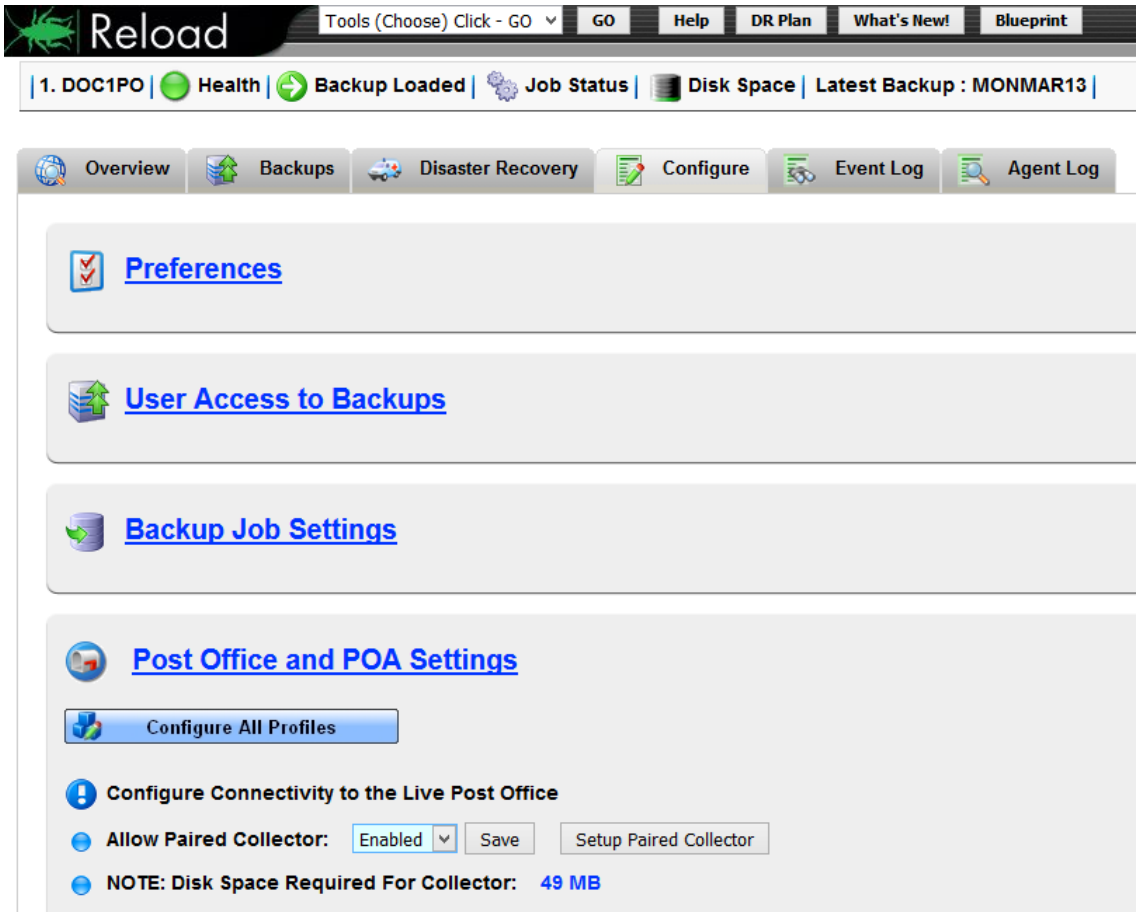
- **On the GroupWise server,** create a directory for the GroupWise Disaster Recovery Agent to copy the databases to before sending to the GroupWise Disaster Recovery server. For example,

```
mkdir /reload
```

If switching the Post Office profile:

1. Browse to the GroupWise Disaster Recovery Web Administration console http://<GroupWise Disaster Recovery_Server_Address>:5555
2. Select the Post Office Profile

3. Select the Configure tab and open "Post Office and POA Settings"
4. Enable "Allow Paired Collector" and press Save



5. Click on "Setup Paired Collector". This will create the directory /collect in the post office directory on the GroupWise server and copy the file "reload_collector.rpm" to it.
6. Confirm there is sufficient space on the GroupWise server for the GroupWise Disaster Recovery agent to copy the post office databases to. For example, 49MB.
7. Connect to the GroupWise server and run

   ```
   rpm -ivh reload_collector.rpm
   ```

8. Setup up the collector by running

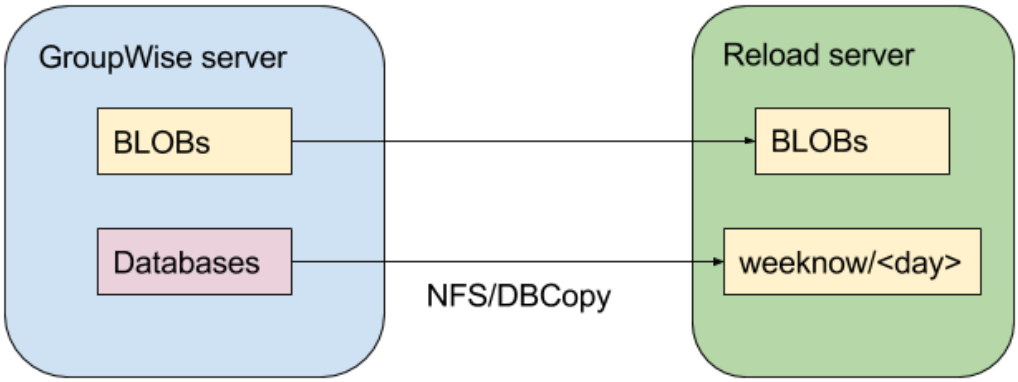
   ```
   reload
   ```

9. See Post Office Profile: Collector/Server Model to complete the setup process
10. Start a backup job on the collector and the profile on the GroupWise Disaster Recovery will change to a Collector/Server with a <~> after the name

Server Only Profiles

Server Only Model

The Server model requires an NFS connection from the GroupWise server to the GroupWise Disaster Recovery server and uses DBCopy to copy the databases and BLOB files between servers. This is slower than the rsync connection that the collector uses, but does not require any extra disk space on the GroupWise server.



Creating Profiles On Linux GroupWise Systems

There are two kinds of profiles: Domain and Post Office.

You will need to create a directory on the GroupWise Disaster Recovery server for the backup data. The name of the profile will be used to create sub-directories for each profile. For example:

/reload/

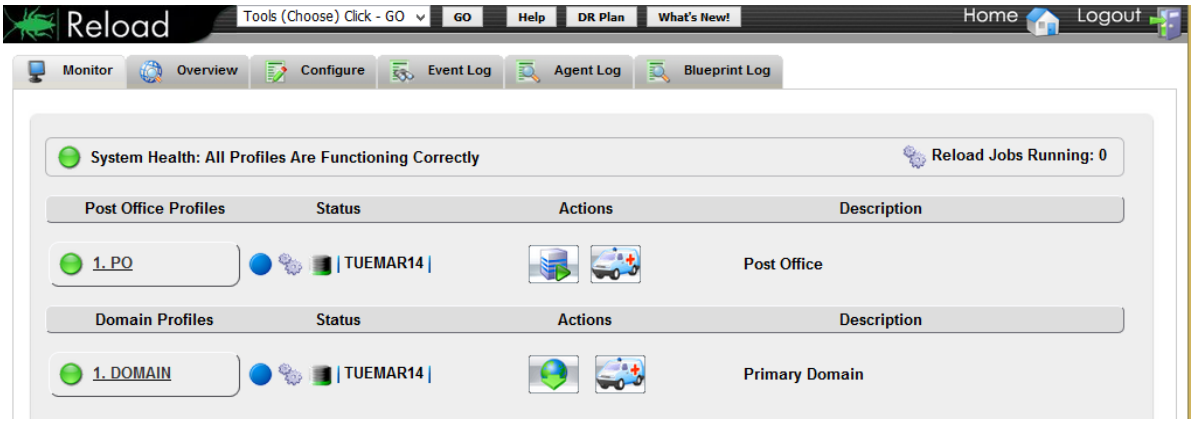
You will need to know the directories on the GroupWise server for the live data. For example:

/groupwise/domain

/groupwise/po1

Configure Profiles

There are two kinds of Server Only Model Profiles: Domain (Creating_Server_Only_Model_Domain_Profiles.htm) and Post Office (Creating_Server_Only_Post_Office_Profiles.htm).

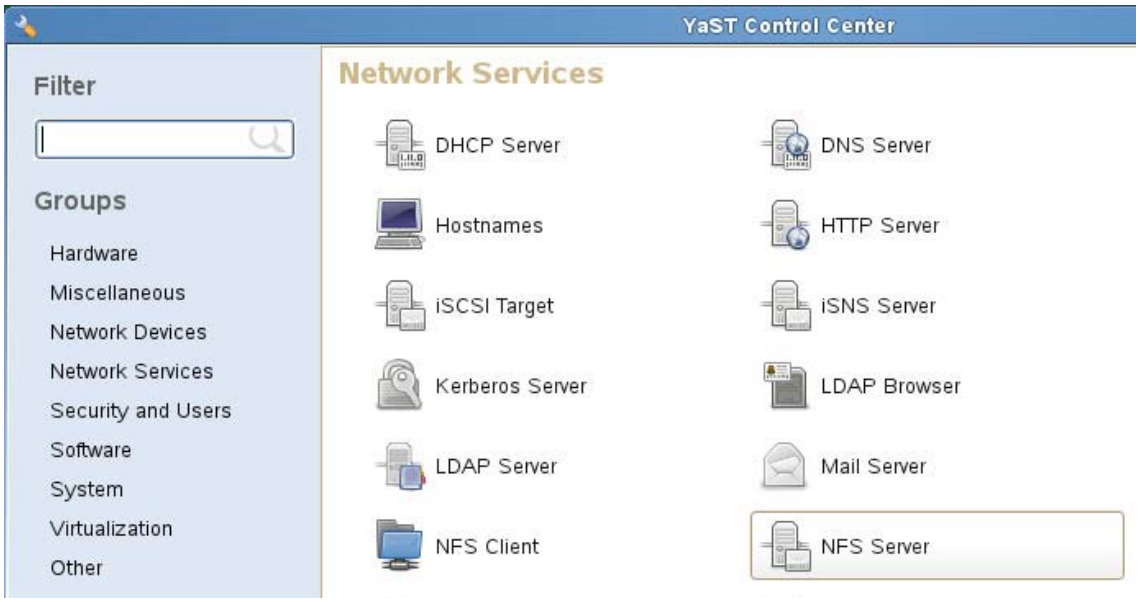


Creating Server Only Model Domain Profiles

Domain Profile: Server Only Model

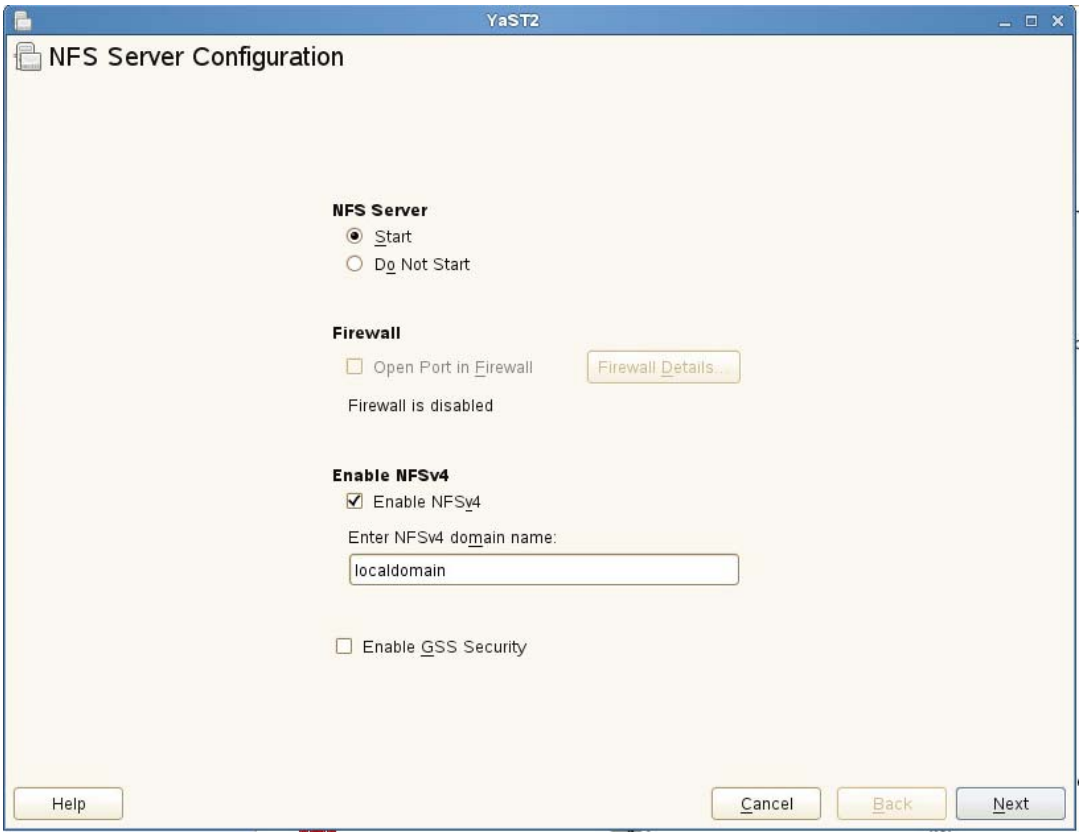
On the GroupWise server, create an NFS mount. Each domain and post office must receive their own mount points.

1. Start YaST2
2. Install NFS Server



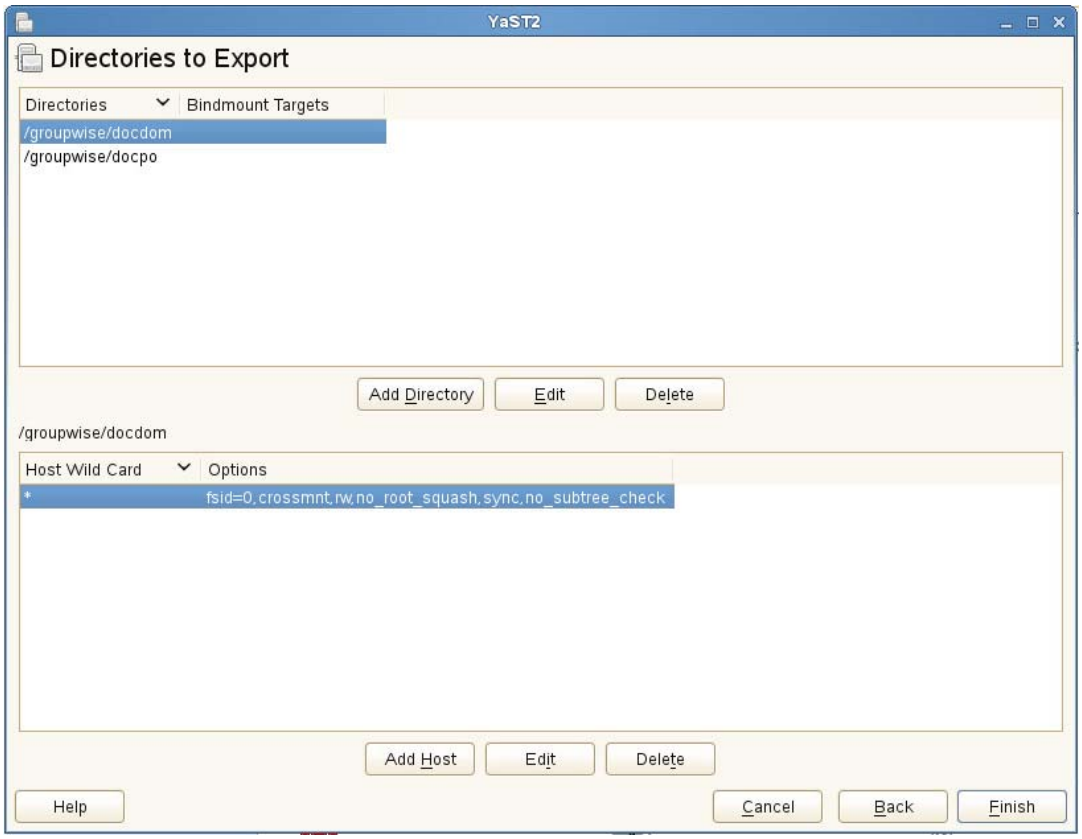
3. Configure NFS Server:
   a. Set NFS Server to start

b. Open the port in the firewall, if applicable.



4. Add Directory:
   a. Browse to the domain directory. For example /groupwise/domain

b. Set options to: *rw,no_root_squash,sync*

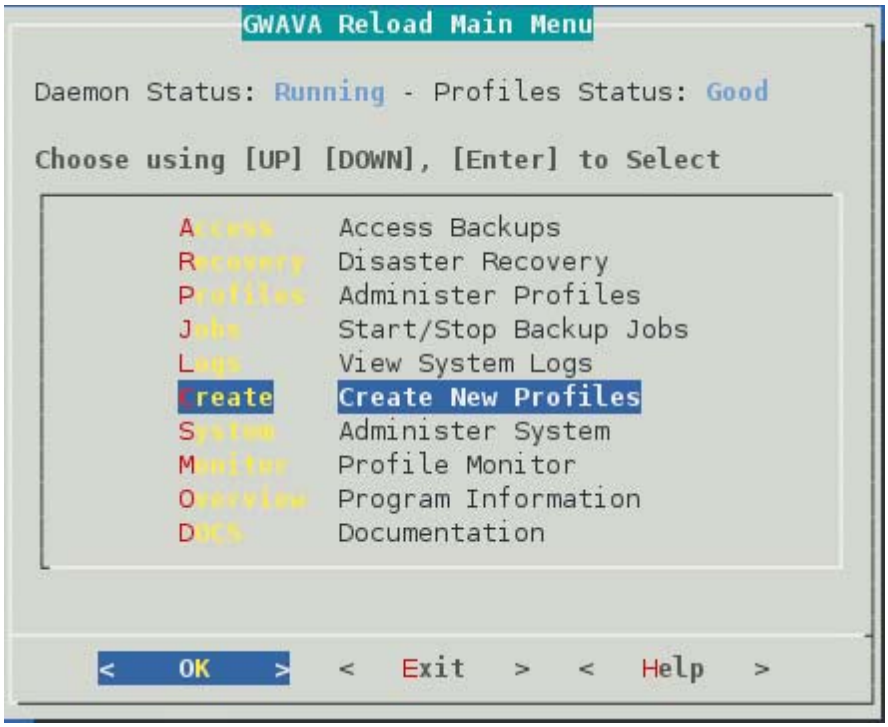


5. Press Finish to complete setup.

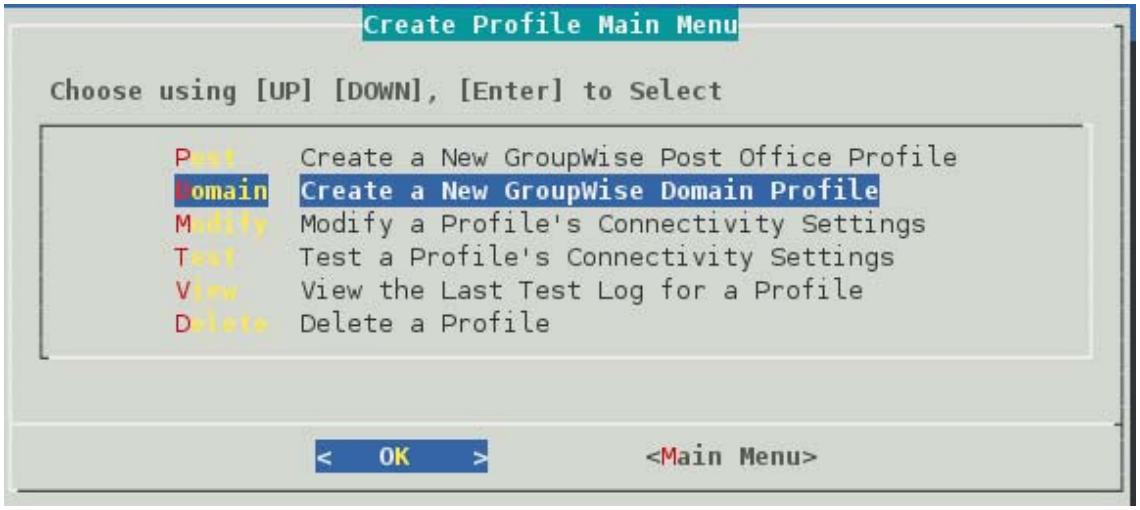
   On the GroupWise Disaster Recovery server, create a data directory and a profile
6. Create a directory for the backup data. For example:

   `mkdir /reload`
7. Start the GroupWise Disaster Recovery Administration Console by typing on the command line:

   `reload`
8. Select "Create (Create Profile)"

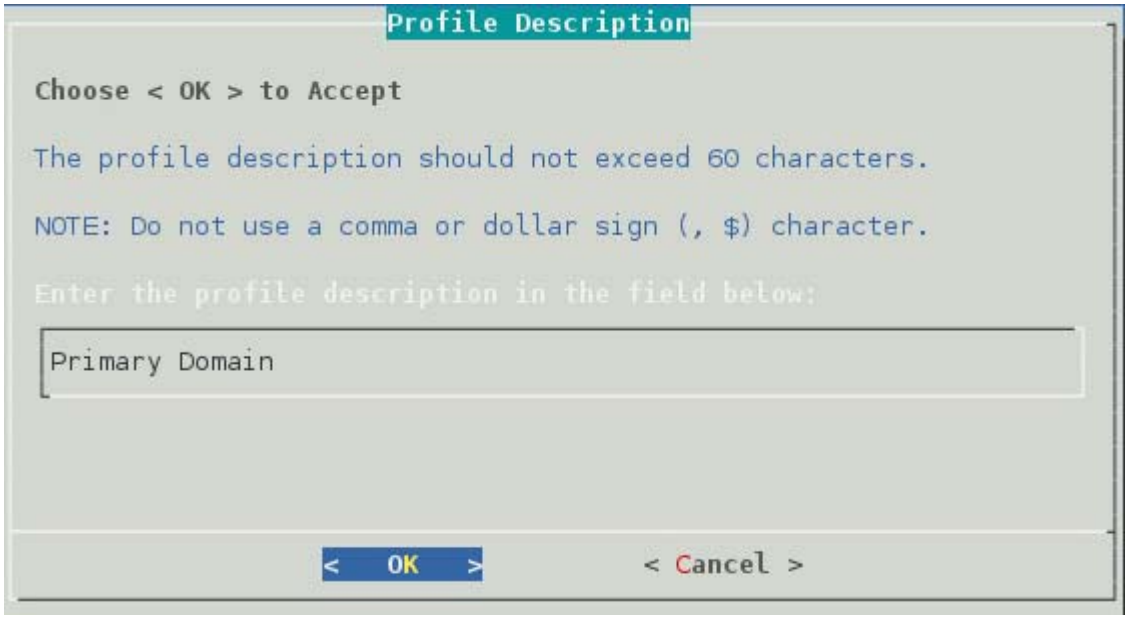


9. Select "Domain (Create a New GroupWise Domain Profile)"

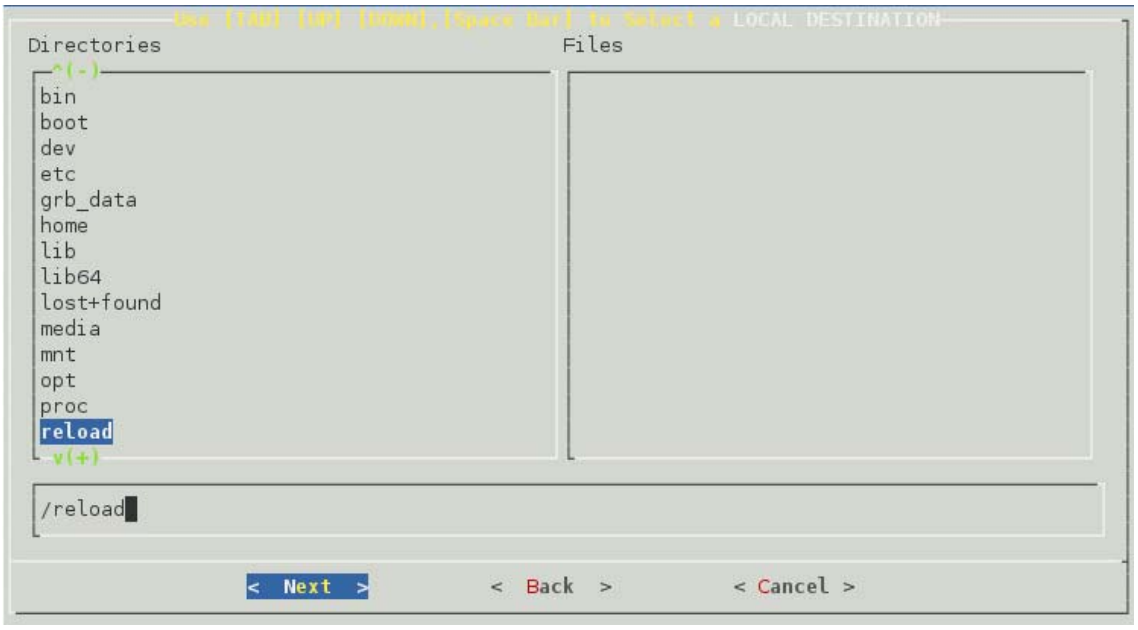


10. Give the Profile a Name. The profile name should not exceed eight characters. Use letters and numbers only, no spaces or other characters. For example: Domain Be aware, that a profile cannot be renamed, once it has been created. Choose the name wisely. Perhaps you will want to name the profile so that its name is the same as the GroupWise post office or domain that the profile represents, but it does not have to match. Select the Next button.

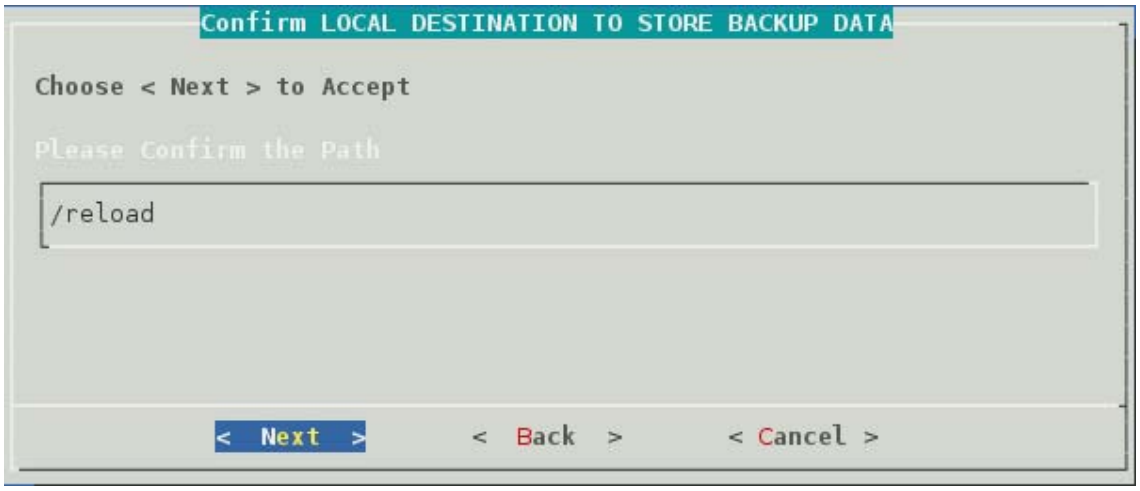
11. Give the Profile a Description. The profile description should not exceed 60 characters and should not have comma(,), nor dollar sign($) characters. For example: Primary Domain. The description of the profile will be added to the Agent Log when backup jobs are run for the profile. Select the Next button.



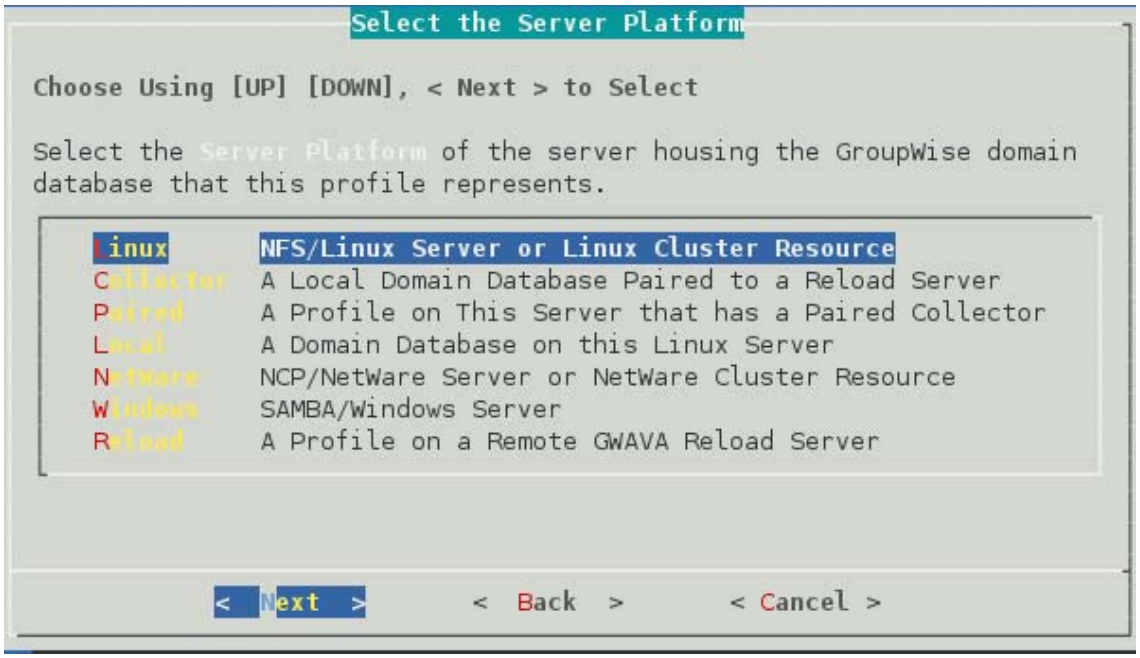
12. Enter the path or browse to the local destination directory to store the backup data. For example: /reload. This path can be a location on the Linux server, or an NFS mount to another Linux/Unix server, or to a SAN. The path should always be available; GroupWise Disaster Recovery is not configured to mount paths in order to access stored data. Also, the path should be to a location that has a lot of disk space available. Select the Next button.



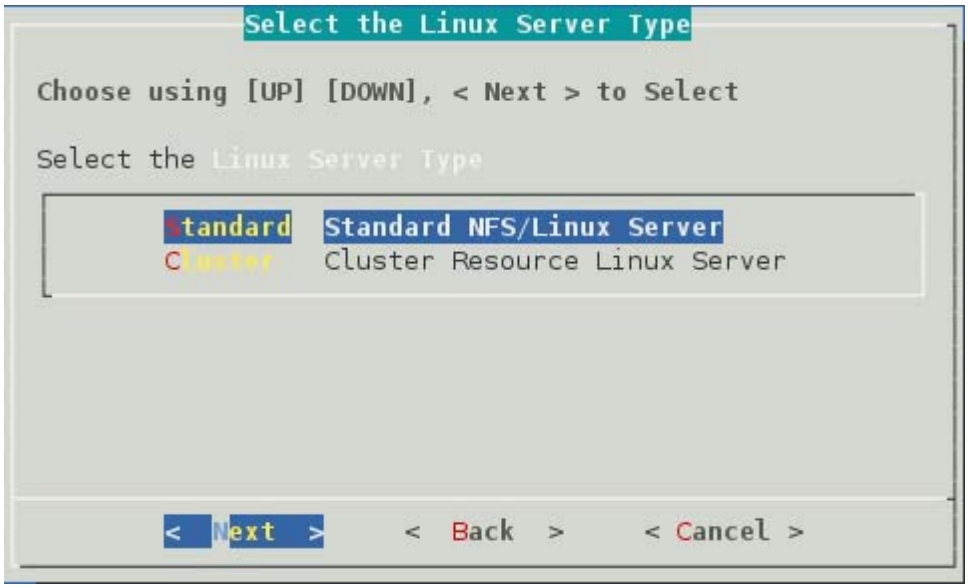
13. Confirm the path to the local destination directory



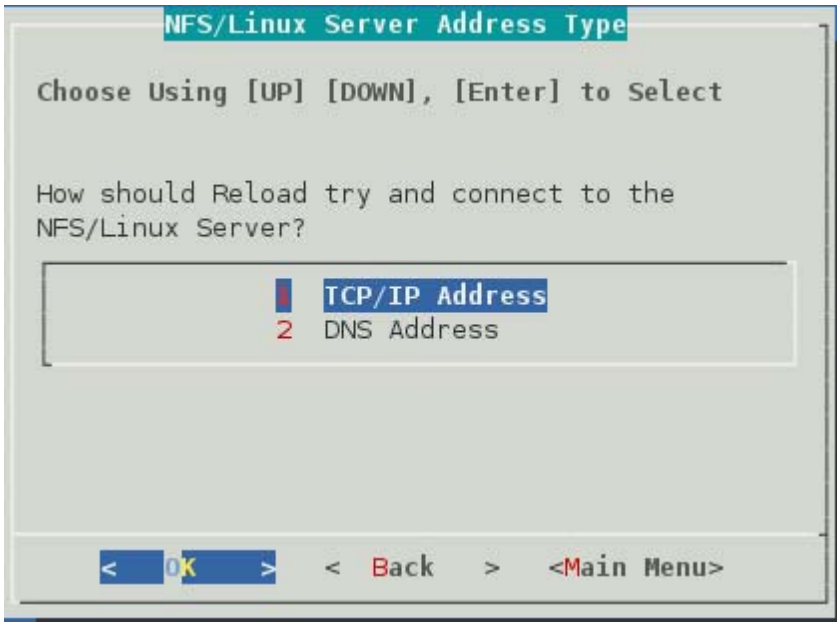
14. Select the Server Platform: "Linux (NFS/Linux Server or Linux Cluster Resource)"



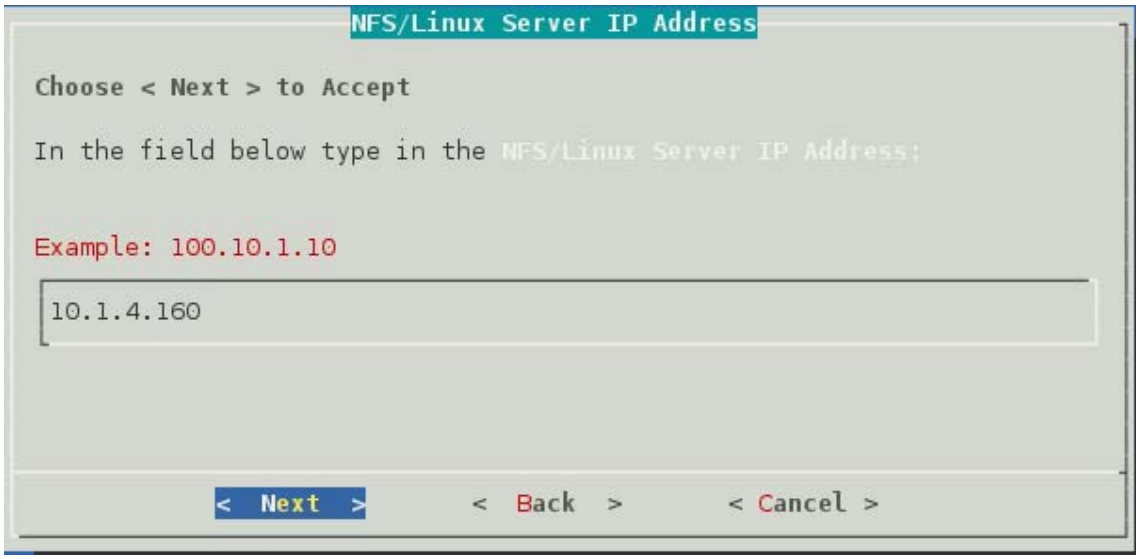
15. Select Linux Server Type: "Standard (Standard NFS/Linux Server)"



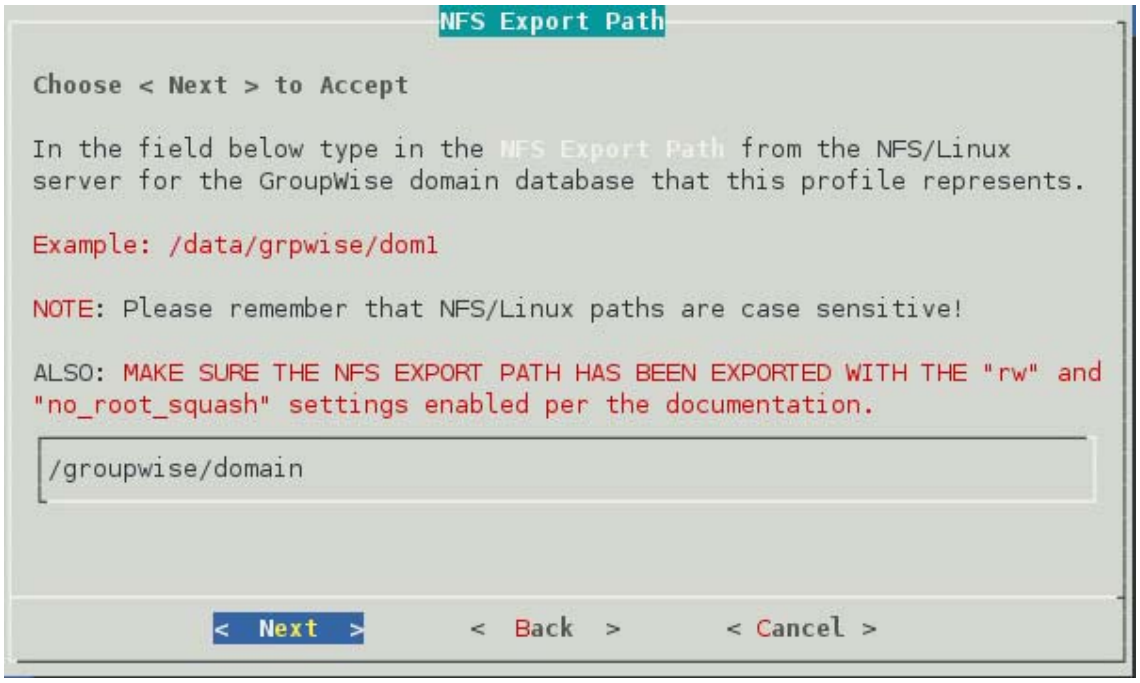
16. Select NFS/Linux Server Address Type: "1 (TCP/IP Address)" or "2 (DNS Address)"



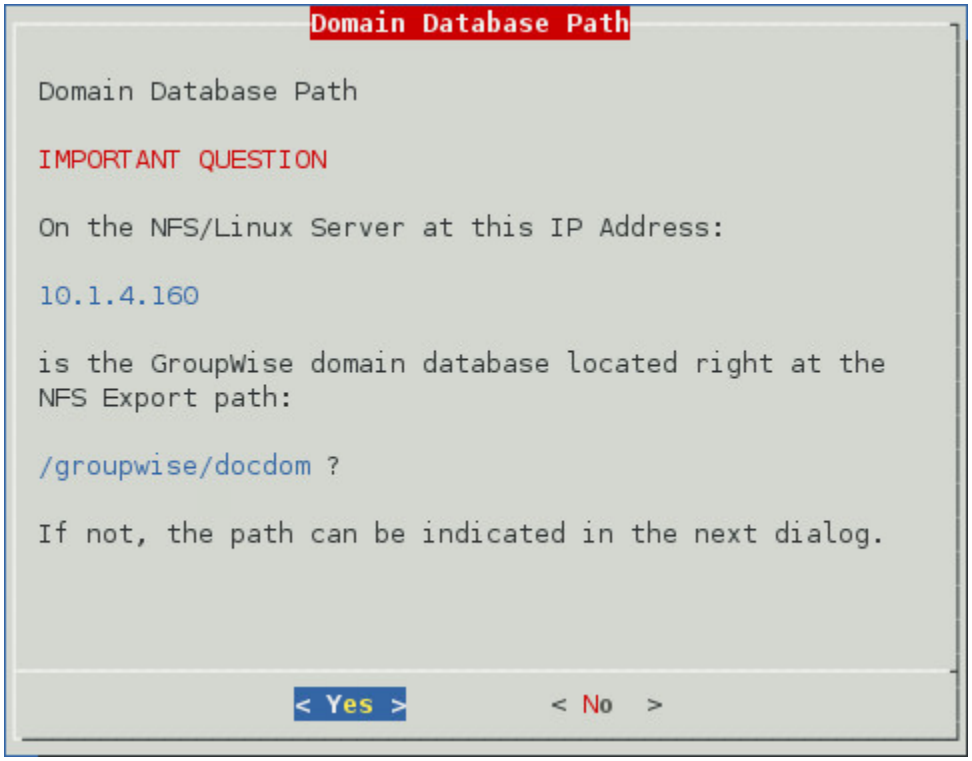
17. Enter the NFS/Linux Server IP Address or DNS hostname Address



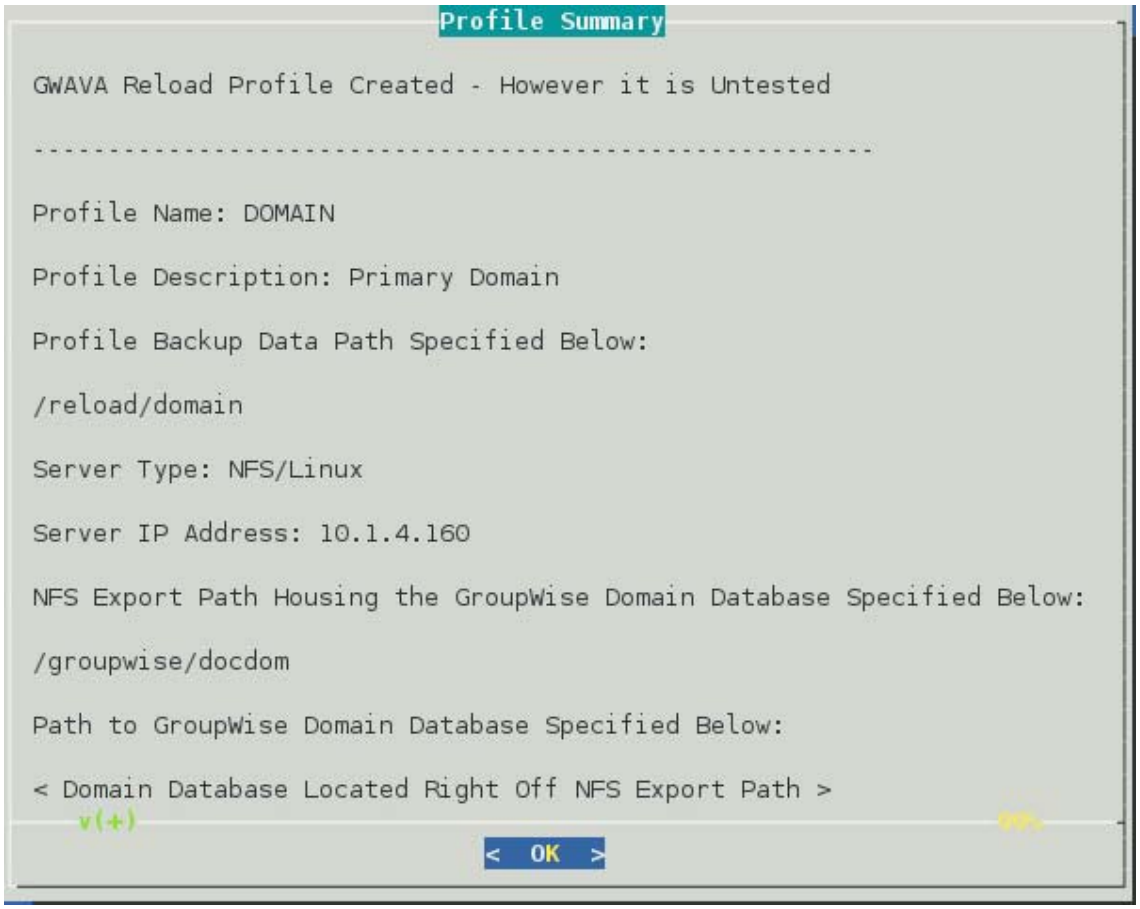
18. Enter the NFS Export Path on the GroupWise server from above. For example: /groupwise/domain



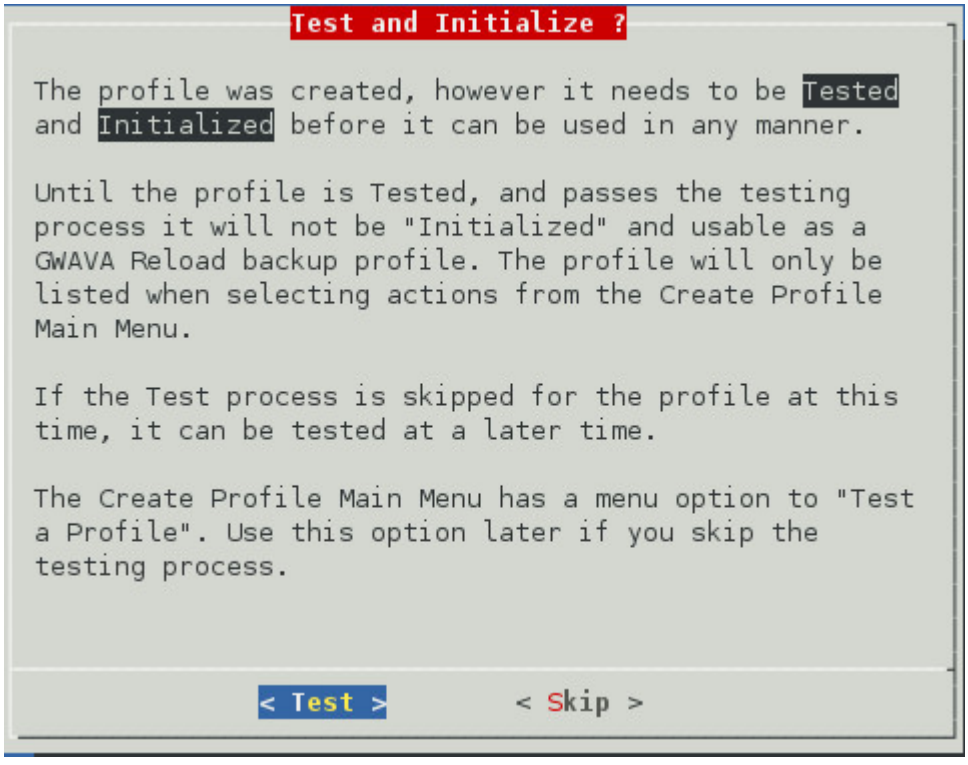
19. A warning page appears that asks if the IP Address and Export path are correct.



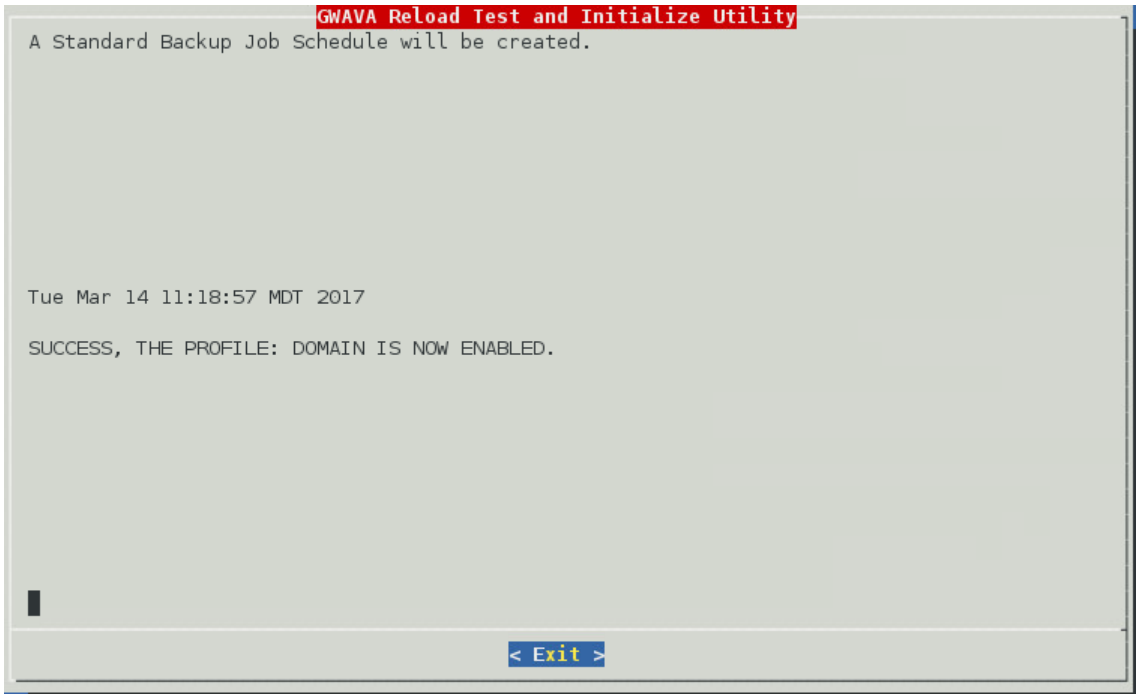
20. A Profile Summary page appears



21. The Test and Initialize page allows you to finalize the profile by selecting Test.



22. If the configuration is incorrect, select Skip and makes your changes.
23. Run the test and it will indicate success or failure.

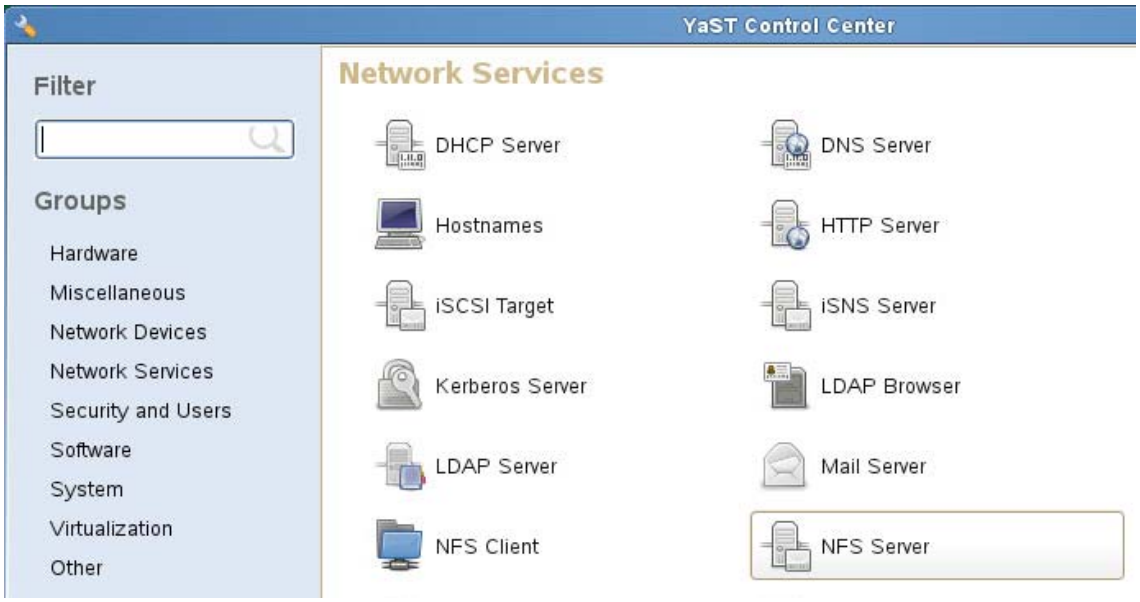


Creating Server Only Post Office Profiles

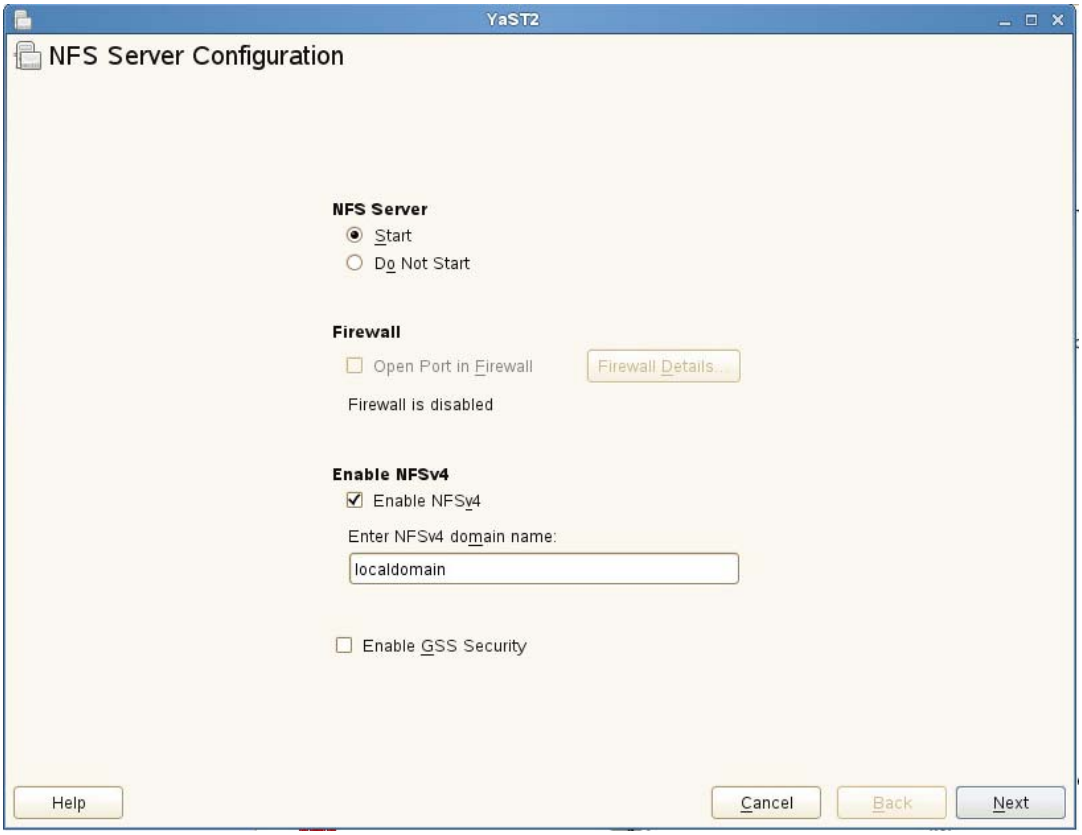
Post Office Profile: Server Only Model

On the GroupWise server, create an NFS mount. Each domain and post office must receive their own mount points.

1. Start YaST2
2. Install NFS Server

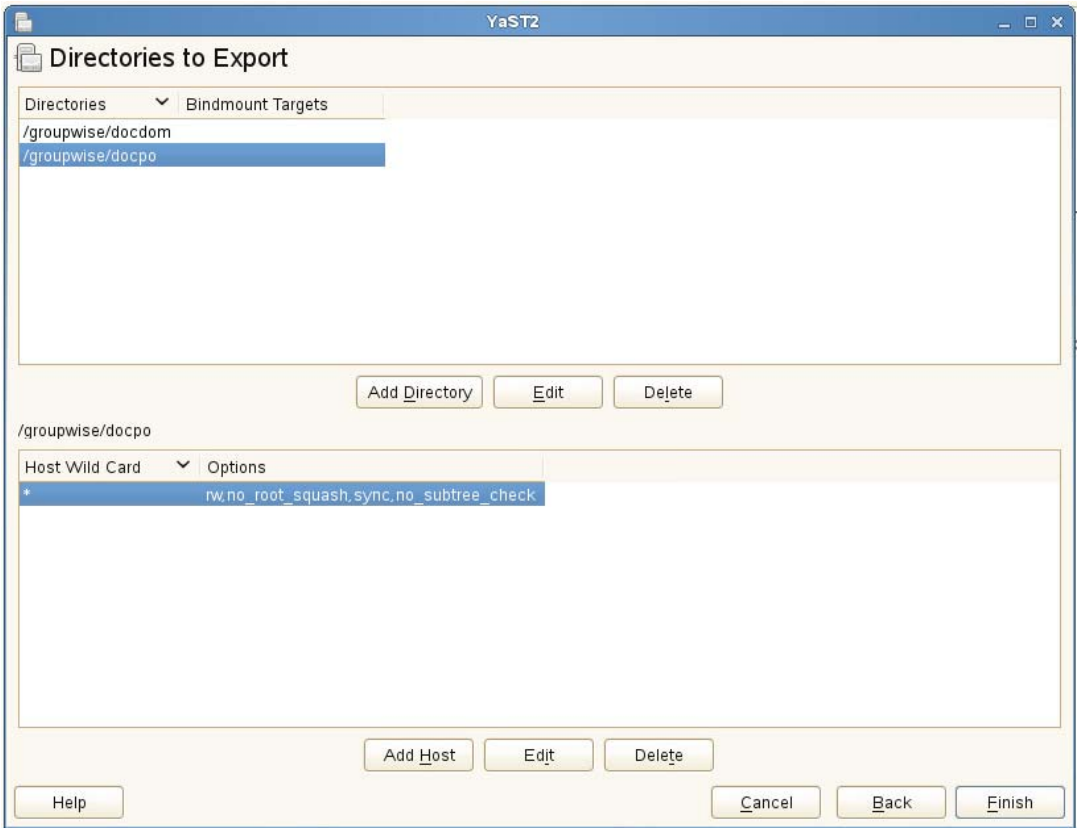


3. Configure NFS Server:
   a. Set NFS Server to start
   b. Open the port in the firewall, if applicable.



4. Add Directory:
   a. Browse to the Post Office directory. For example /groupwise/po

b. Set options to: *rw,no_root_squash,sync*

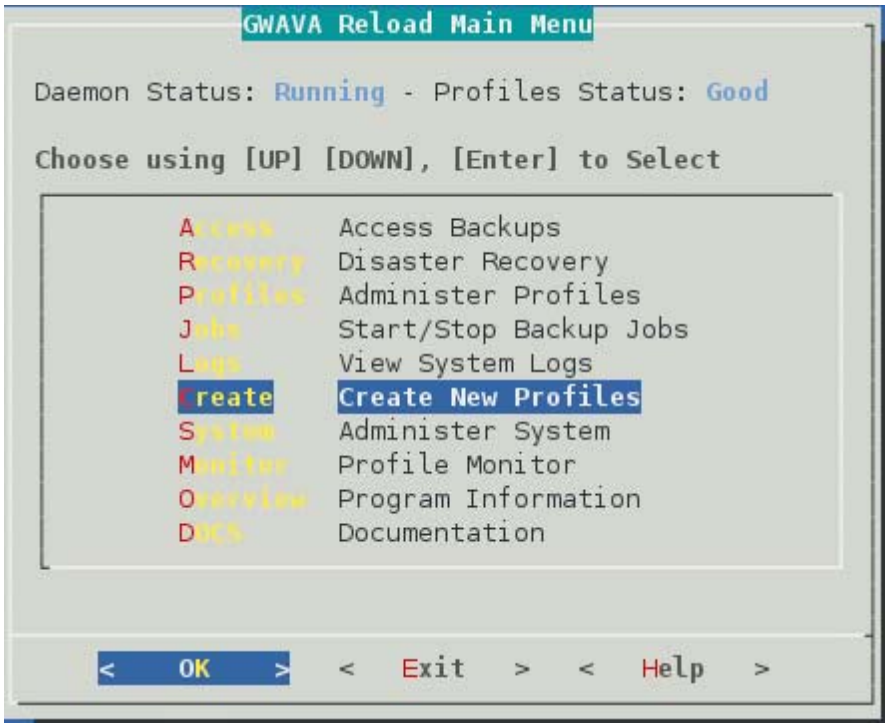


5. Press Finish to complete setup.

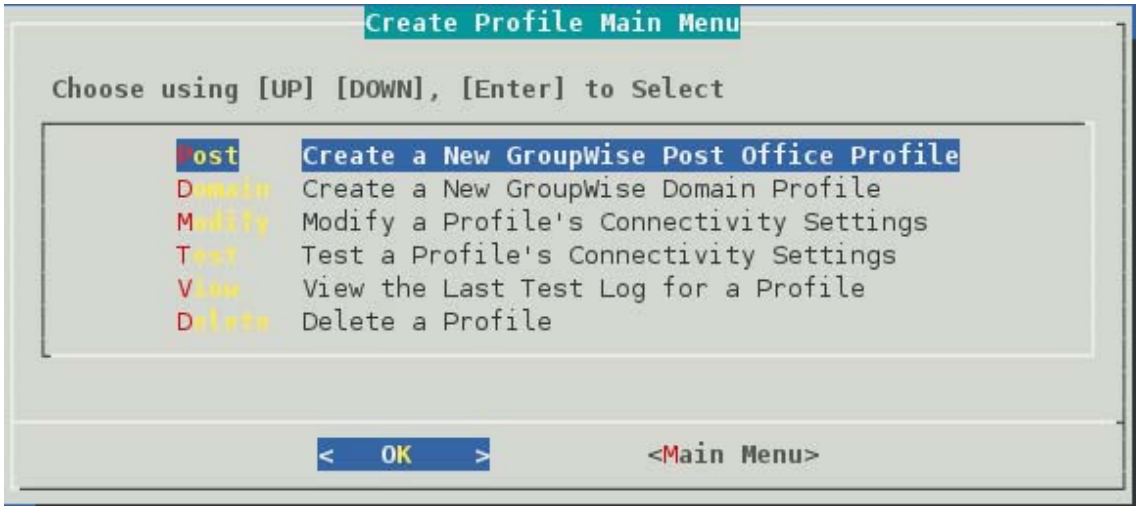
   On the GroupWise Disaster Recovery server, create a data directory and a profile
6. Create a directory for the backup data, if necessary. For example:

   `mkdir /reload`
7. Start the GroupWise Disaster Recovery Administration Console by typing on the command line:

   `reload`
8. Select "Create (Create Profile)"

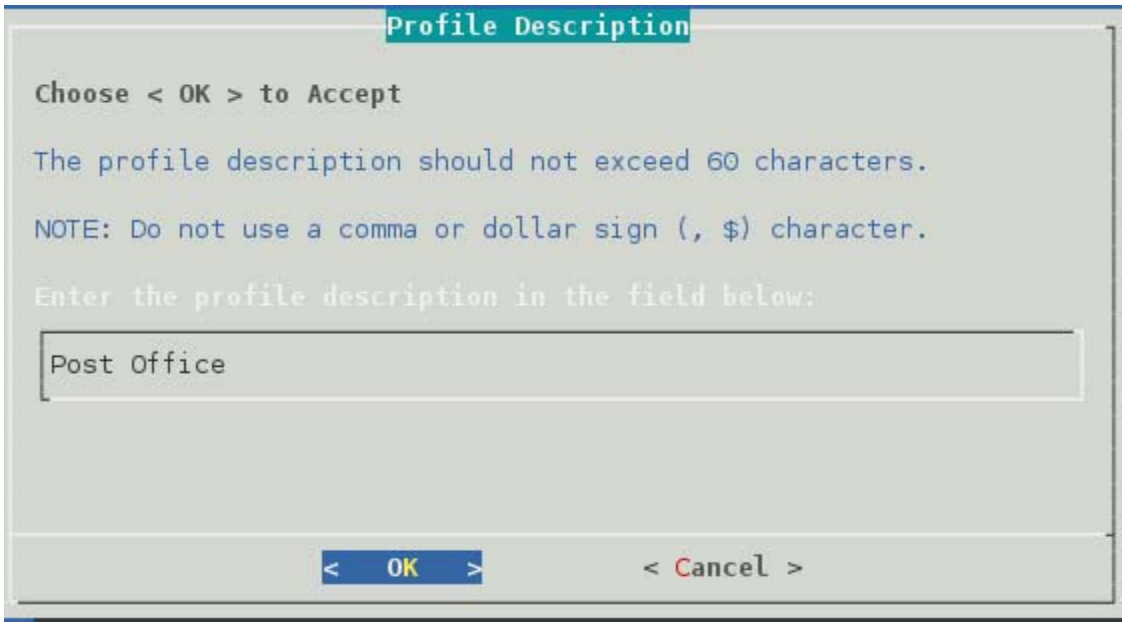


9. Select "Post (Create a New GroupWise Post Office Profile)"

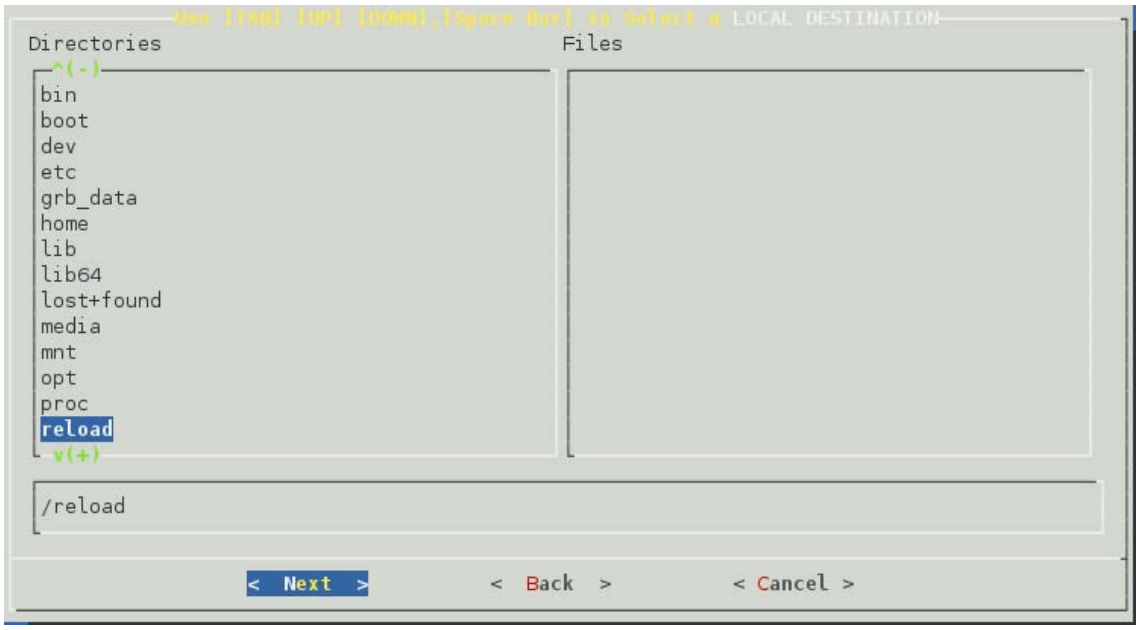


10. Give the Profile a Name. The profile name should not exceed eight characters. Use letters and numbers only, no spaces or other characters. For example: Post Office. Be aware, that a profile cannot be renamed, once it has been created. Choose the name wisely. Perhaps you will want to name the profile so that its name is the same as the GroupWise post office or domain that the profile represents, but it does not have to match. Select the Next button.

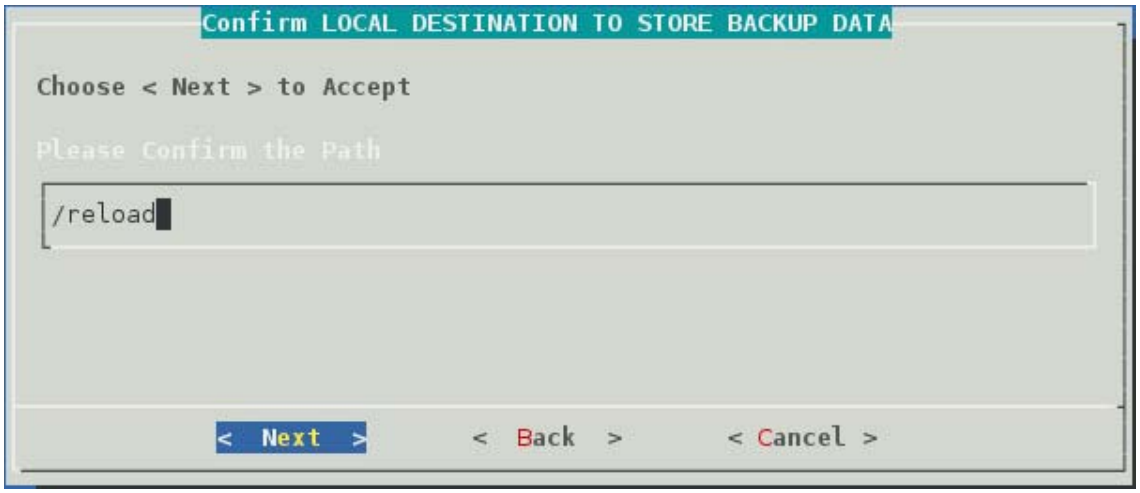
11. Give the Profile a Description. The profile description should not exceed 60 characters and should not have comma(,), nor dollar sign($) characters. For example: Primary Post Office. The description of the profile will be added to the Agent Log when backup jobs are run for the profile. Select the Next button.



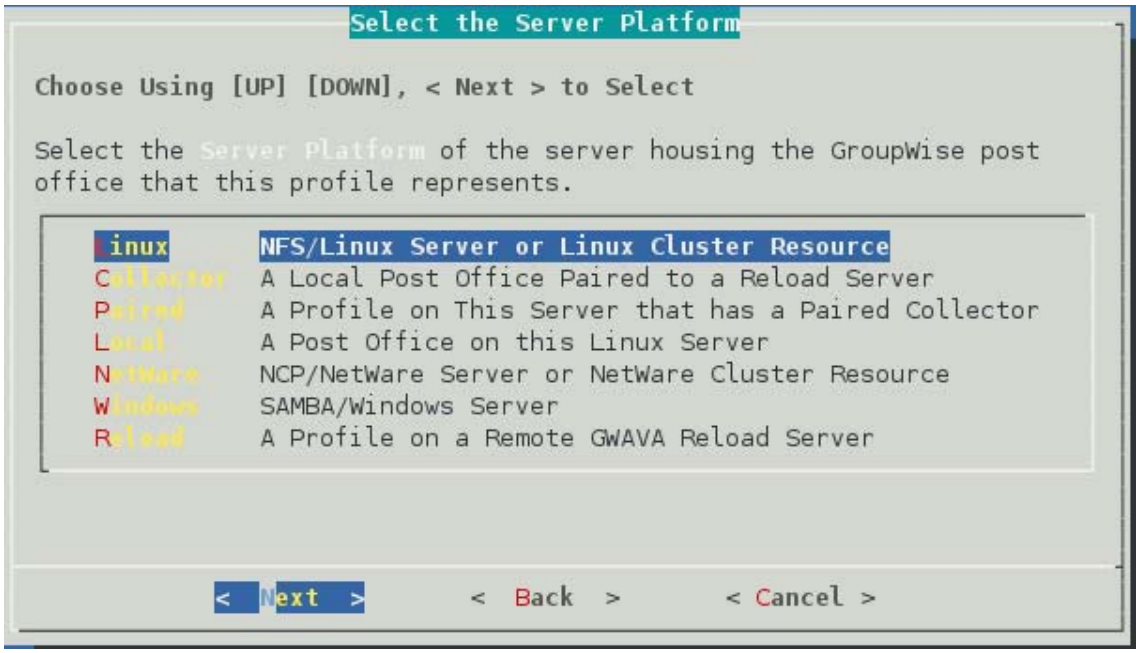
12. Enter the path or browse to the local destination directory to store the backup data. For example: /reload. This path can be a location on the Linux server, or an NFS mount to another Linux/Unix server, or to a SAN. The path should always be available; GroupWise Disaster Recovery is not configured to mount paths in order to access stored data. Also, the path should be to a location that has a lot of disk space available. Select the Next button.



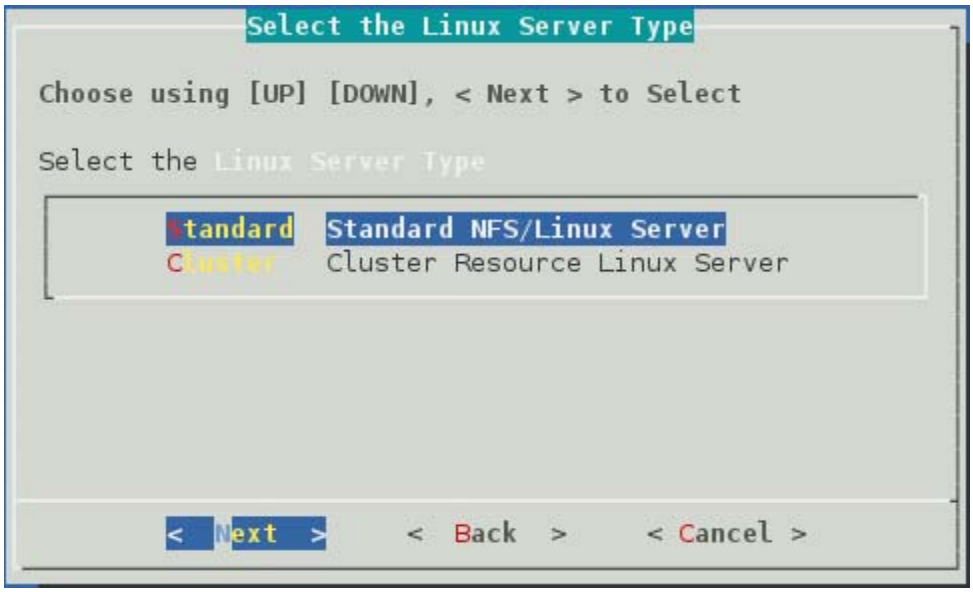
13. Confirm the path to the local destination directory



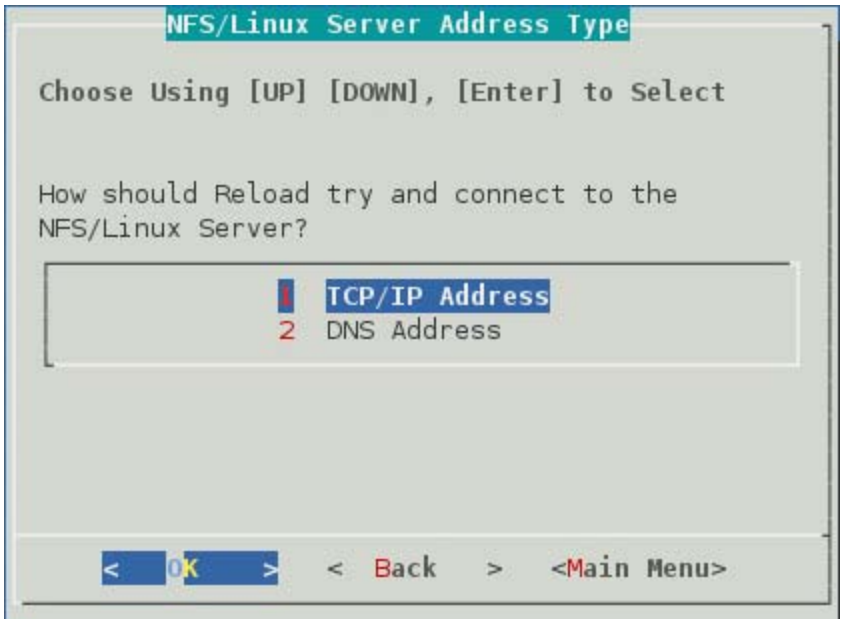
14. Select the Server Platform: "Linux (NFS/Linux Server or Linux Cluster Resource)"



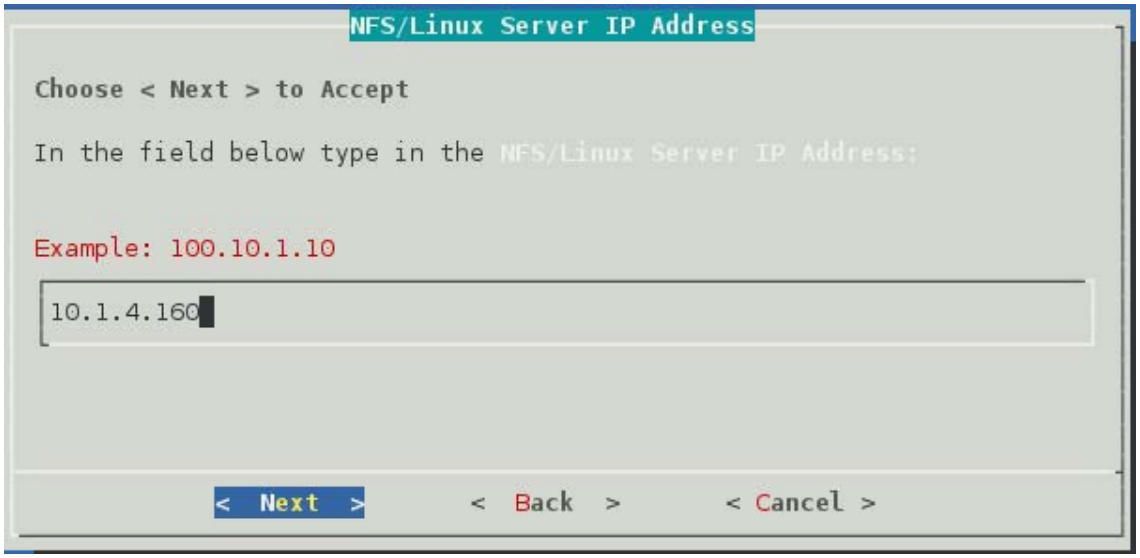
15. Select Linux Server Type: "Standard (Standard NFS/Linux Server)"



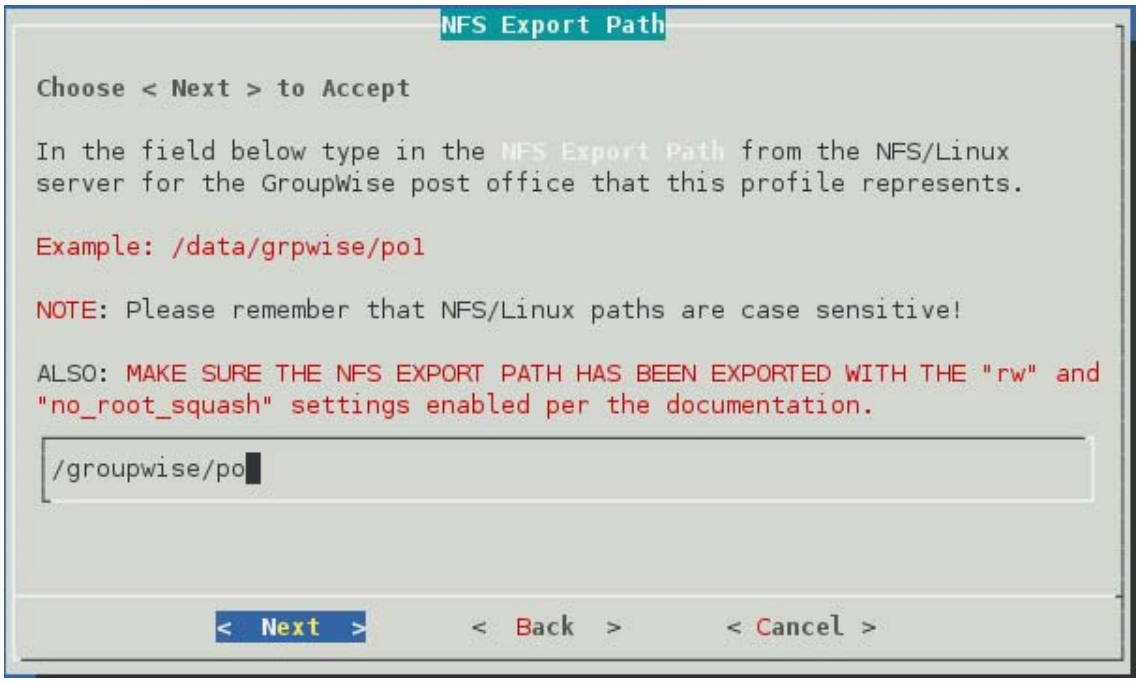
16. Select NFS/Linux Server Address Type: "1 TCP/IP Address" or "2 DNS Address"



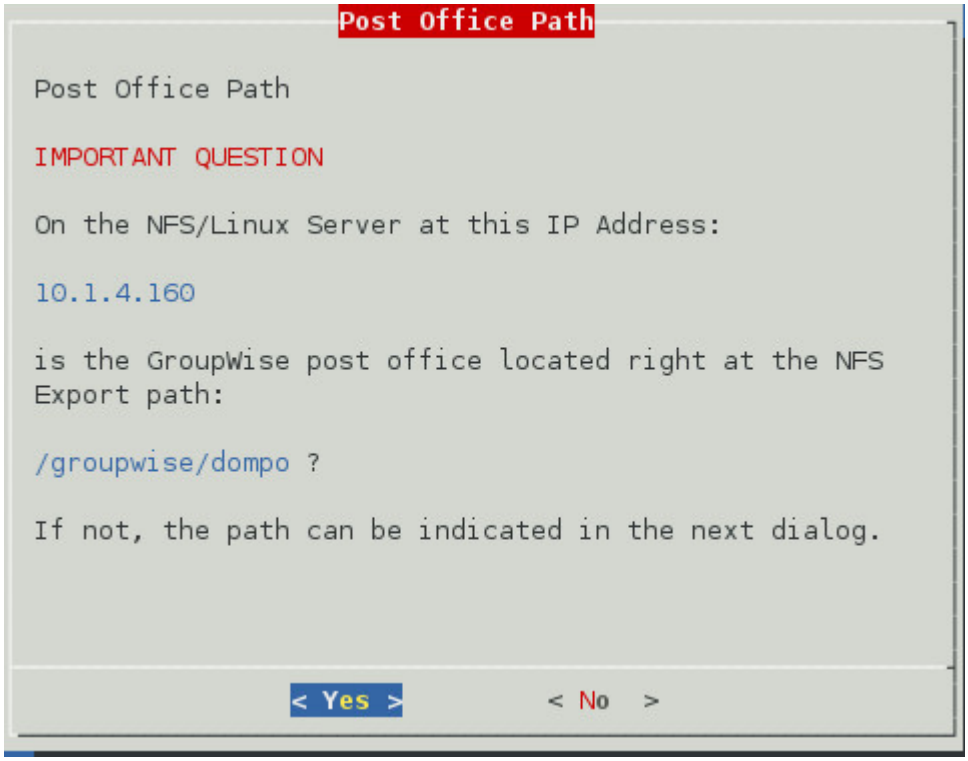
17. Enter the NFS/Linux Server IP Address or DNS Hostname



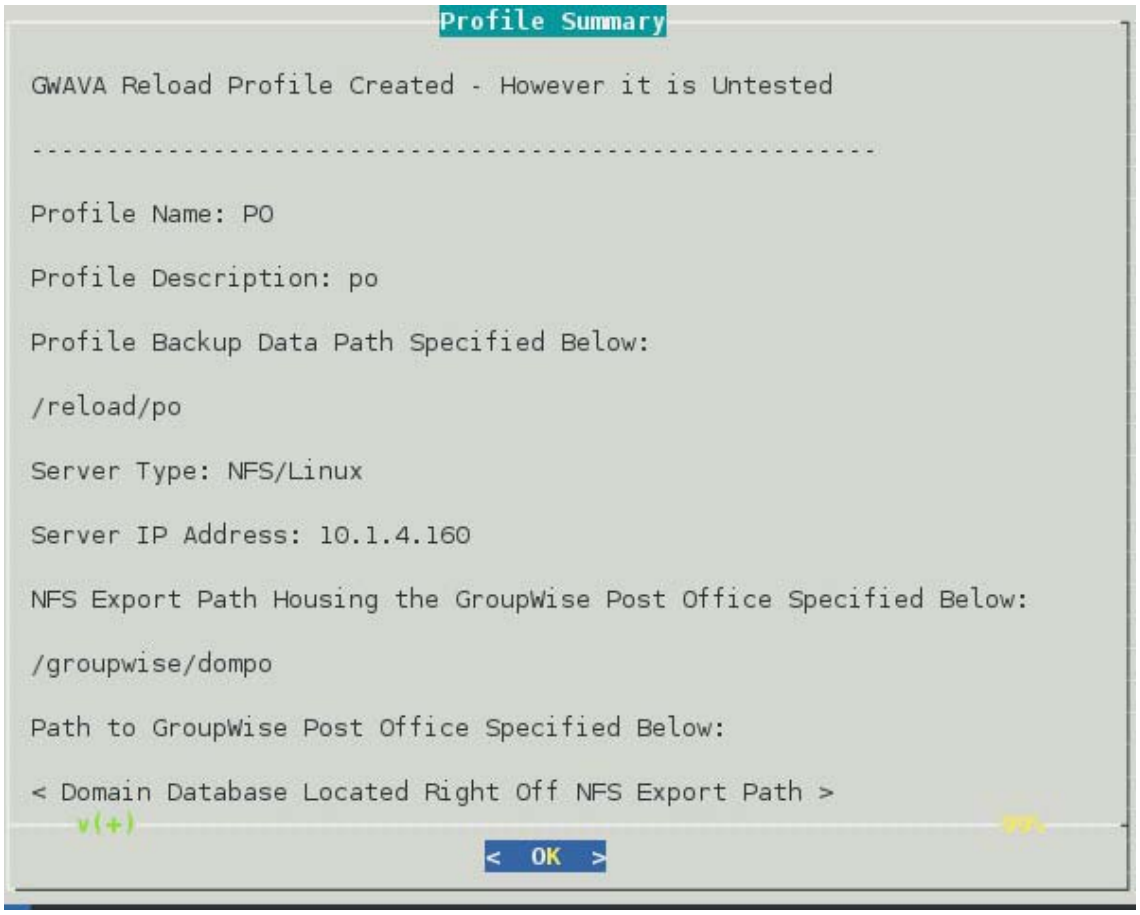
18. Enter the NFS Export Path on the GroupWise server from above. For example: /groupwise/po



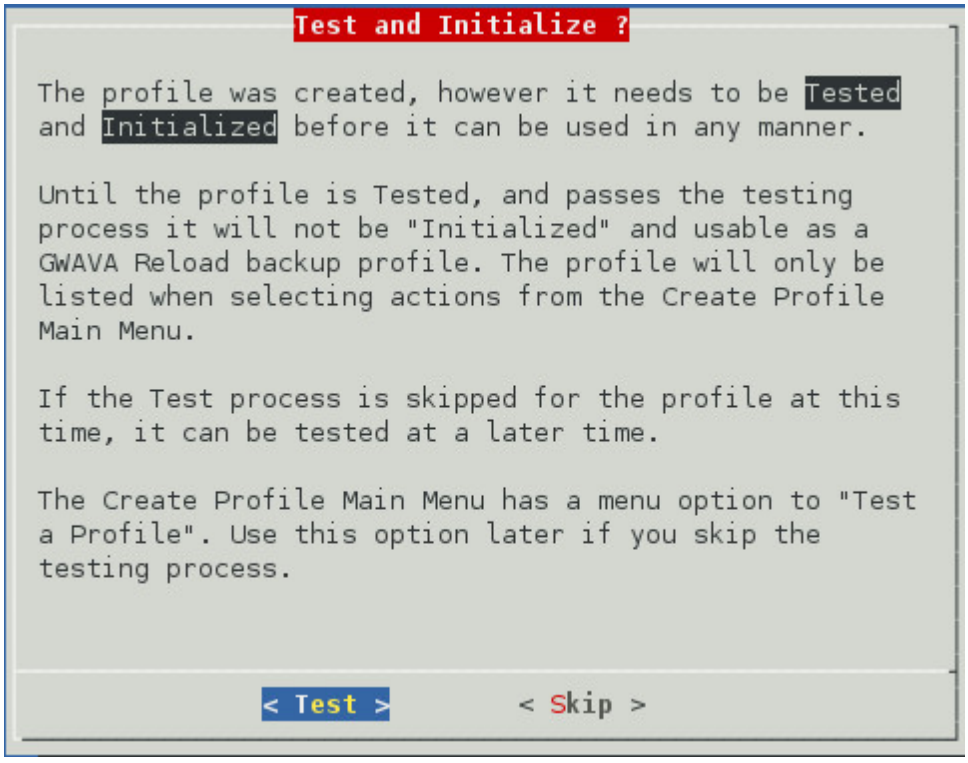
19. A warning page appears that asks if the IP Address and Export path are correct.



20. A Profile Summary page appears



21. The Test and Initialize page allows you to finalize the profile by selecting Test.



22. If the configuration is incorrect, select Skip and makes your changes.
23. Run the test and it will indicate success or failure.

GroupWise Cluster

Installing GroupWise Disaster Recovery in a GroupWise Cluster

GroupWise Disaster Recovery can be implemented where GroupWise is in a cluster.

When GroupWise is implemented in a cluster there are a few extra steps needed to configure GroupWise Disaster Recovery to operate successfully.

In this example there are three servers:

- GroupWise Disaster Recovery Server
- GroupWise Cluster Node 1 (NODE1)
- GroupWise Cluster Node 2 (NODE2)

Installation Collector/Server Model

On the GroupWise Disaster Recovery Server

Install GroupWise Disaster Recovery on the GroupWise Disaster Recovery server

Create a Post Office Profile for the Post Office on the GroupWise Cluster

If upgrading a standard server model profile to a Collector/Server model profile:

In GroupWise Disaster Recovery Web Administration, choose the profile and go to the Configure tab for the profile.

Select the Post Office and POA Settings panel

Find the line Note: Disk Space Required for Collector

Check on each node that there is sufficient space for the collector and data on each node. Note: This calculation does not take Document Management Libraries into account. If you wish to add DMS, multiple the size of the GWDMS directory structure by 2.

Set "Allow Paired Collector" to Enabled

On GroupWise Cluster Node 1 (NODE1)

Install the GroupWise Disaster Recovery Collector Software on NODE1

Browse to the GroupWise Disaster Recovery Server and select the appropriate collector software from the Tools dropdown menu and select go, or copy the software from the GroupWise Disaster Recovery server found in the directory:

```
/opt/beginfinite/reload/setup/collector/reload_collector.rpm
```

Run the following command from the terminal:

```
rpm -ivh reload_collector.rpm
```

Exchange SSH keys with the GroupWise Disaster Recovery Server

Run the following command from the terminal:

ssh-copy-id -i /root/.ssh/id_rsa.pub <address of the GroupWise Disaster Recovery Server>

This is to setup the ssh connection so NODE1 can rsync with GroupWise Disaster Recovery without being prompted for a password. This must be successful before proceeding.

Create a GroupWise Disaster Recovery Collector Profile

1. Run the following command from the terminal:

   ```
   reload
   ```
2. Choose Create Profile
3. Select "Create (Create Profile)"
4. Select "Post Office (Create a New GroupWise Post Office Profile)"
5. Give the Profile a Name. The profile name should not exceed eight characters. Use letters and numbers only, no spaces or other characters. For example: po. Be aware, that a profile cannot be renamed, once it has been created. Choose the name wisely. Perhaps you will want to name the profile so that its name is the same as the GroupWise post office or domain that the profile represents, but does not have to match. Select the Next button.
6. Give the Profile a Description. The profile description should not exceed 60 characters and should not have comma(,), nor dollar sign($) characters. For example: Domain Collector. The description of the profile will be added to the Agent Log when backup jobs are run for the profile. Select the Next button.

7. Enter the path or browse to the local destination directory to store the backup data. For example: /reload. This path can be a location on the Linux server, or an NFS mount to another Linux/Unix server, or to a SAN. The path should always be available; GroupWise Disaster Recovery is not configured to mount paths in order to access stored data. Also, the path should be to a location that has a lot of disk space available. Select the Next button.
8. Confirm the path to the local destination directory
9. Choose the server type: "Collector (A Local Post Office/Domain Paired to a GroupWise Disaster Recovery Server)". Select the Next button.
10. Enter the TCP/IP Address or DNS hostname for the GroupWise Disaster Recovery server this collector will be paired with. Select the Next button.
11. A terminal session will appear to prompt you to accept an SSH key and enter the password for the GroupWise Disaster Recovery server.
12. Enter the SSH port used by the GroupWise Disaster Recovery server (default port: 22)
13. Enter the destination path the data will be stored in on the GroupWise Disaster Recovery server. This is the destination directory you entered when creating the Paired Server on the GroupWise Disaster Recovery server.
14. Source Path to the GroupWise files: Enter the source path to the local destination directory entered earlier on the GroupWise server. For example: /groupwise/po
15. Confirm the path to the local source directory
16. A summary of the profile settings will appear. Select the OK button.
17. Test and Initialization:

    If the profile is correct, select the Test button.

    If the profile is not correct, select the Skip button.
18. The profile creation wizard tests and initializes the newly created profile and prepares it to accept a pairing request from a Paired Collector and initializes the newly created profile and prepares it to accept a pairing request from a Paired Collector.

Browse to the GroupWise Disaster Recovery Web Administration page on NODE1. For example, http://NODE1:5555.

1. Choose the profile being configured
2. Select the Configure tab and open the GroupWise Disaster Recovery Collector Settings panel
3. Set "This Collector is on a Cluster Node" to Enabled
4. Select the Backups tabs, open the Reload Job Control panel and click on "Start a Standard Backup Job [SmartPurge Disabled]" to run a backup job, allow the backup to complete normally.

On GroupWise Cluster Node 2 (NODE2)

Profile settings are not shared across the cluster automatically, this needs to be done manually when setting up or when settings are changed.

1. Install the GroupWise Disaster Recovery Collector Software on NODE1
    a. Browse to the GroupWise Disaster Recovery Server and select the appropriate collector software from the Tools dropdown menu and select go, or copy the software from the GroupWise Disaster Recovery server found in the directory: /opt/beginfinite/reload/setup/collector/reload_collector.rpm
    b. Run the following command from the terminal: rpm -ivh reload_collector.rpm

2. Exchange SSH keys with the GroupWise Disaster Recovery Server
    a. Run the following command from the terminal: ssh-copy-id -i /root/.ssh/id_rsa.pub <address of the GroupWise Disaster Recovery Server>
    b. This is to setup the ssh connection so NODE1 can rsync with GroupWise Disaster Recovery without being prompted for a password. This must be successful before proceeding.
3. Obtain the following files from NODE1 and copy them to the same directories on NODE2
    a. The contents of the /opt/beginfinite/reload/conf directory (including the ../conf/cron directory)
    b. The license file /opt/beginfinite/reload/license/reload.pem
4. Restart the GroupWise Disaster Recovery daemon on NODE2 with the following command: reloadd restart
5. Browse to the GroupWise Disaster Recovery Web Administration page on NODE2. For example, http://NODE2:5555.
    a. Select the Backups tabs, open the Reload Job Control panel and click on "Start a Standard Backup Job [SmartPurge Disabled]" to run a backup job.
    b. This backup should '"fail"'

In the Event Log the failure will look like:

```
 DATE: Fri_Dec_11 TIME: 14:57:25 PROFILE: COLLECT1 - STARTING JOB FOR PROFILE:
COLLECT1

 DATE: Fri_Dec_11 TIME: 14:57:25 PROFILE: COLLECT1 - DISK SPACE IN USE AT JOB
BEGINNING: 46%

 DATE: Fri_Dec_11 TIME: 14:57:25 PROFILE: COLLECT1 - JOB TYPE: COLLECTOR
(INCREMENTAL) BACKUP

 DATE: Fri_Dec_11 TIME: 14:57:25 PROFILE: COLLECT1 - [GRE_DBS_AGENTS] Start
Database Backup

 DATE: Fri_Dec_11 TIME: 14:57:34 PROFILE: COLLECT1 - [GRE_DBS_OFUSER] Start OFUSER
Backup

 DATE: Fri_Dec_11 TIME: 14:57:38 PROFILE: COLLECT1 - [GRE_DBS] Terminating
Processing, Post Office Volume for Profile Not Mounted.

 DATE: Fri_Dec_11 TIME: 14:57:38 PROFILE: COLLECT1 - [GRE_DBS] This must not be the
active node for the Post Office
```

On NODE1 & NODE2

Only the GroupWise Disaster Recovery server requires Backup Age monitoring

1. Disable Backup Age Monitoring
    a. Browse to the GroupWise Disaster Recovery Web Administration page on each node
    b. Go to the Collector Profile, under the Configure tab, open the Preferences panel
        i. Under Backup Age Monitoring, set "Monitor How Old the Most Current Backup Is" to Disabled

Upgrading Collectors in a Cluster

Clusters are a bit of a challenge to work with as an inactive node does not do anything since it is inactive, therefore you will have to upgrade each node manually.

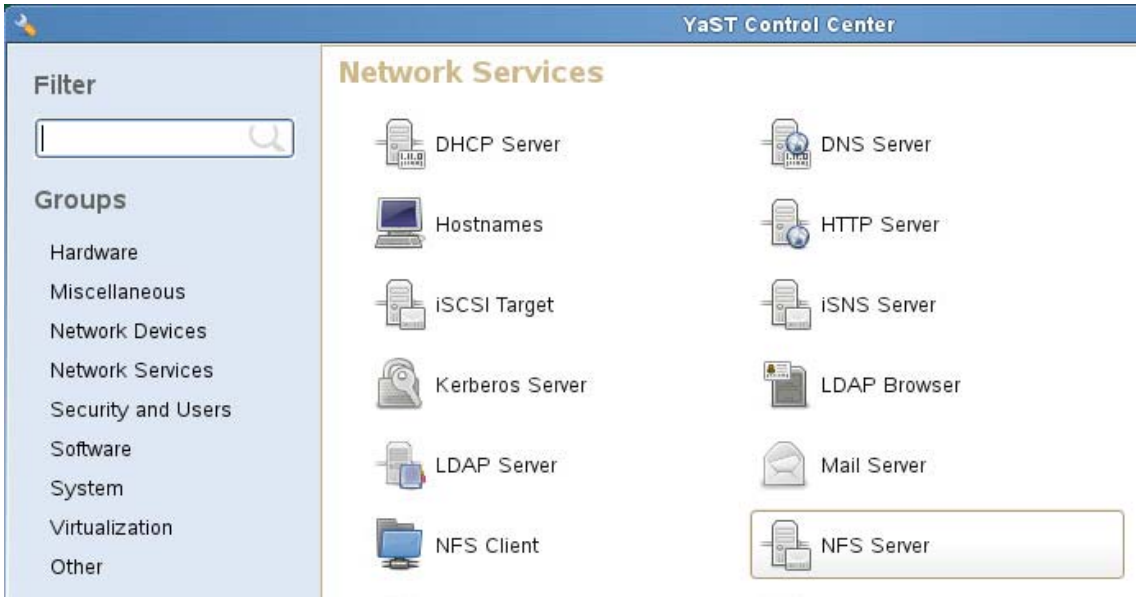
1. Browse to the GroupWise Disaster Recovery Server and select the appropriate collector software from the Tools dropdown menu and select Go, or copy the software from the GroupWise Disaster Recovery server found in the directory: /opt/beginfinite/reload/setup/collector/reload_collector.rpm
2. Place the file on each '"inactive"' node in: /opt/beginfinite/reload/upgrade
3. Upgrade the GroupWise Disaster Recovery Collector software from the terminal by running the command: reloadu

Configure Restore Area on Linux

Once a backup has been created the link to the Restore Area can be made.

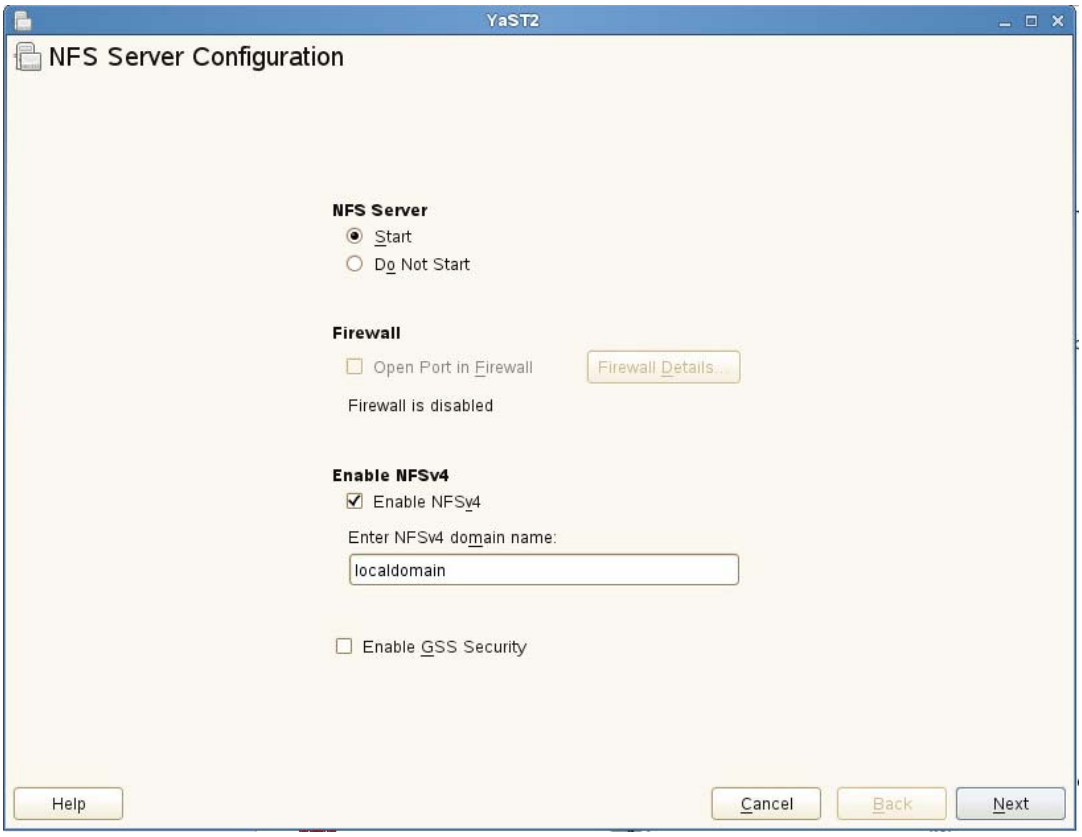
On the GroupWise Disaster Recovery Server, enable NFS Server

1. Open YaST2 and select *Network Services* | *NFS Server*

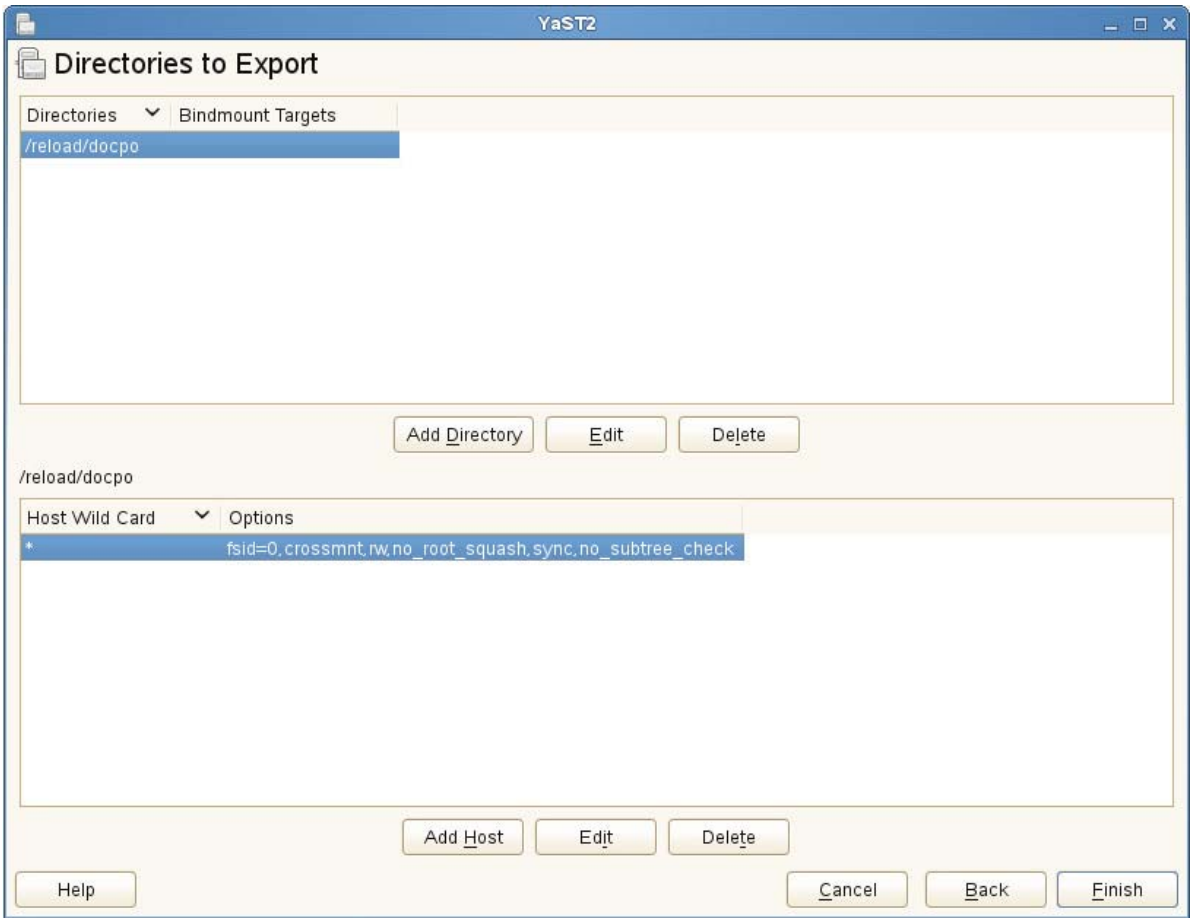


2. Configure NFS Server:
   a. Set NFS Server to start

b. Open the port in the firewall, if applicable.



3. Select Add Directory button:
   a. Set options: *rw,no_root_squash,sync*
   b. Browse to the post office backup directory. For example: /reload/po



On the Linux GroupWise Server

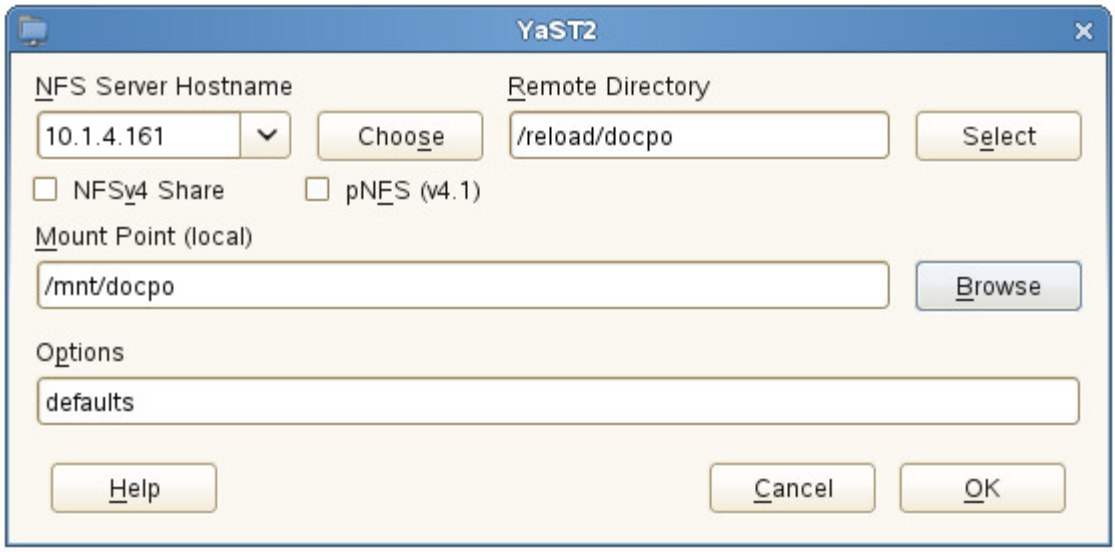
Create a mount point:

1. Open a terminal window
2. Create a local directory for the mount point. Generally, this is placed in the /mnt directory. For example:

   ```
   mkdir /mnt/restore
   ```

Enable NFS Client:

1. Open YaST2 and select *Network Services* | *NFS Client*
2. Click on *Add*
   - Set the NFS Server Hostname to the GroupWise Disaster Recovery server IP address or hostname
   - Set the Remote Directory to the backup directory on the GroupWise Disaster Recovery server. For example: /reload/po
   - Set the Mount Point to the one created on the GroupWise server

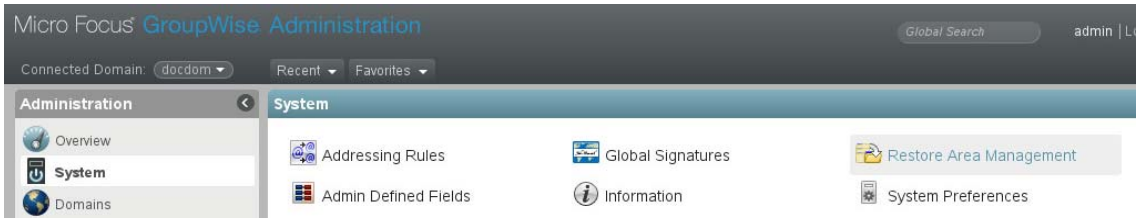


In GroupWise Administration

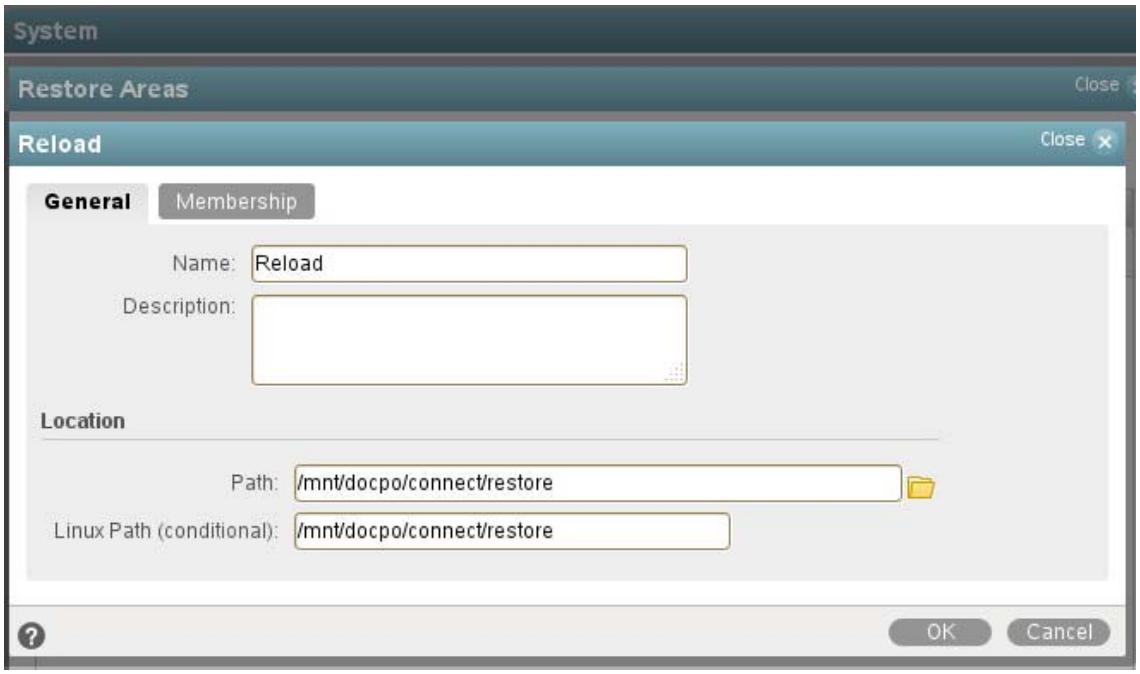
The Restore Area needs to be defined and the users given access to it.

Create Post Office Restore Area, this will need to be done for each Post Office:

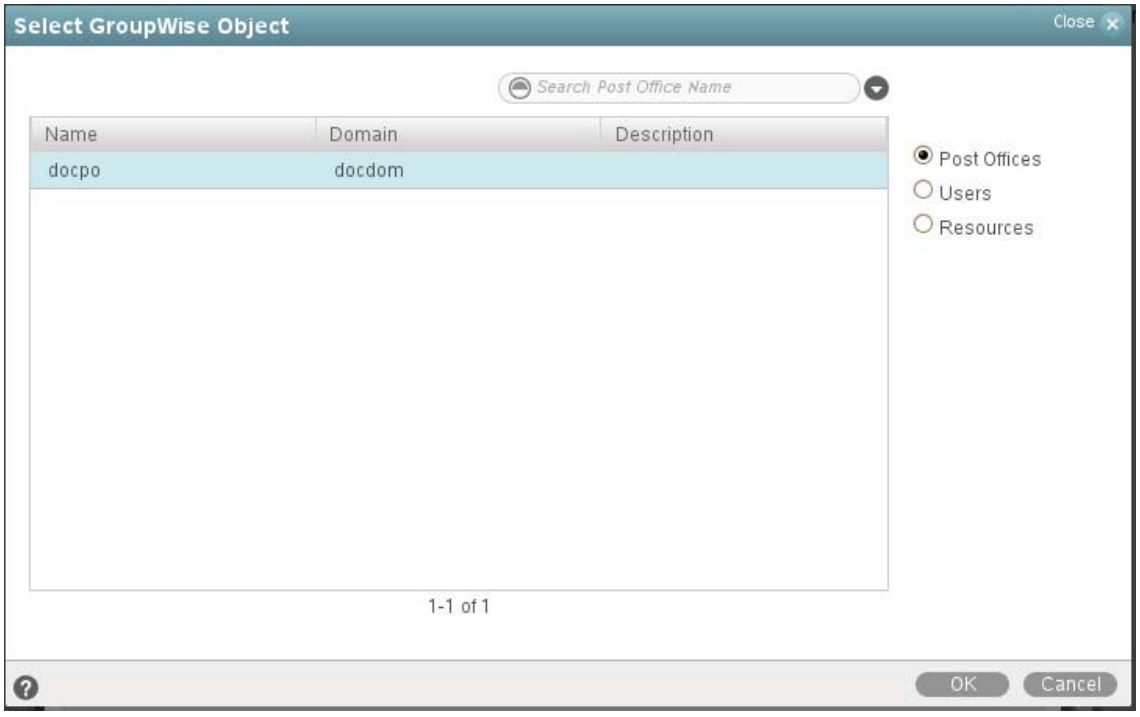
1. Browse to GroupWise Administration https://<GroupWise_Server_Address>:9710
2. Open *System* | *Restore Area Management*



3. Select New
4. Enter a Name and Description:
5. Set the Path and Linux Path to the mount point adding /connect/restore. For example: /mnt/backup/connect/restore.



6. Under the Membership tab, click Add:
7. Select Post Offices
8. Add Post Office



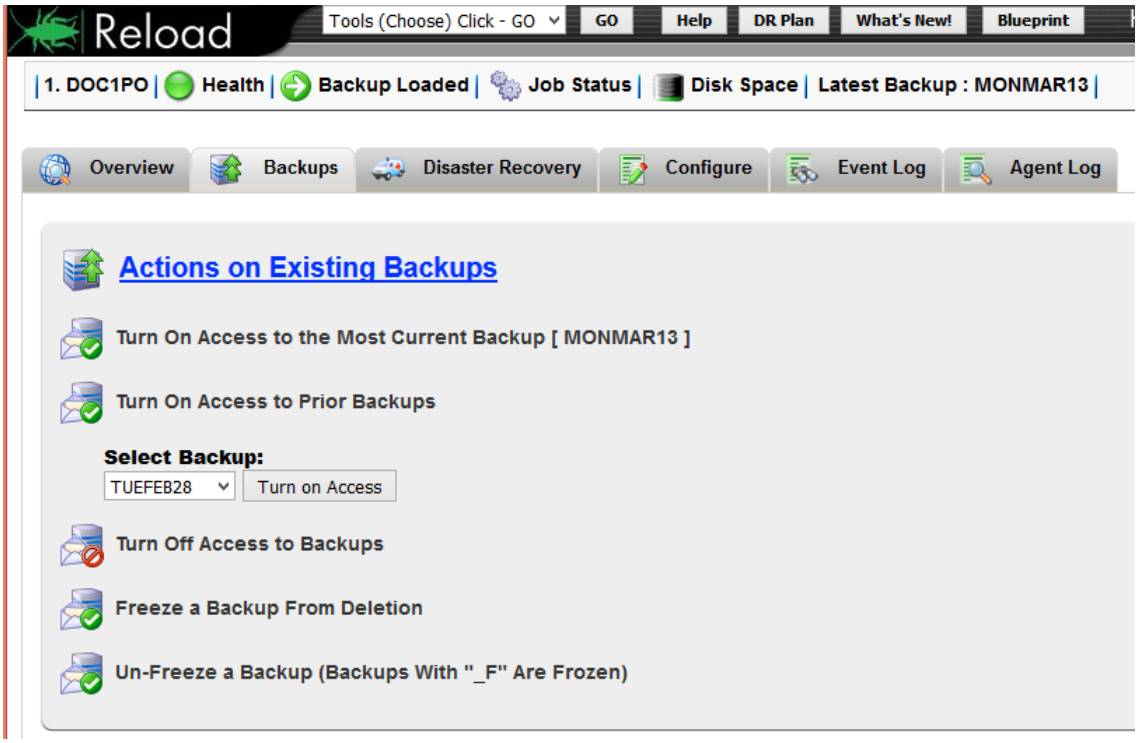
9. Click Ok
10. Click Ok
11. Click Close

Confirmation

To confirm that this worked:

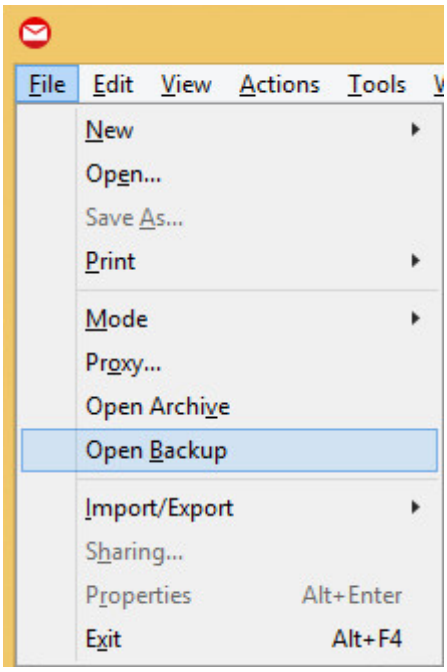
On the GroupWise Disaster Recovery server, load a backup for the profile

1. From the GroupWise Disaster Recovery Web Console, select a *Post Office profile*
2. Select the *Backups* tab
3. From the *Actions of Existing Backups*, select "Turn On Access to the Most Current Backup" or "Turn on Access to Prior Backups"

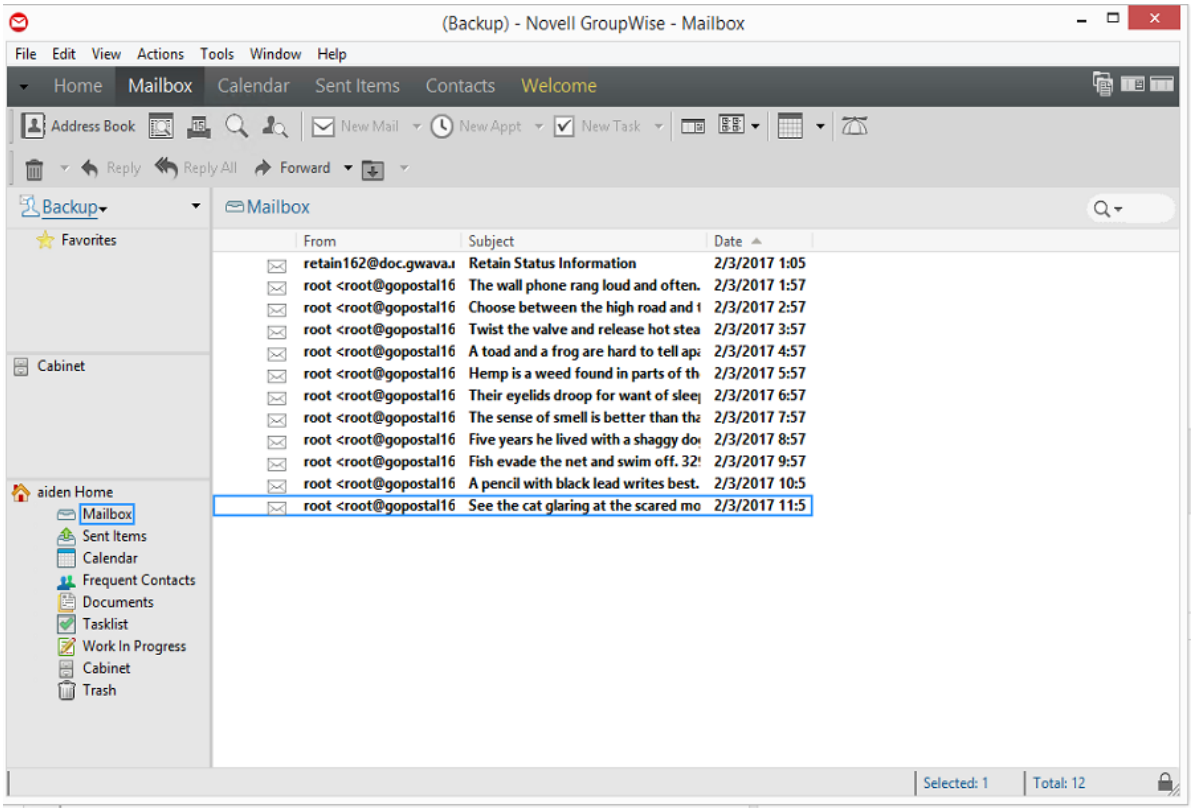


On a workstation with a GroupWise client

1. Move a few items that exist in the backup to the Trash
2. Select *File* | *Open Backup*.



This view will show the items in the GroupWise Disaster Recovery backup, and NOT on the production GW server for the user.



GroupWise on Windows

Server Only Profiles on Windows

When GroupWise is on Windows, the Server Only model must be used.

Prerequisites

- Create backup data directory on the GroupWise Disaster Recovery server
- Install Server for NFS on the Windows Server

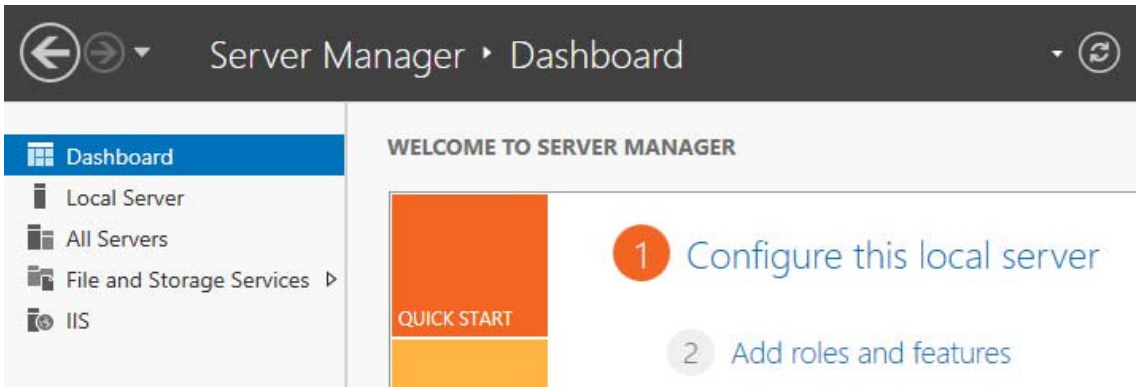
On the GroupWise Disaster Recovery Server: Create backup data directory

You will need to create a directory on the GroupWise Disaster Recovery server for the backup data. The name of the profile will be used to create sub-directories for each profile. For example:

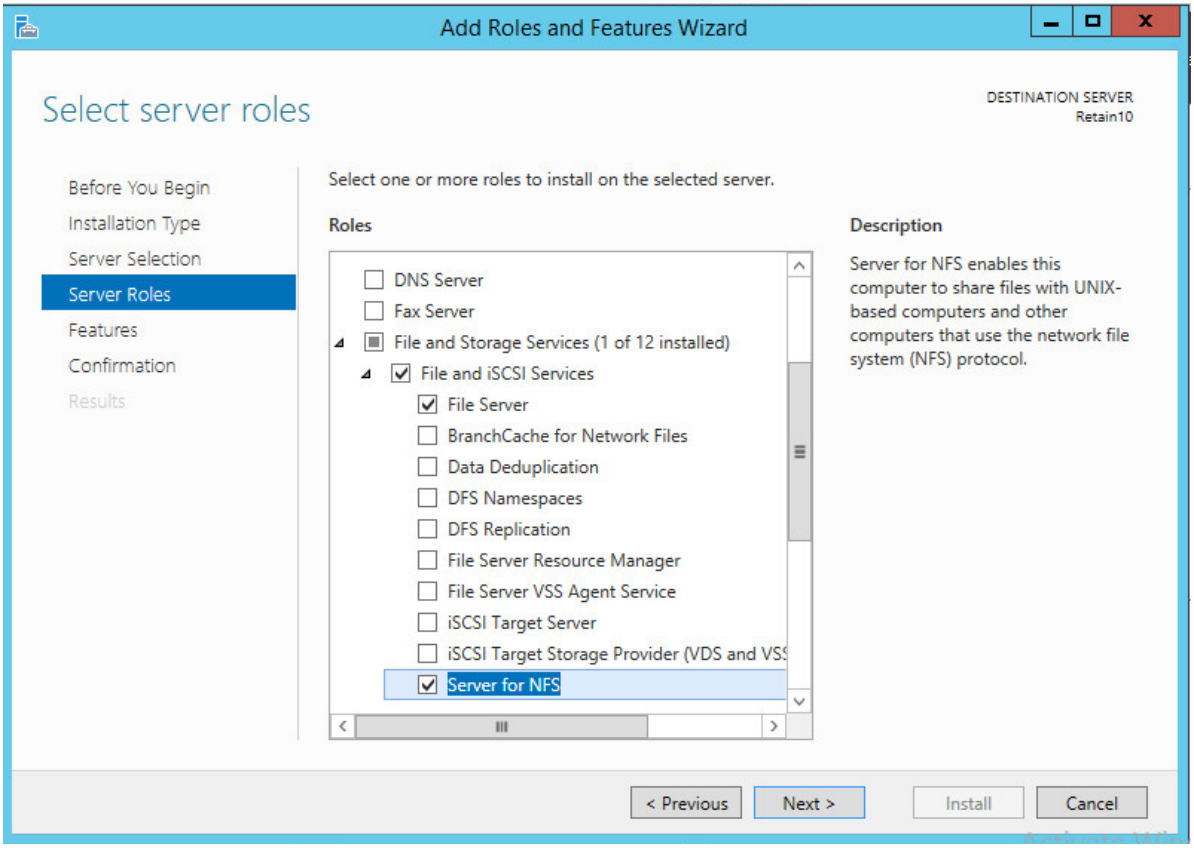
```
mkdir /reload/
```

On the Windows GroupWise server: Install and Configure Server for NFS

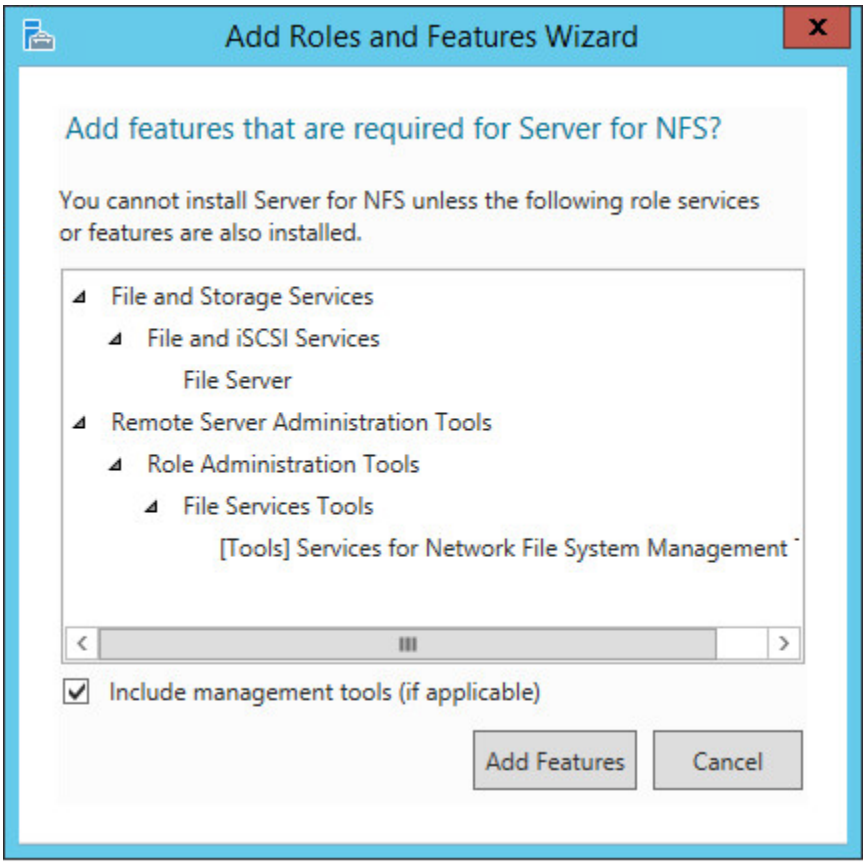
1. Open Server Manager and select *Add roles and features*



2. Install the Server Role *File and Storage Services* | *Server for NFS*. A restart will be required.



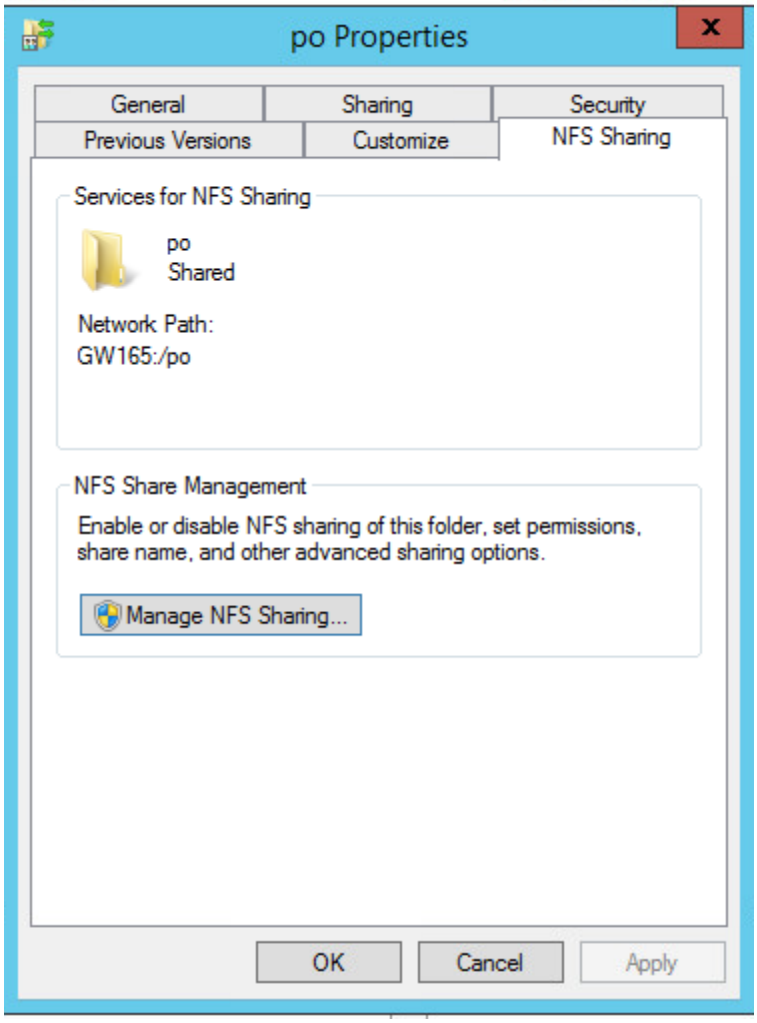
And add the Features



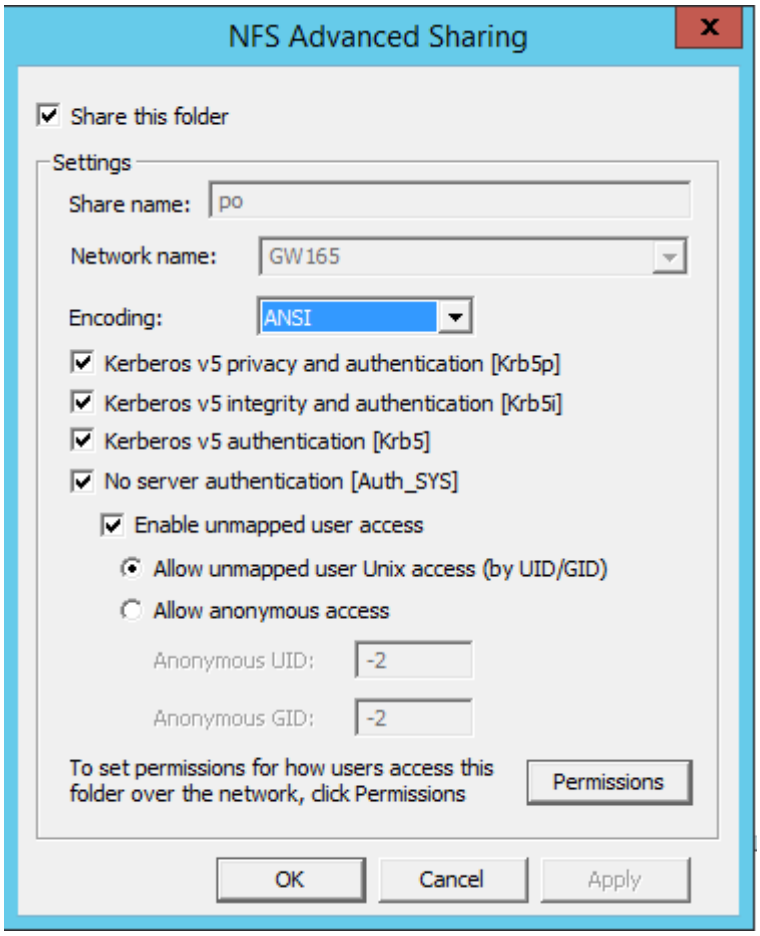
The server will restart once the installation is complete.

Create the share point for the *domain* and *post office* folders:

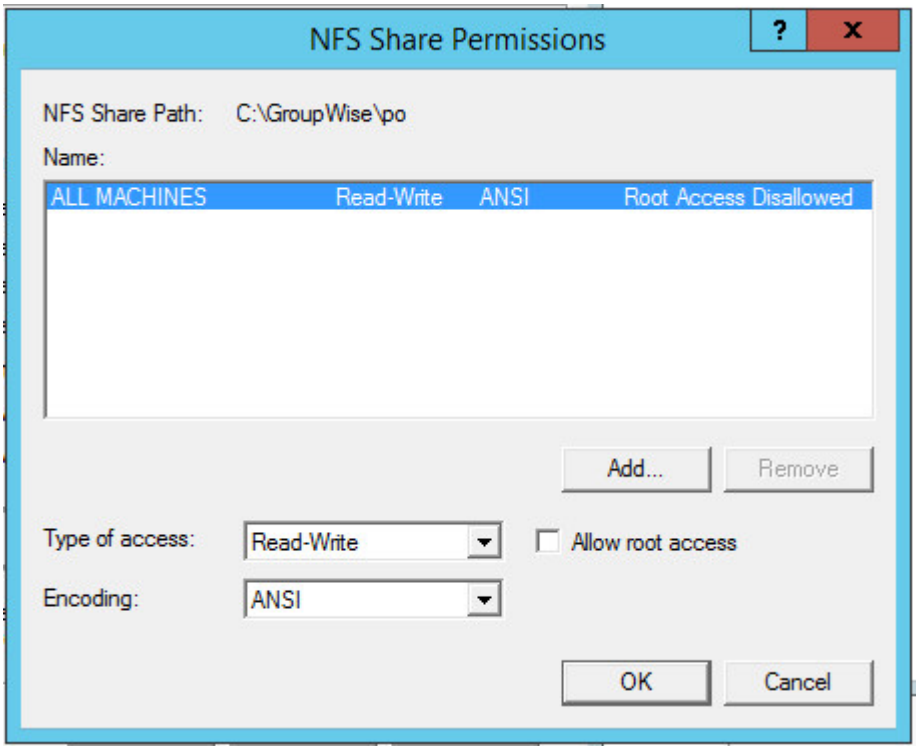
1. In File Explorer browse to the GroupWise folder
2. Right-click the folder to be shared and select Properties
3. Select the *NFS Sharing* tab



4. Click Manage NFS Sharing
5. Enable *Share this folder*



6. Select Permissions and set *Type of Access* to *Read-Write* and click OK



7. Click OK
8. Click Close

Do this for the domain as well.

On the GroupWise Disaster Recovery server:

1. Create a mount point. For example,

   ```
   mkdir /mnt/po
   ```

2. Mount the NFS point from the Windows server

   ```
   mount -t nfs <address of GW Windows server>:/<shared folder> <local mount point>
   ```

   For example: mount -t nfs 10.1.1.123:/po /mnt/po

Configure Profiles

There are two kinds of profiles: Domain (Create_Domain_Profiles_on_Windows.htm) and Post Office (Create_Post_Office_Profiles_on_Windows.htm).

Creating Domain Profiles with GroupWise on Windows

When GroupWise is on Windows the Server Only model must be used to backup the data to GroupWise Disaster Recovery.

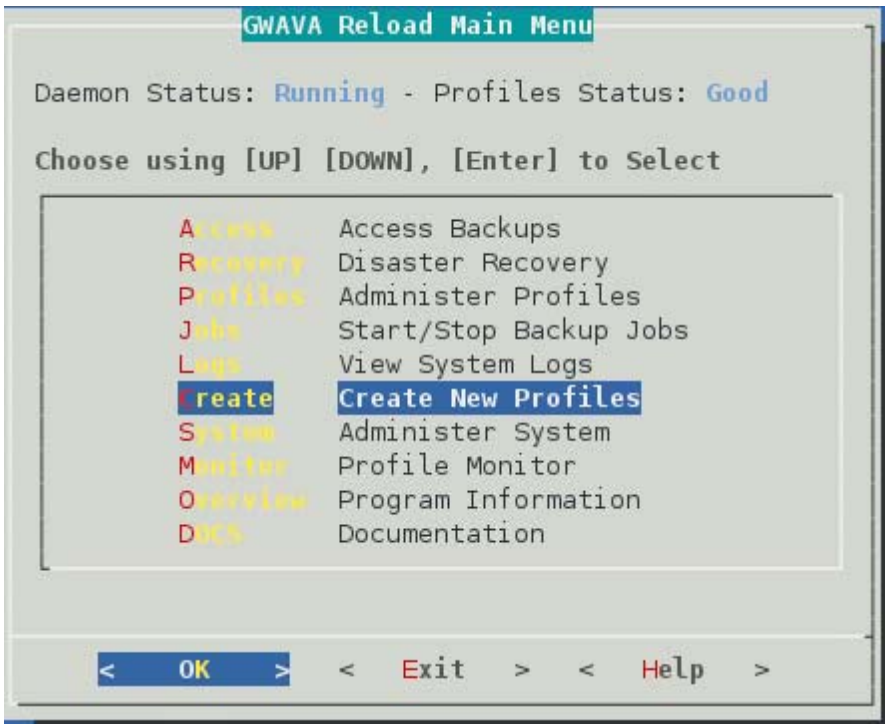
Domain Profile: Server Only Model

On the GroupWise Disaster Recovery server, create a data directory and a profile

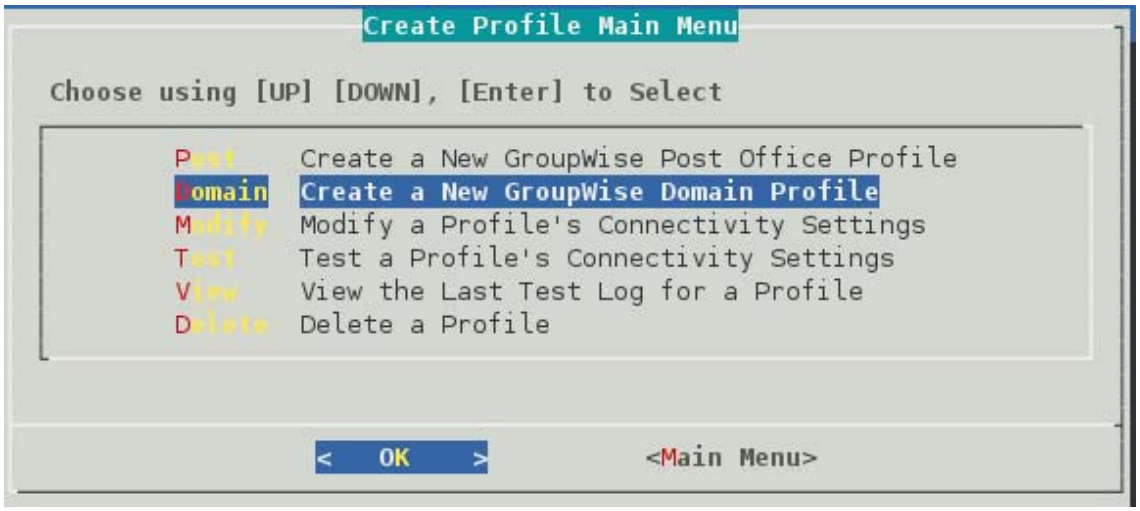
1. Create a directory for the backup data. For example:

   ```
   mkdir /reload
   ```

2. Start the GroupWise Disaster Recovery Administration Console by typing on the command line:
   reload
3. Select "Create (Create Profile)"

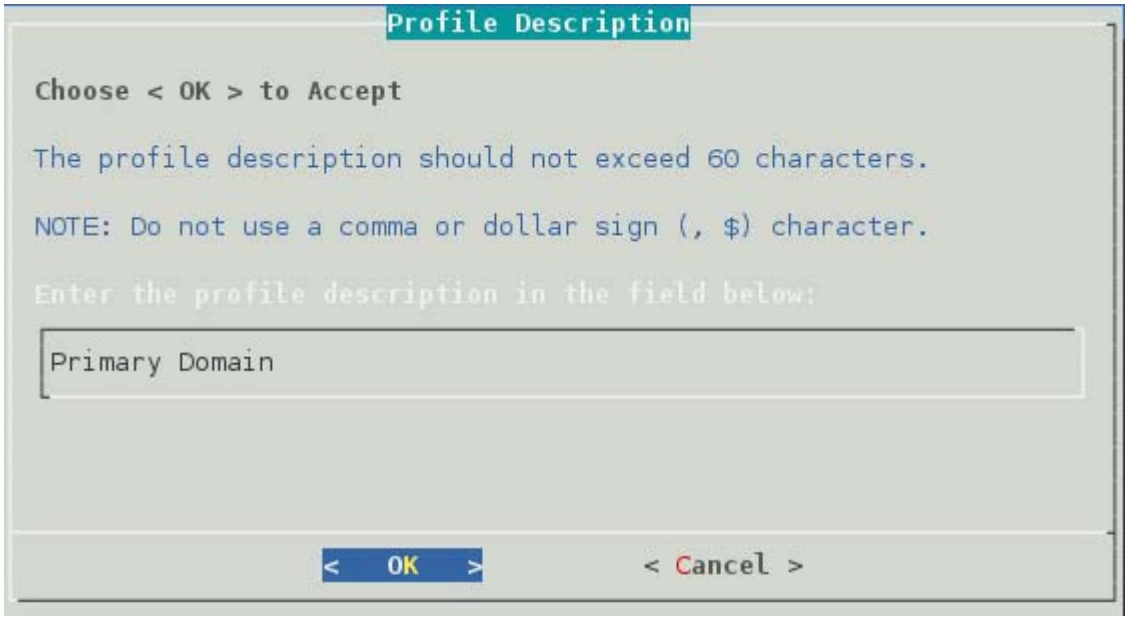


4. Select "Domain (Create a New GroupWise Domain Profile)"

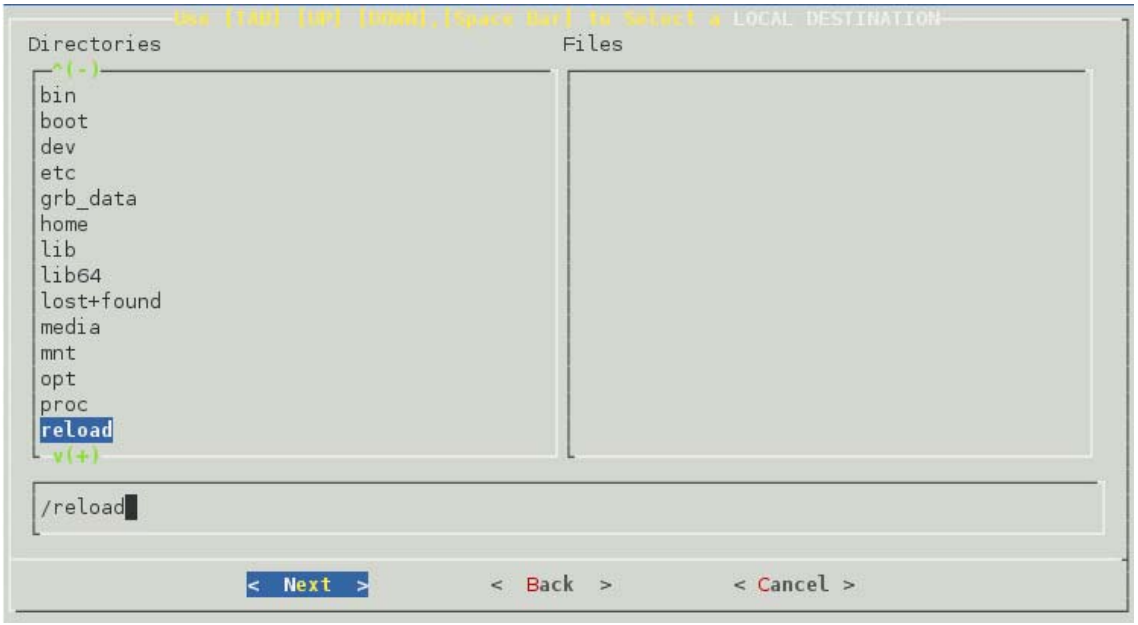


5. Give the Profile a Name. The profile name should not exceed eight characters. Use letters and numbers only, no spaces or other characters. For example: Domain Be aware, that a profile cannot be renamed, once it has been created. Choose the name wisely. Perhaps you will want to name the profile so that its name is the same as the GroupWise post office or domain that the profile represents. Select the Next button.

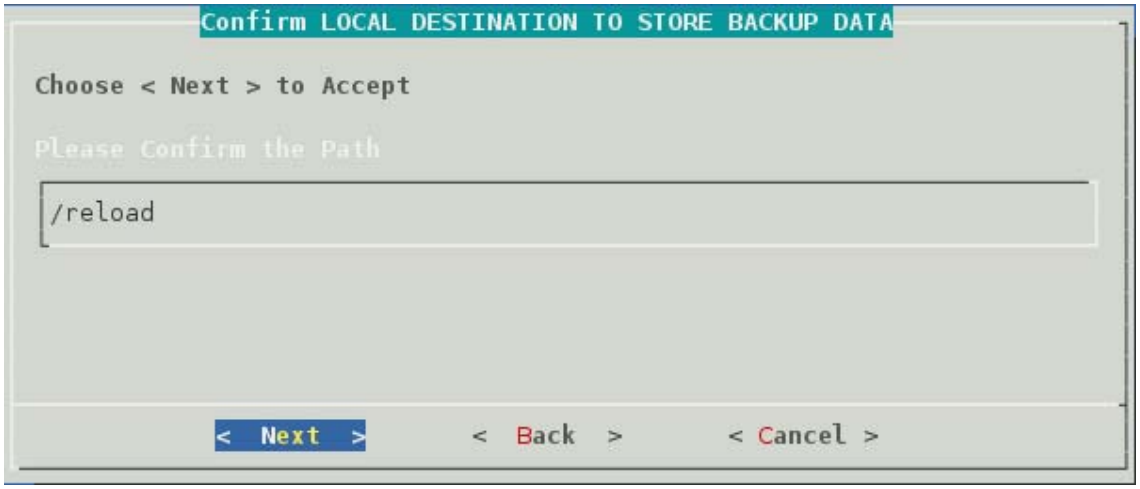
6. Give the Profile a Description. The profile description should not exceed 60 characters and should not have comma(,), nor dollar sign($) characters. For example: Primary Domain. The description of the profile will be added to the Agent Log when backup jobs are run for the profile. Select the Next button.



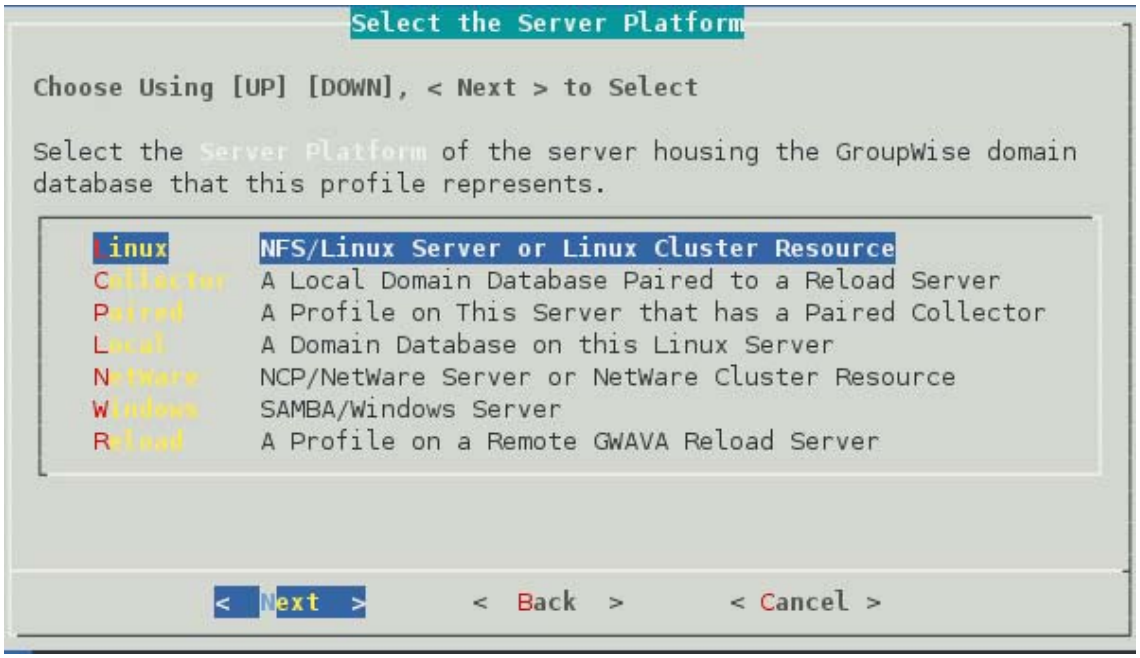
7. Enter the path or browse to the local destination directory to store the backup data. For example: /reload. This path can be a location on the Linux server, or an NFS mount to another Linux/Unix server, or to a SAN. The path should always be available; GroupWise Disaster Recovery is not configured to mount paths in order to access stored data. Also, the path should be to a location that has a lot of disk space available. Select the Next button.



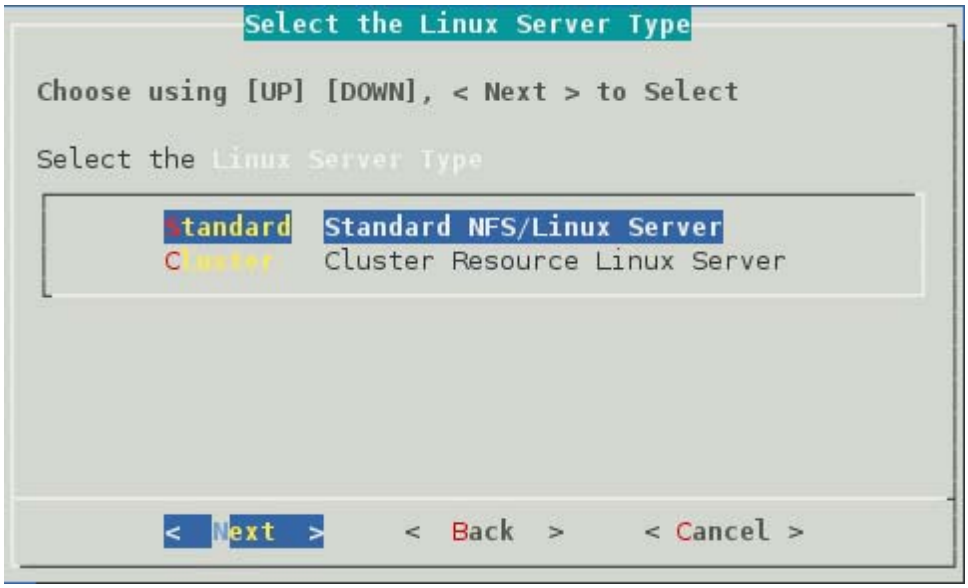
8. Confirm the path to the local destination directory



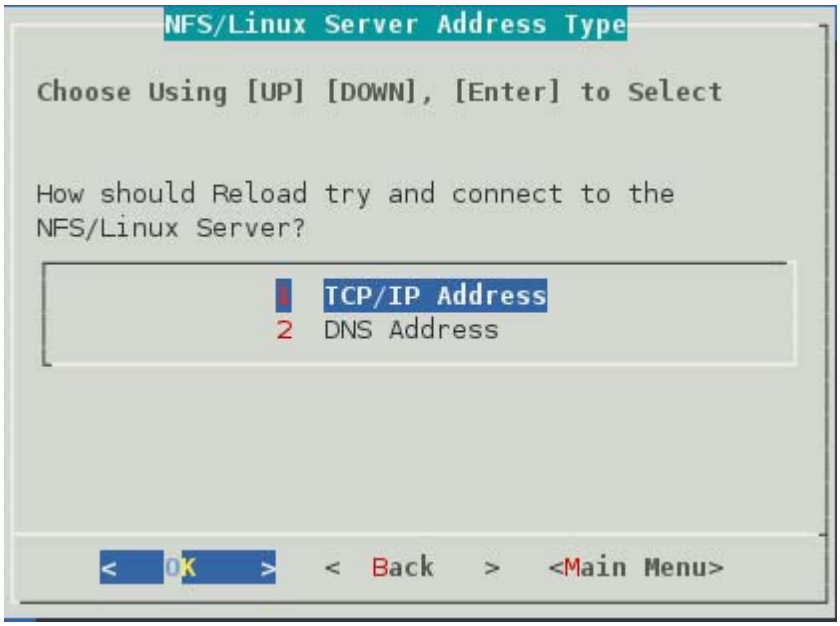
9. Select the Server Platform: "Linux (NFS/Linux Server or Linux Cluster Resource)" [Yes, the GroupWise server is Windows, but the share is NFS, which is the important part]



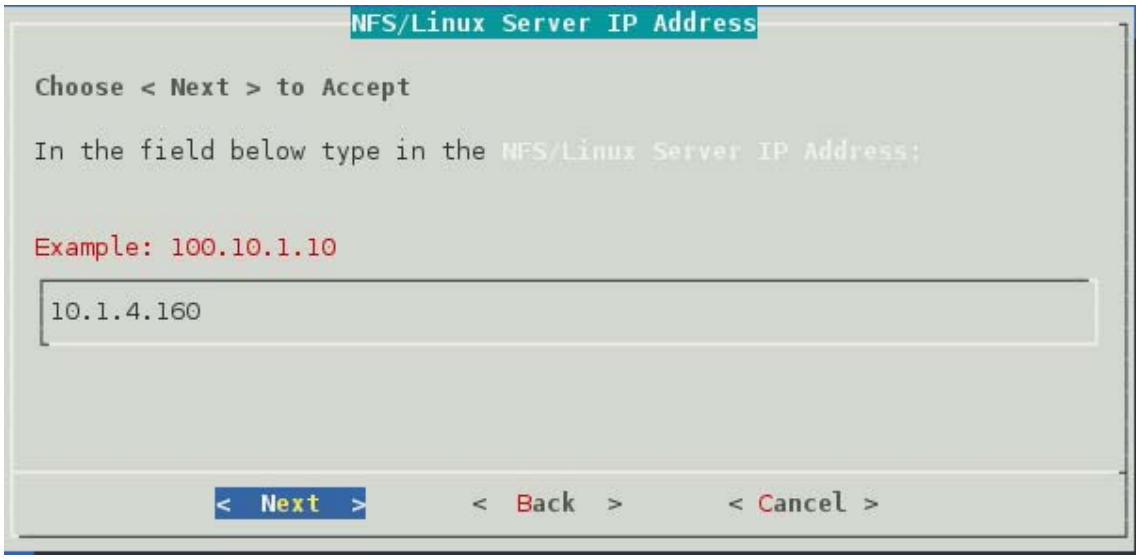
10. Select Linux Server Type: "Standard (Standard NFS/Linux Server)"



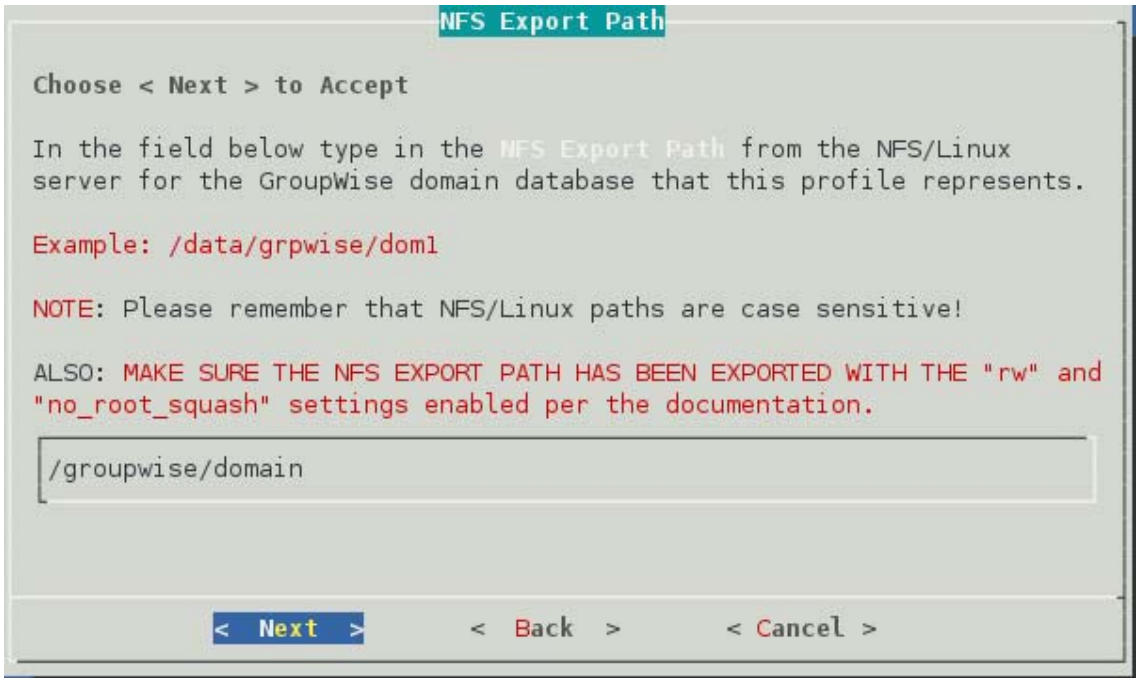
11. Select NFS/Linux Server Address Type: "1 (TCP/IP Address)" or "2 (DNS Address)"



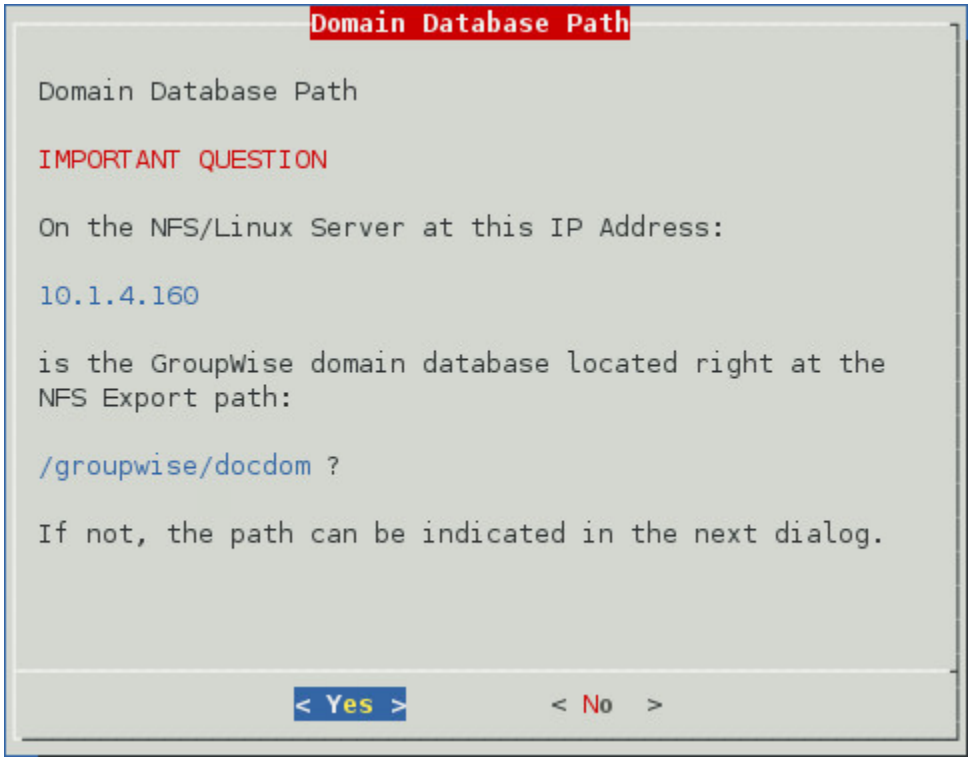
12. Enter the NFS/Linux Server IP Address or DNS hostname Address



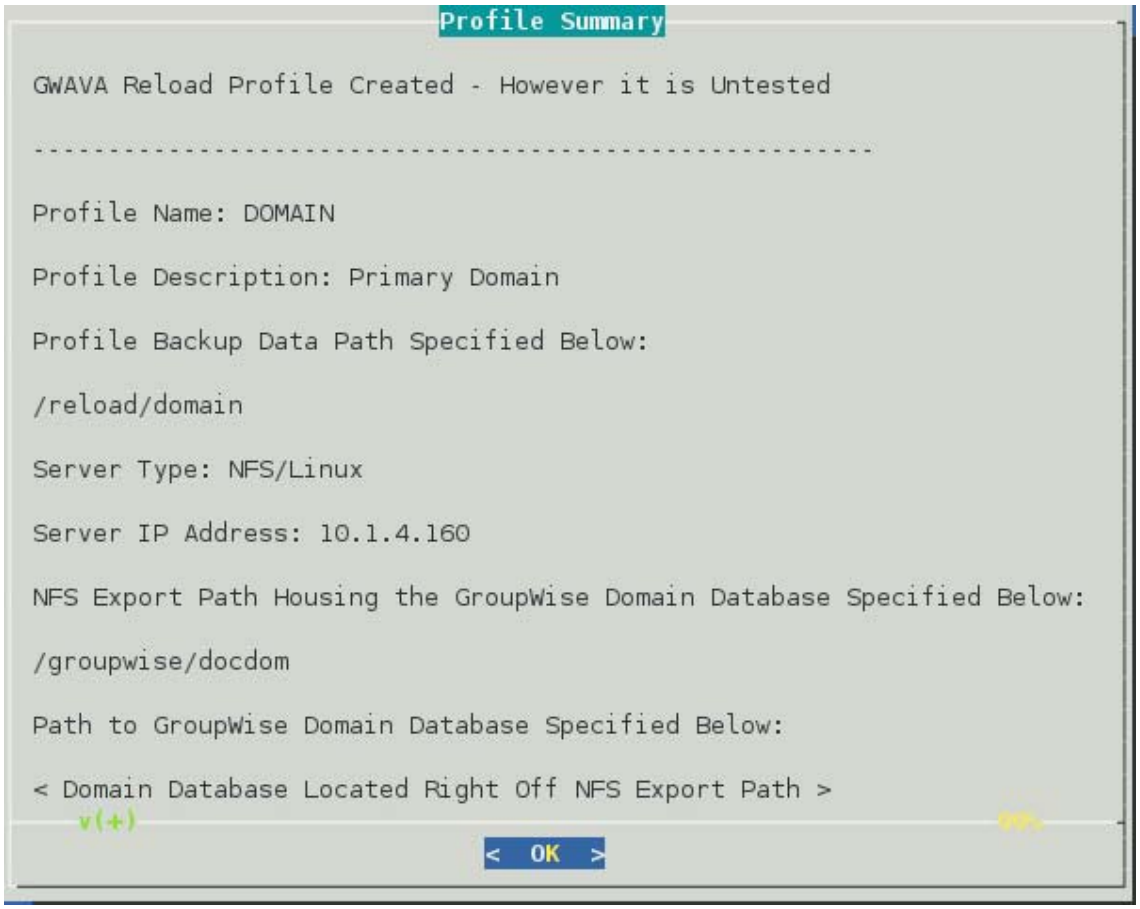
13. Enter the NFS Export Path on the GroupWise server from above. For example: /groupwise/domain



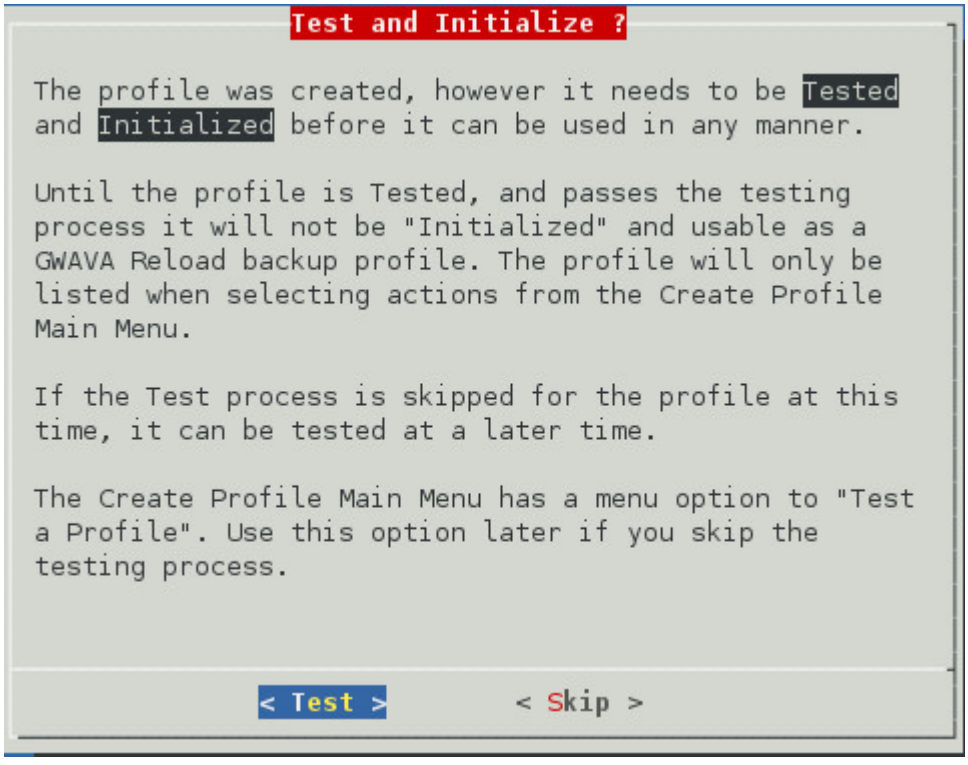
14. A warning page appears that asks if the IP Address and Export path are correct.



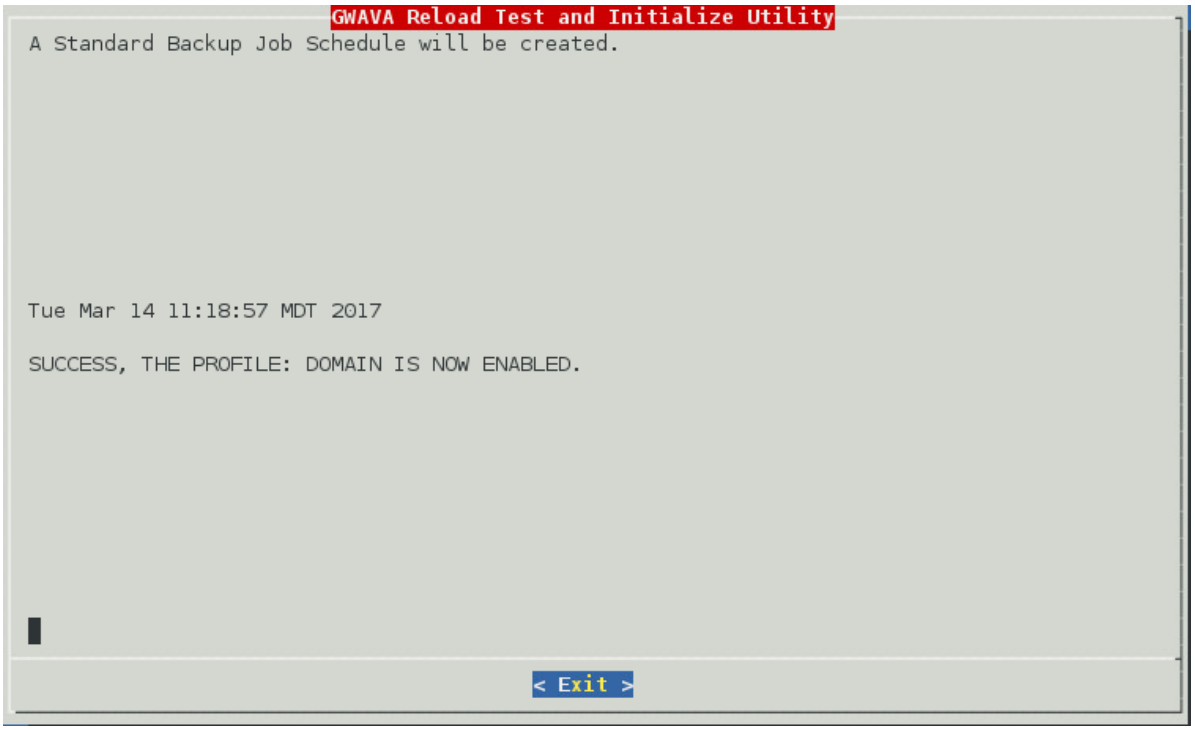
15. A Profile Summary page appears



16. The Test and Initialize page allows you to finalize the profile by selecting Test.



17. If the configuration is incorrect, select Skip and makes your changes.
18. Run the test and it will indicate success or failure.



Creating Post Office Profiles with GroupWise on Windows

When GroupWise is on Windows the Server Only model must be used to backup the data to GroupWise Disaster Recovery.

Post Office Profile: Server Only Model

On the GroupWise Disaster Recovery server, create a data directory and a profile

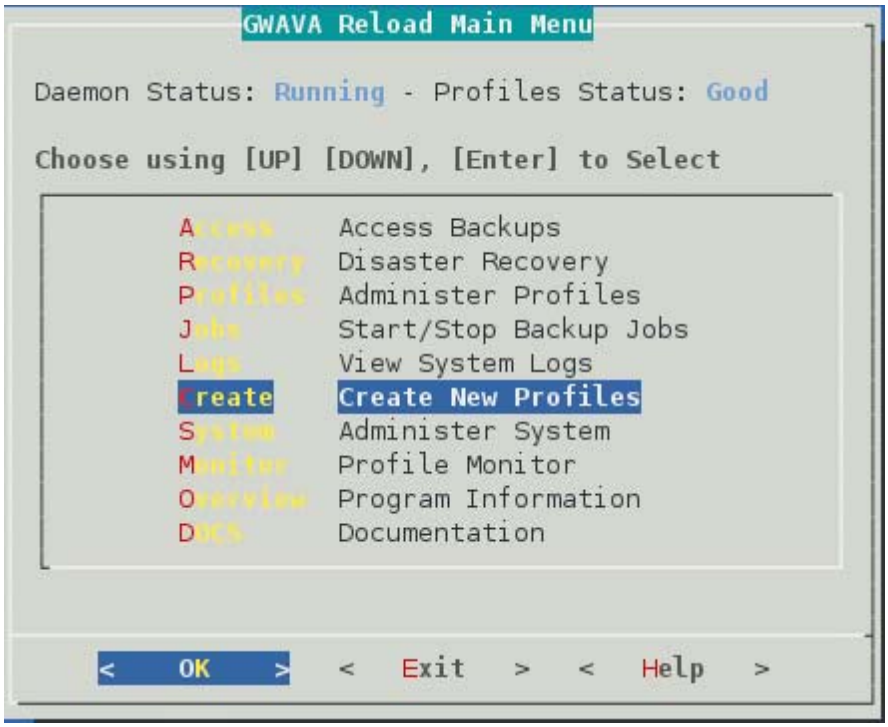
1. Create a directory for the backup data, if necessary. For example:

   ```
   mkdir /reload
   ```

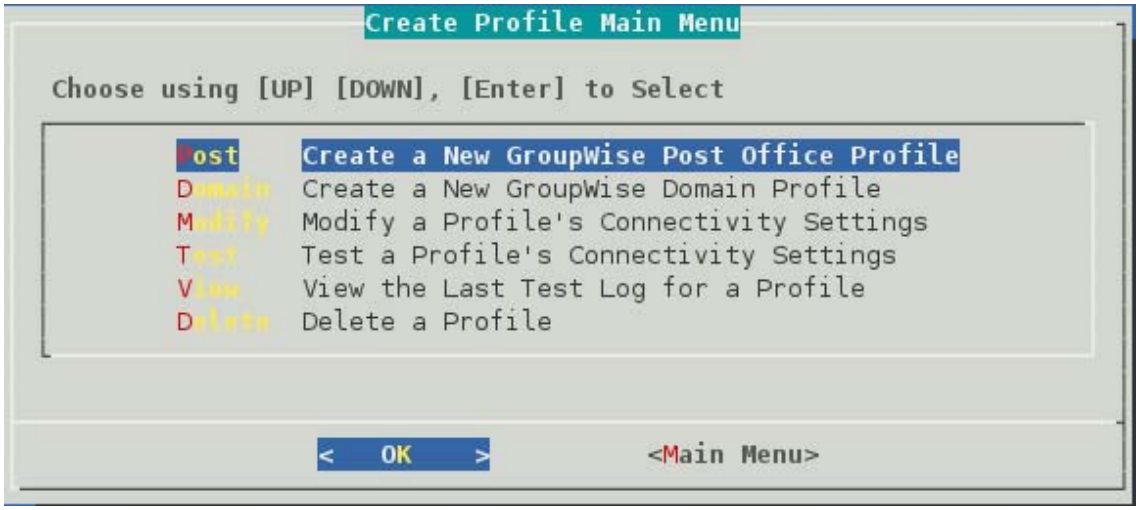
2. Start the GroupWise Disaster Recovery Administration Console by typing on the command line:

   ```
   reload
   ```

3. Select "Create (Create Profile)"

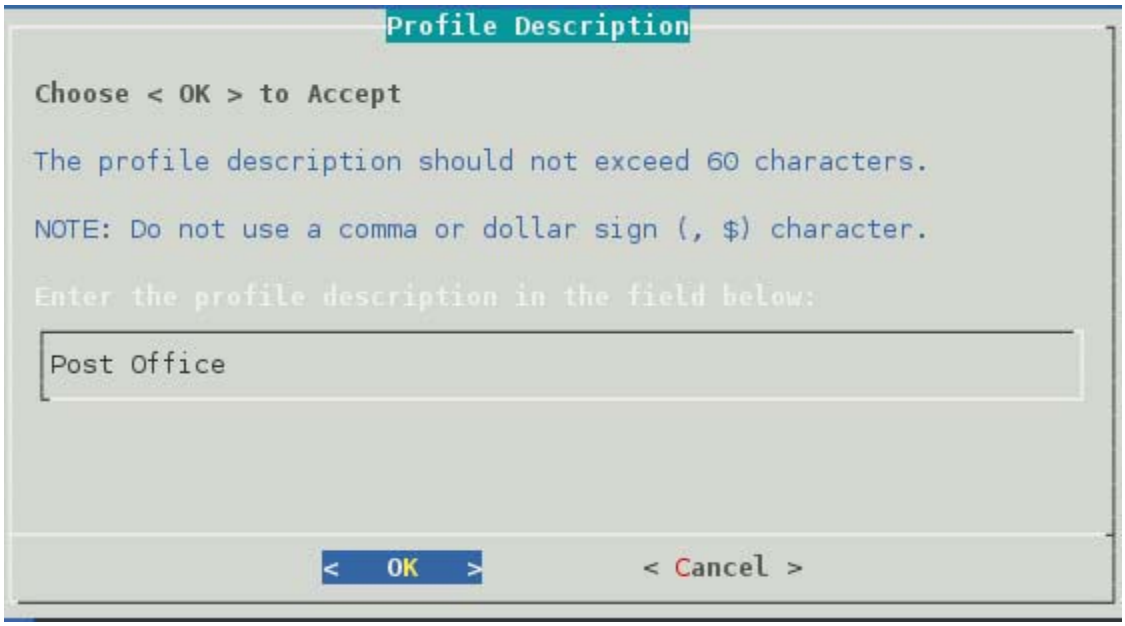


4. Select "Post (Create a New GroupWise Post Office Profile)"

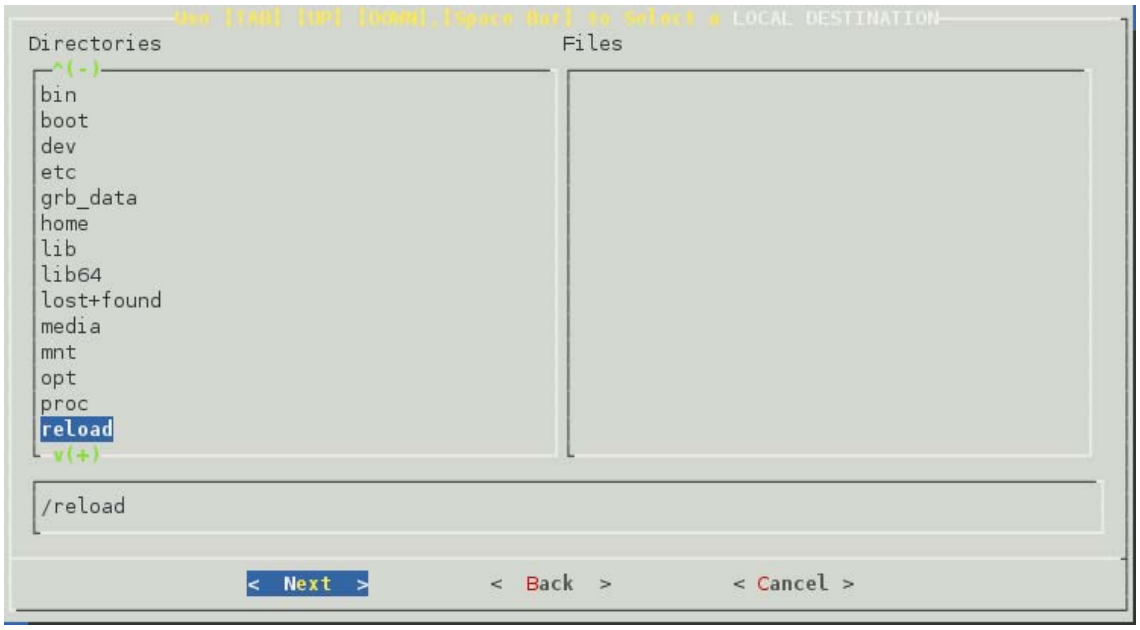


5. Give the Profile a Name. The profile name should not exceed eight characters. Use letters and numbers only, no spaces or other characters. For example: Post Office. Be aware, that a profile cannot be renamed, once it has been created. Choose the name wisely. Perhaps you will want to name the profile so that its name is the same as the GroupWise post office or domain that the profile represents. Select the Next button.

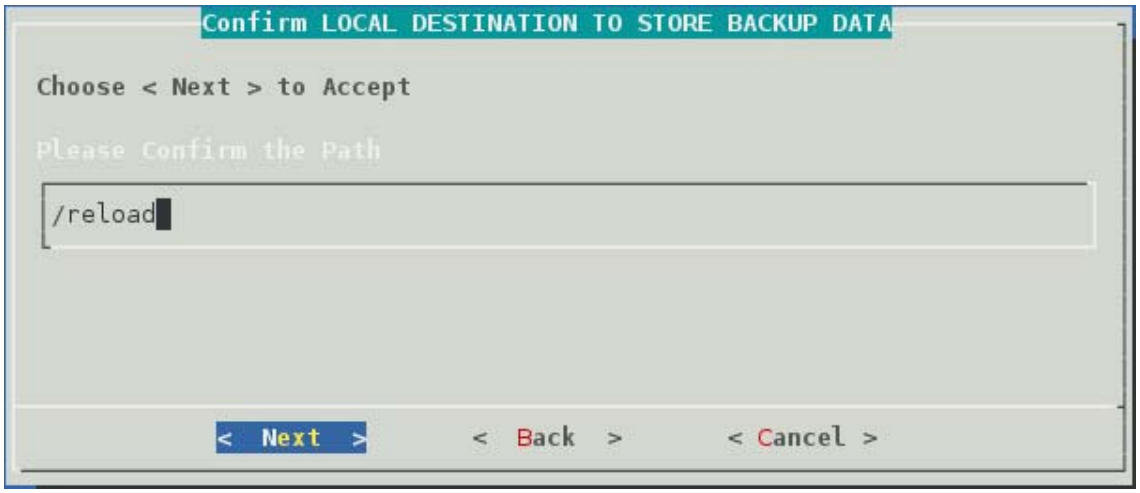
6. Give the Profile a Description. The profile description should not exceed 60 characters and should not have comma(,), nor dollar sign($) characters. For example: Primary Post Office. The description of the profile will be added to the Agent Log when backup jobs are run for the profile. Select the Next button.



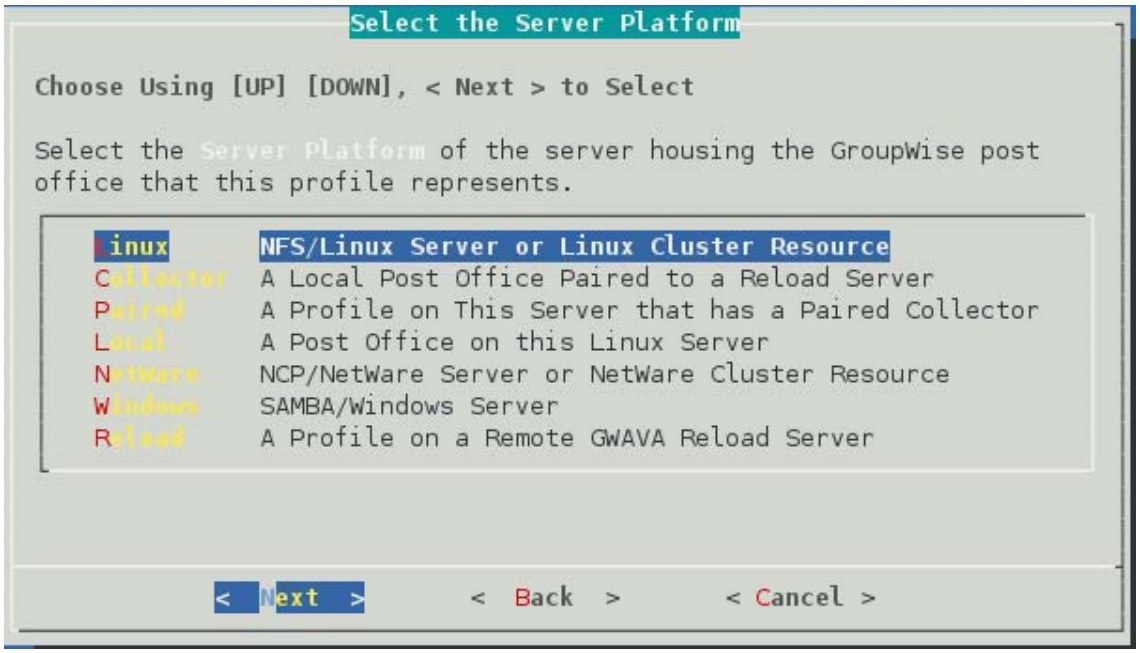
7. Enter the path or browse to the local destination directory to store the backup data. For example: /reload. This path can be a location on the Linux server, or an NFS mount to another Linux/Unix server, or to a SAN. The path should always be available; GroupWise Disaster Recovery is not configured to mount paths in order to access stored data. Also, the path should be to a location that has a lot of disk space available. Select the Next button.



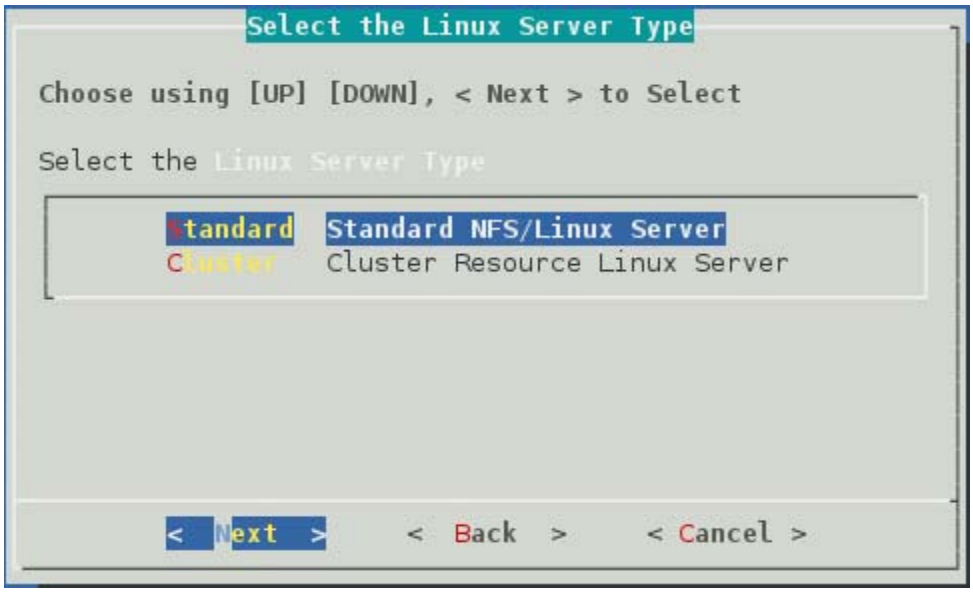
8. Confirm the path to the local destination directory



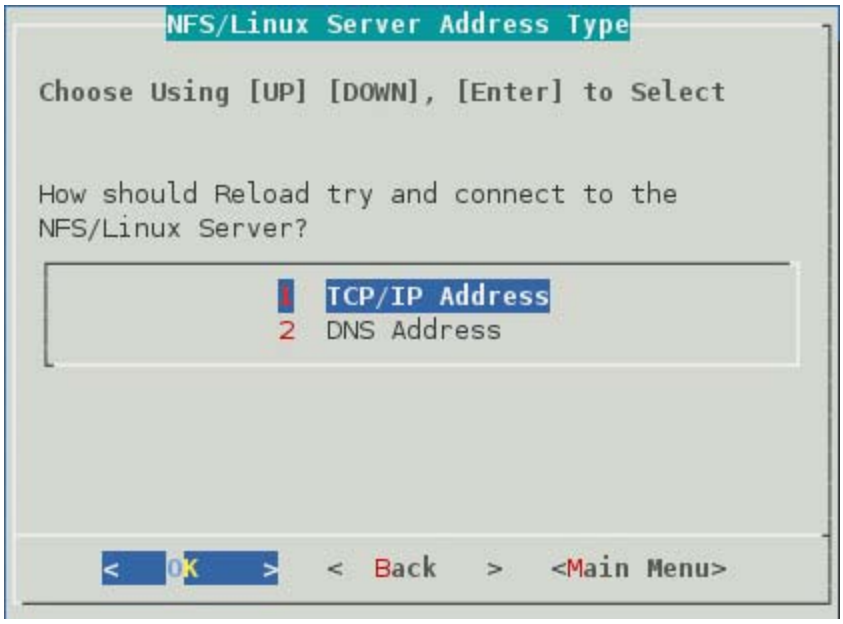
9. Select the Server Platform: "Linux (NFS/Linux Server or Linux Cluster Resource)" [Yes, the GroupWise server is Windows, but the share is NFS, which is the important part]



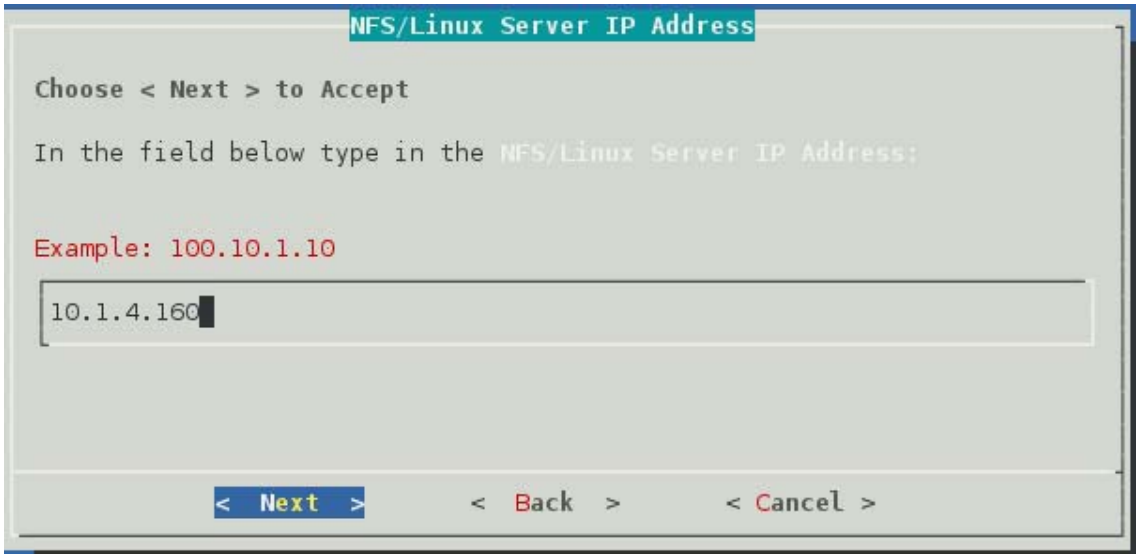
10. Select Linux Server Type: "Standard (Standard NFS/Linux Server)"



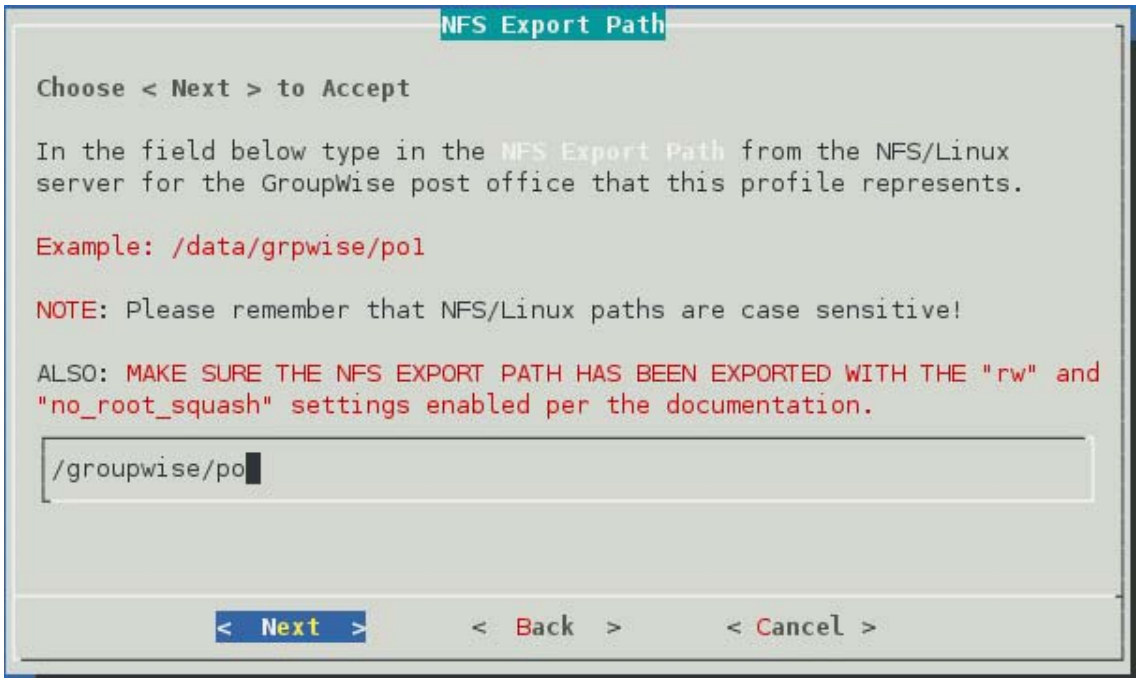
11. Select NFS/Linux Server Address Type: "1 TCP/IP Address" or "2 DNS Address"



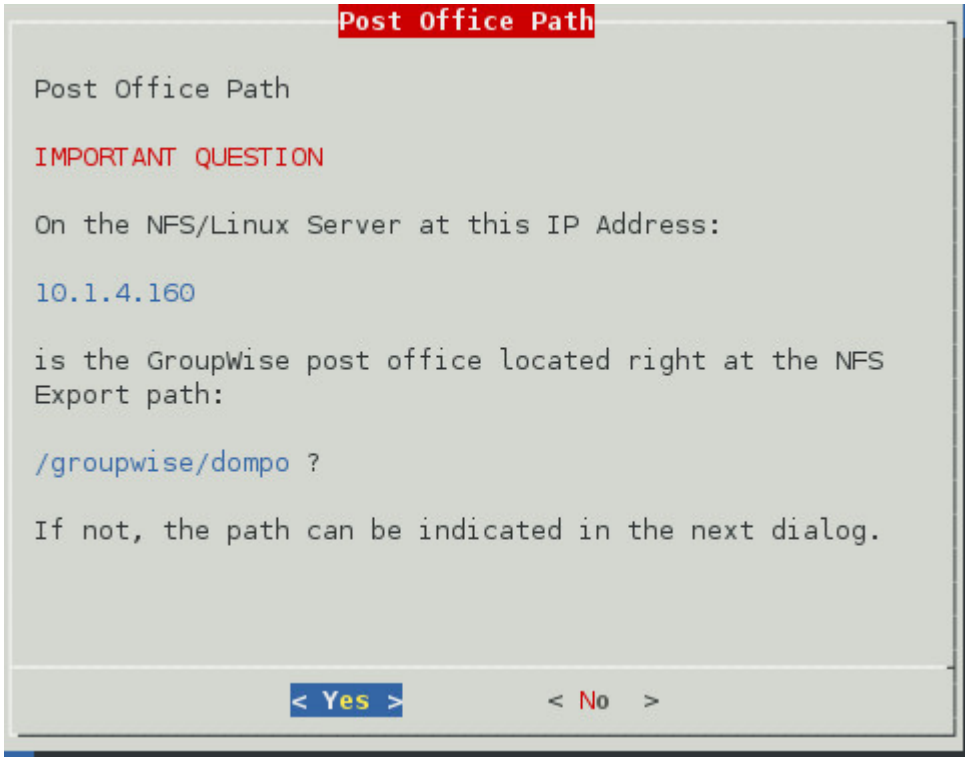
12. Enter the NFS/Linux Server IP Address or DNS Hostname



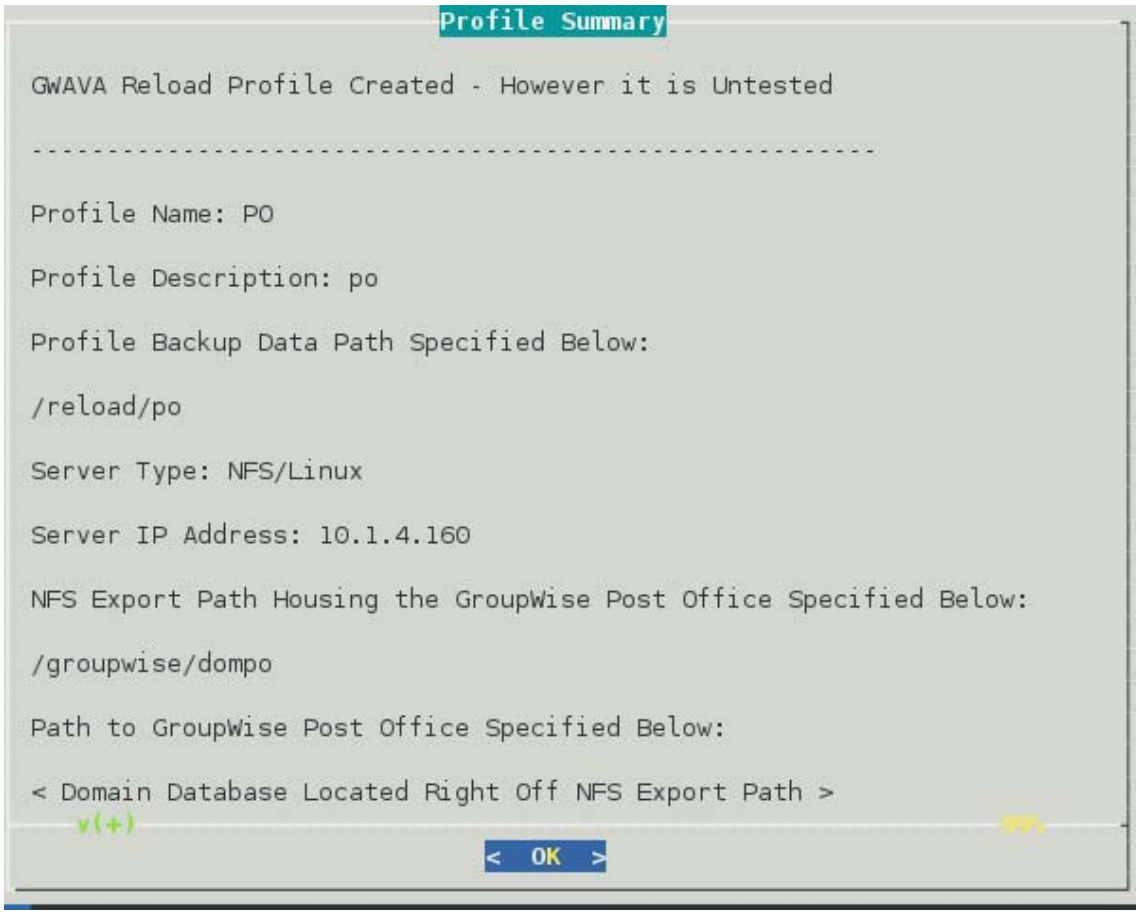
13. Enter the NFS Export Path on the GroupWise server from above. For example: /groupwise/po



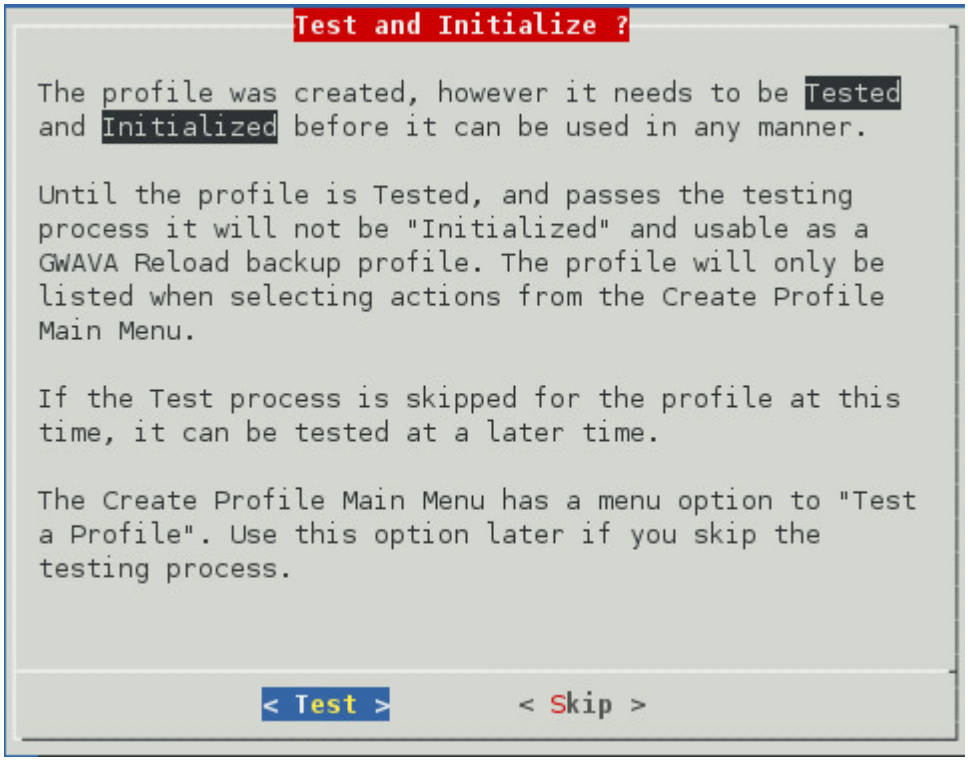
14. A warning page appears that asks if the IP Address and Export path are correct.



15. A Profile Summary page appears



16. The Test and Initialize page allows you to finalize the profile by selecting Test.



17. If the configuration is incorrect, select Skip and makes your changes.
18. Run the test and it will indicate success or failure.

Configure Restore Area on Windows

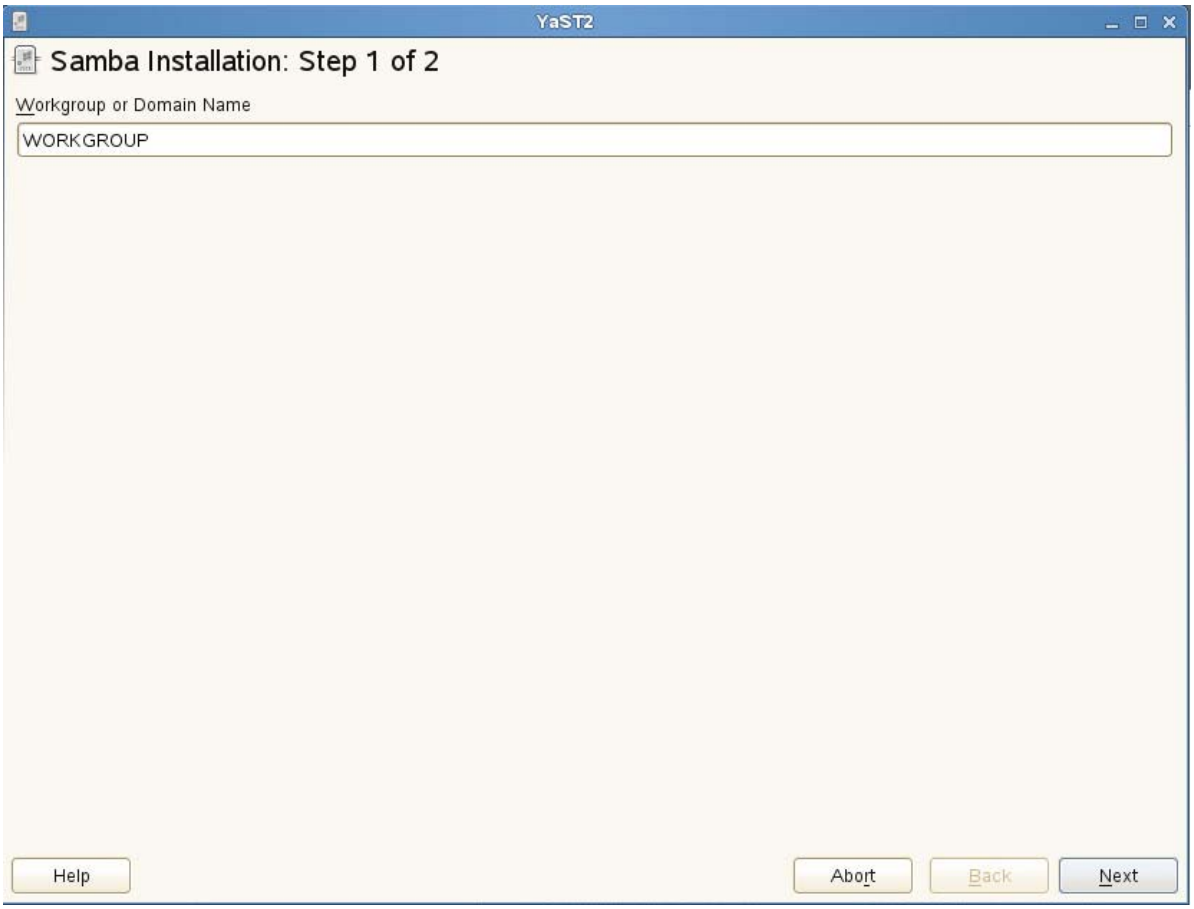
Once a backup has been created the link to the Restore Area can be made.

On the GroupWise Disaster Recovery Server

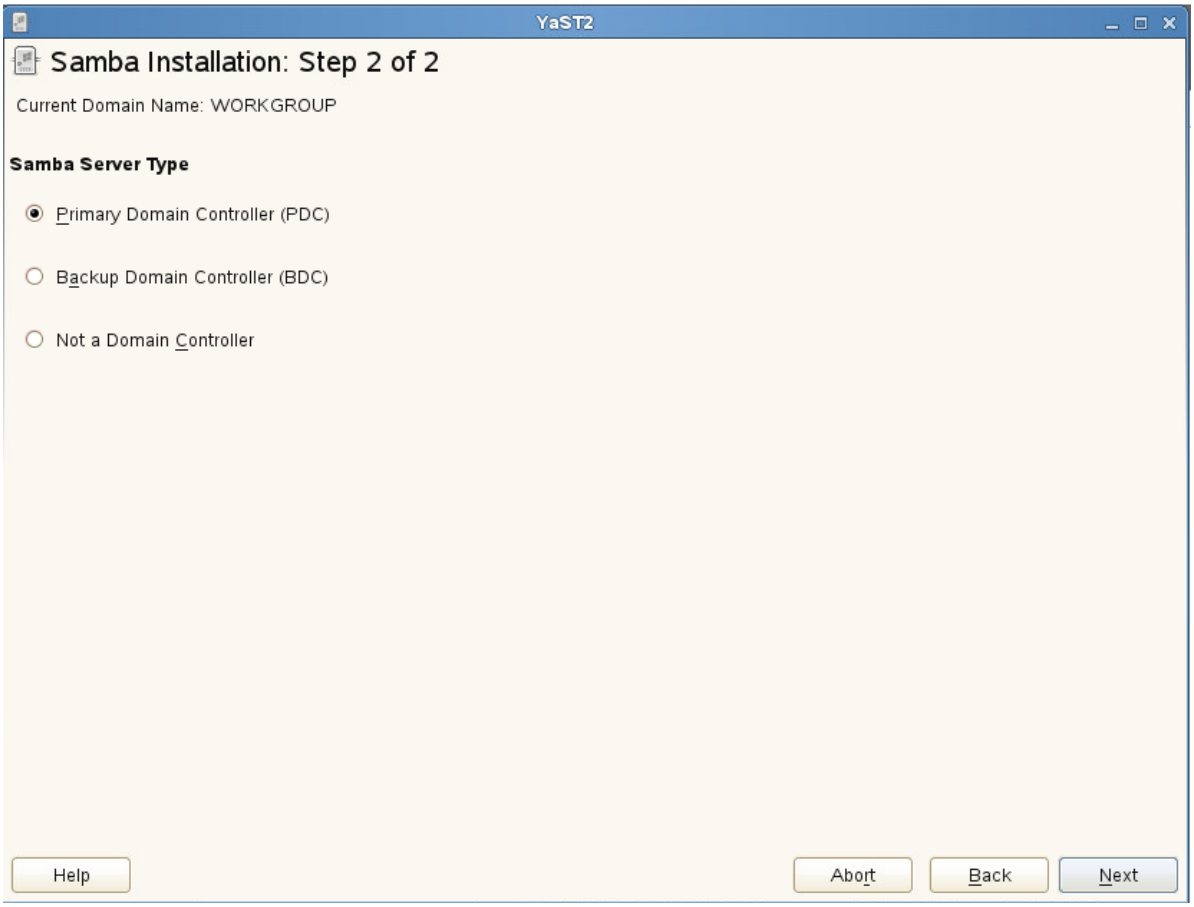
Install Samba Server on the GroupWise Disaster Recovery server

Open YaST | Samba Server

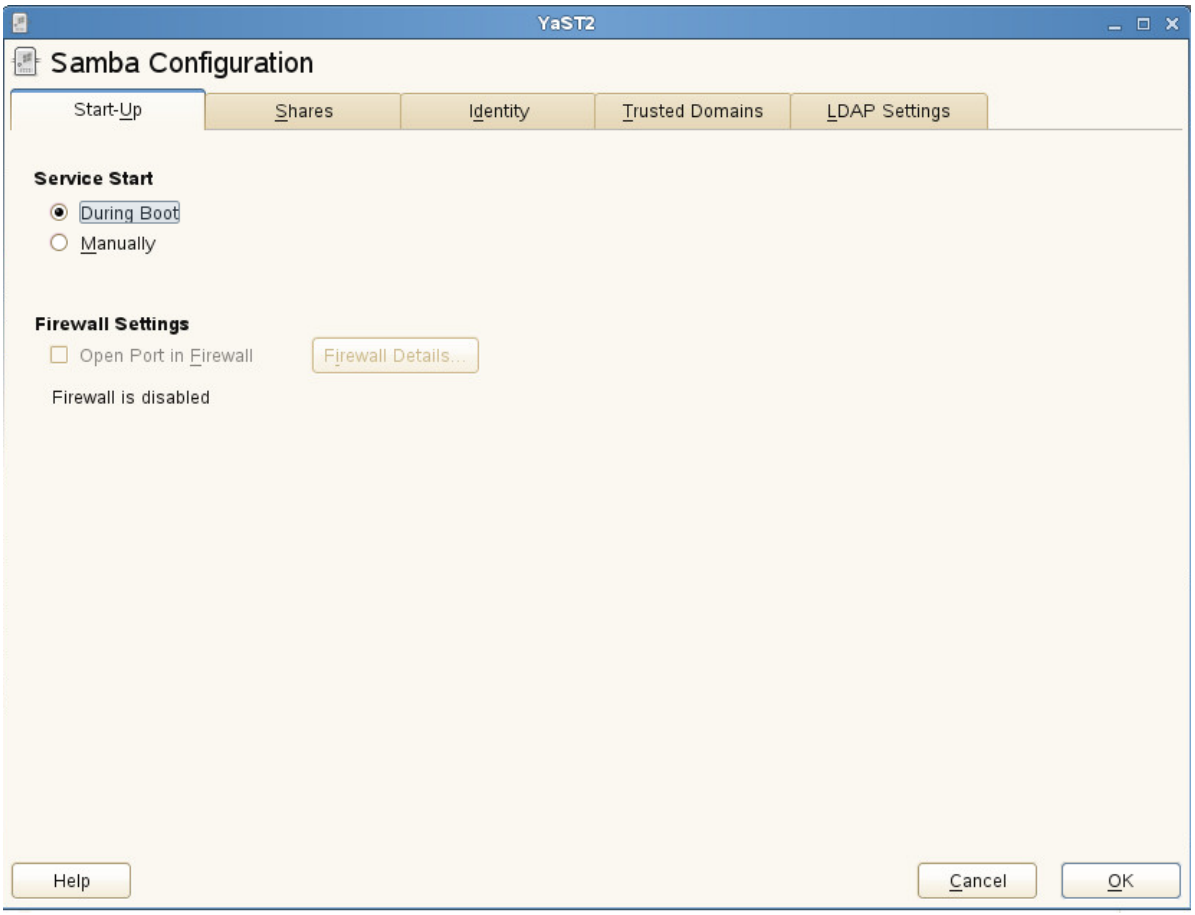
Provide a Workgroup or Domain Name (default WORKGROUP), Press Next



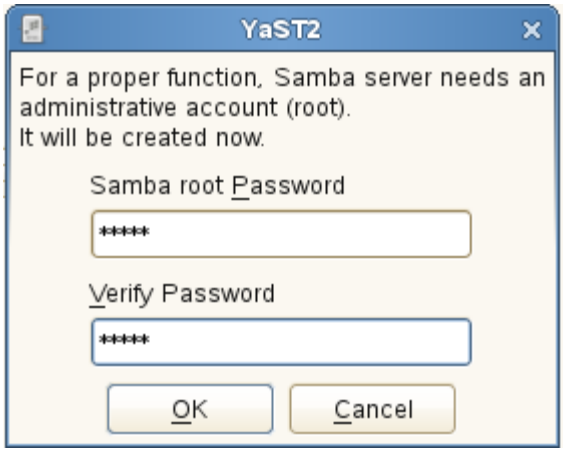
Choose Samba Server Type (default Primary Domain Controller), Press Next



Set Service Start to During Boot, Press OK

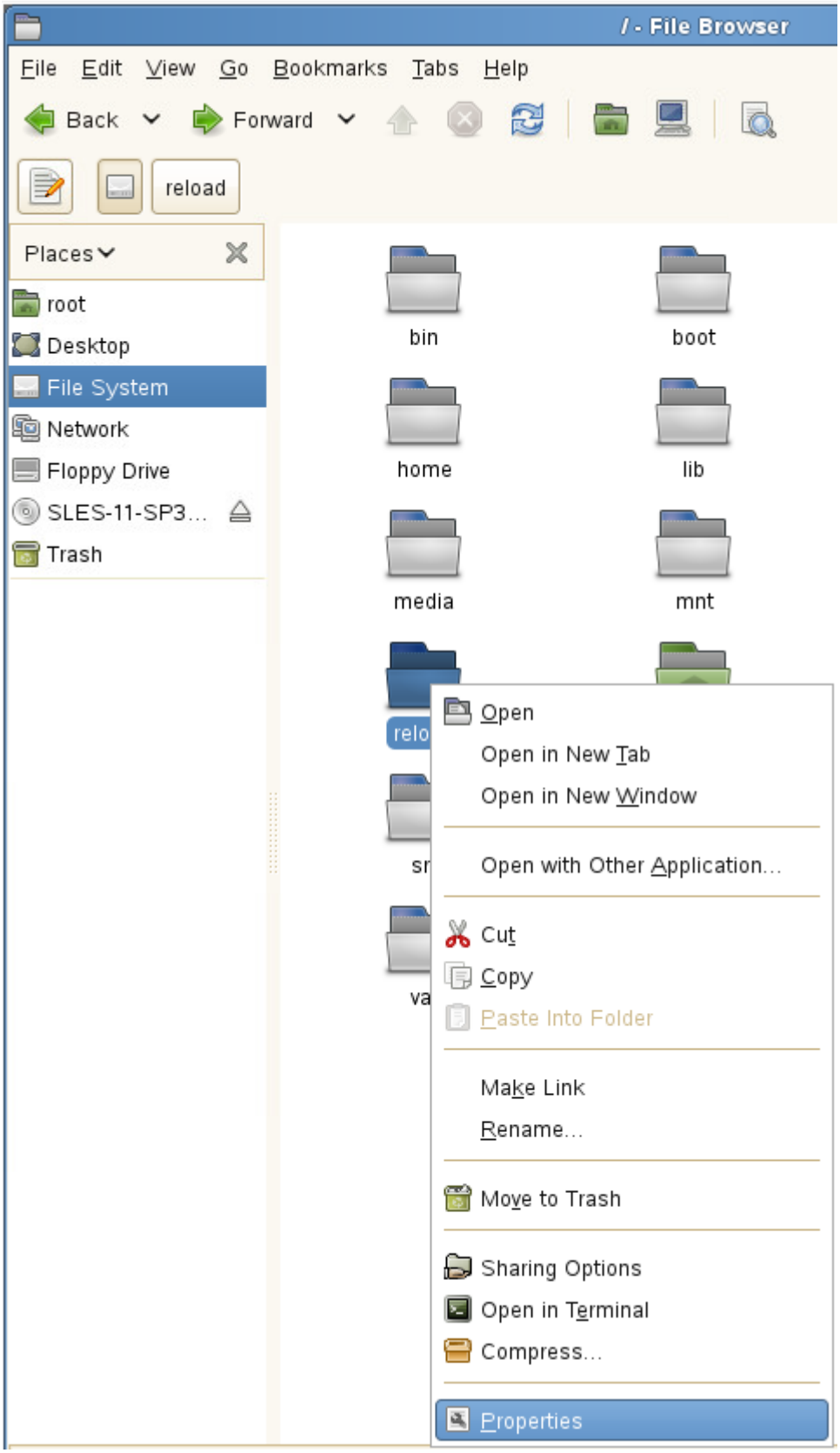


Provide an admin password



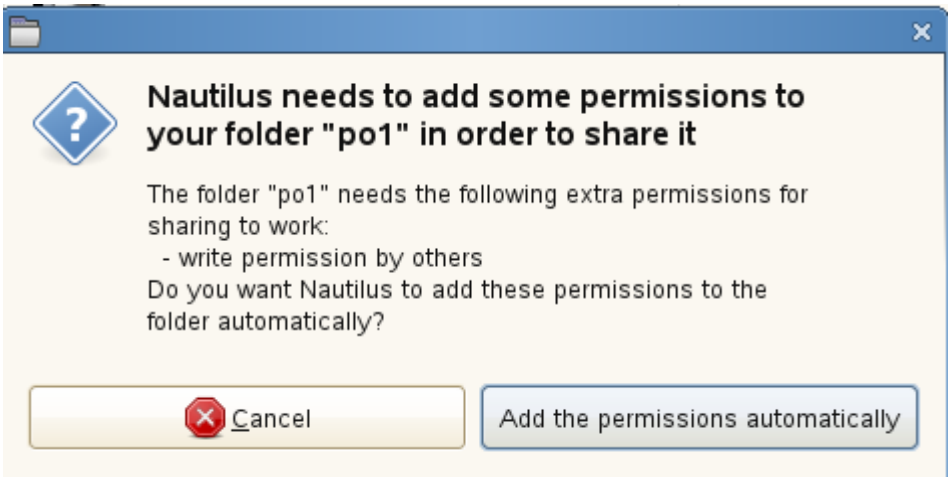
Setup Share

1. Using the "Nautilus File Browser" Browse to the parent directory of the profiles. For example, /reload, with /reload/po under it
2. Right-click on the parent directory of your profiles and select "Properties"


/ - File Browser
File Edit View Go Bookmarks Tabs Help
Back Forward
reload
Places
root
Desktop
File System
Network
Floppy Drive
SLES-11-SP3...
Trash
bin
boot
home
lib
media
mnt
Open
Open in New Tab
Open in New Window
Open with Other Application...
Cut
Copy
Paste Into Folder
Make Link
Rename...
Move to Trash
Sharing Options
Open in Terminal
Compress...
Properties

3. Select the Share tab
    a. Enable "Share this folder" and give it a share name
    b. Enable "Allow other people to writing in this folder"
    c. Click "Create Share"

4. Click on "Add the permissions automatically" when prompted

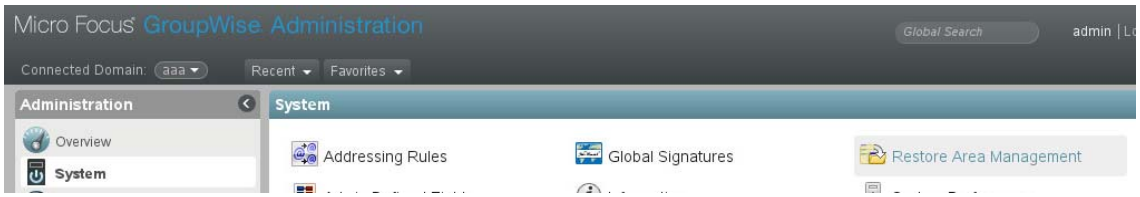


In GroupWise Administration

The Restore Area needs to be defined and the users given access to it.

Create Post Office Restore Area, this will need to be done for each Post Office:

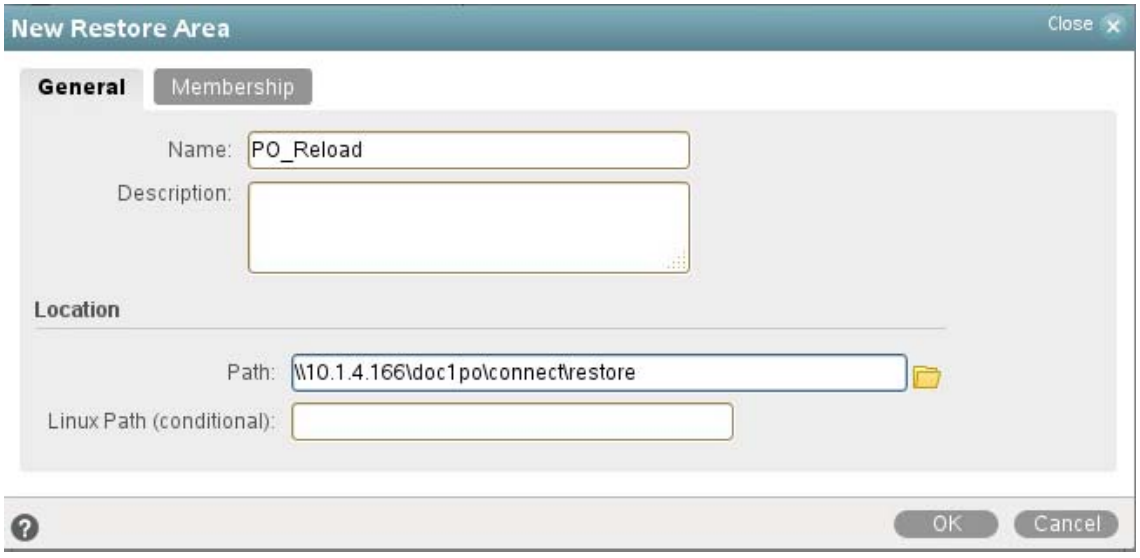
1. Browse to GroupWise Administration
2. Open *System* | *Restore Area Management*



3. Select New
4. Enter a Name and Description
5. Set the Path to the Samba share, adding `\connect\restore`

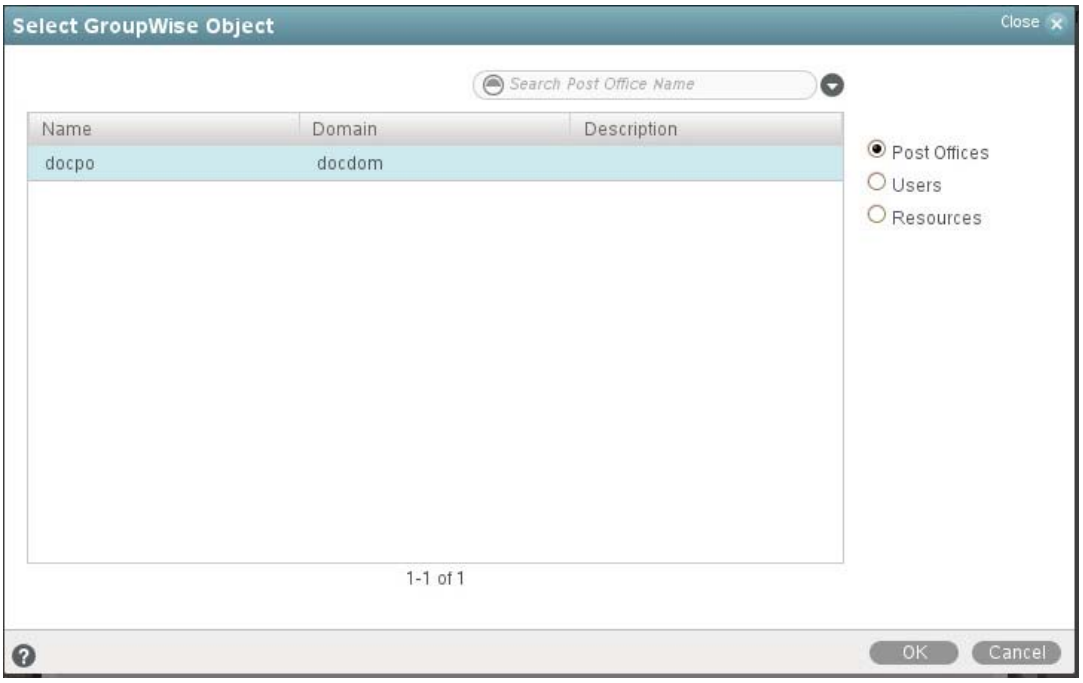
   `\\<GroupWise Disaster Recovery Server Address>\<Post Office Directory>\connect\restore`

   For example, \\10.1.1.123\po1\connect\restore
6. Do not complete the Linux path field



7. Under the Membership tab, Click Add
   - Select Post Offices

- Add Post Office

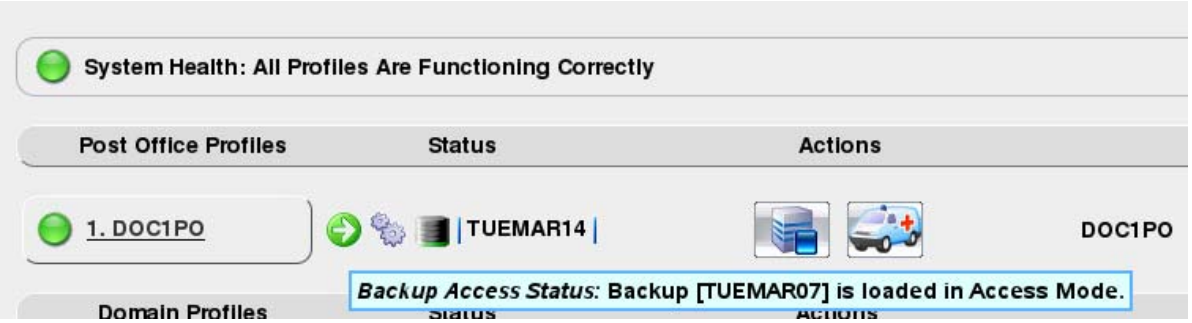


Confirmation

To confirm that this worked:

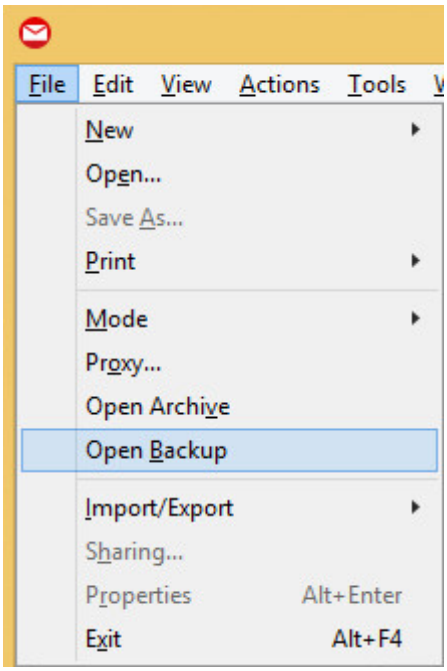
On the GroupWise Disaster Recovery server, load a backup for the profile

1. From the GroupWise Disaster Recovery Web Console, select a Post Office profile
2. Select the Backups tab
3. From the Actions of Existing Backups, select "Turn On Access to the Most Current Backup"

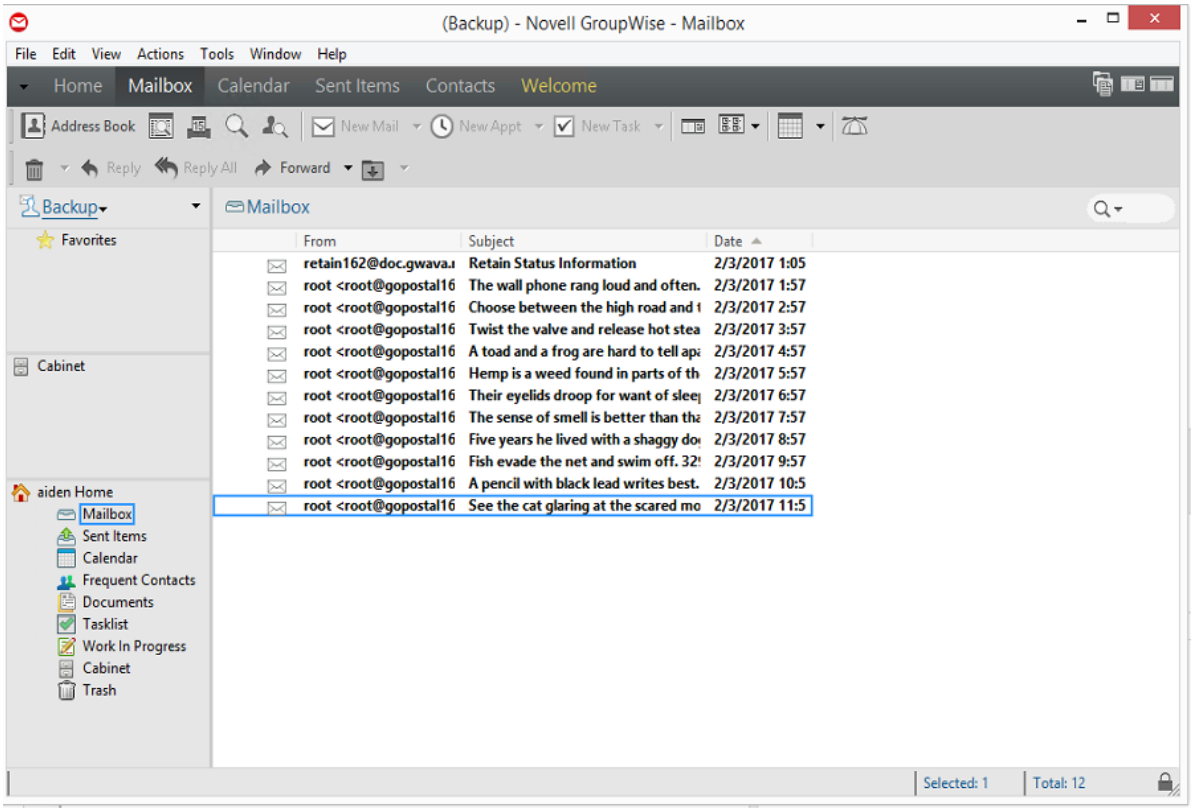


On a workstation with a GroupWise client

1. Move a few items that exist in the backup to the Trash
2. Select *File* | *Open Backup*.



This view will show the items in the GroupWise Disaster Recovery backup, and NOT on the production GW server for the user.



Troubleshooting

Sometimes the Samba connection fails due to insufficient rights on the GroupWise Disaster Recovery serve side. Providing full rights to the backup directory can help temporarily. The permissions will hold until the mount is unmounted.

On the command line `chmod -R 777 <directory>`. For example,

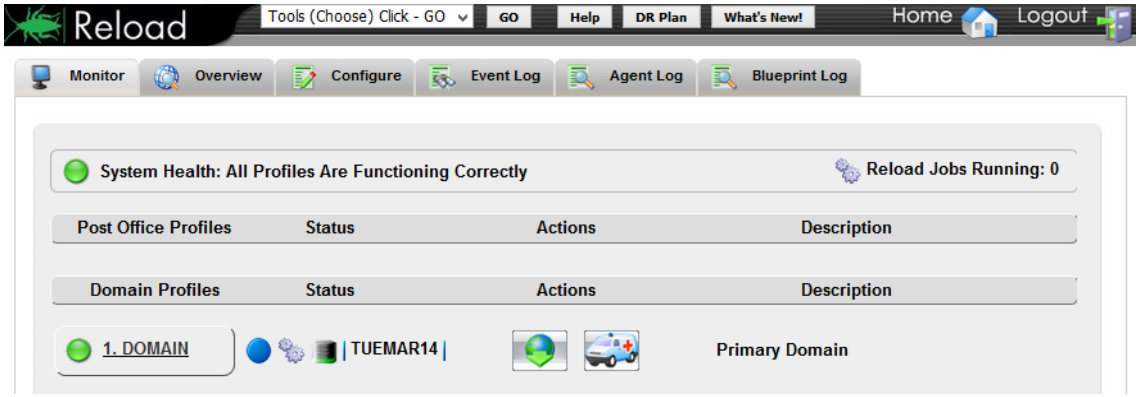
```
chmod -R 777 /reload/
```

Backup Jobs

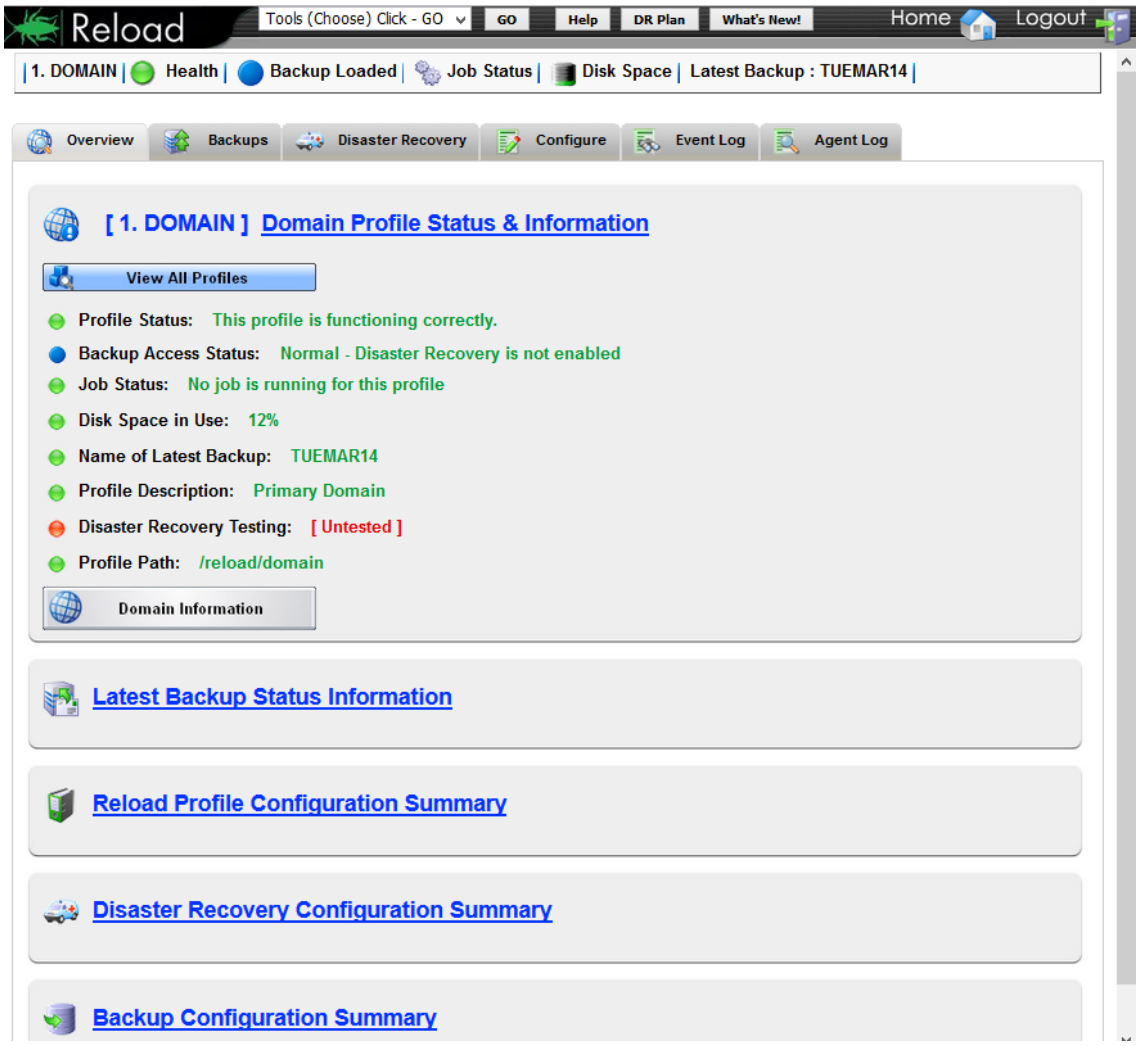
There are two kinds of backup jobs: “Domain Backup Jobs” on page 132 and “Post Office Backup Jobs” on page 136

Domain Backup Jobs

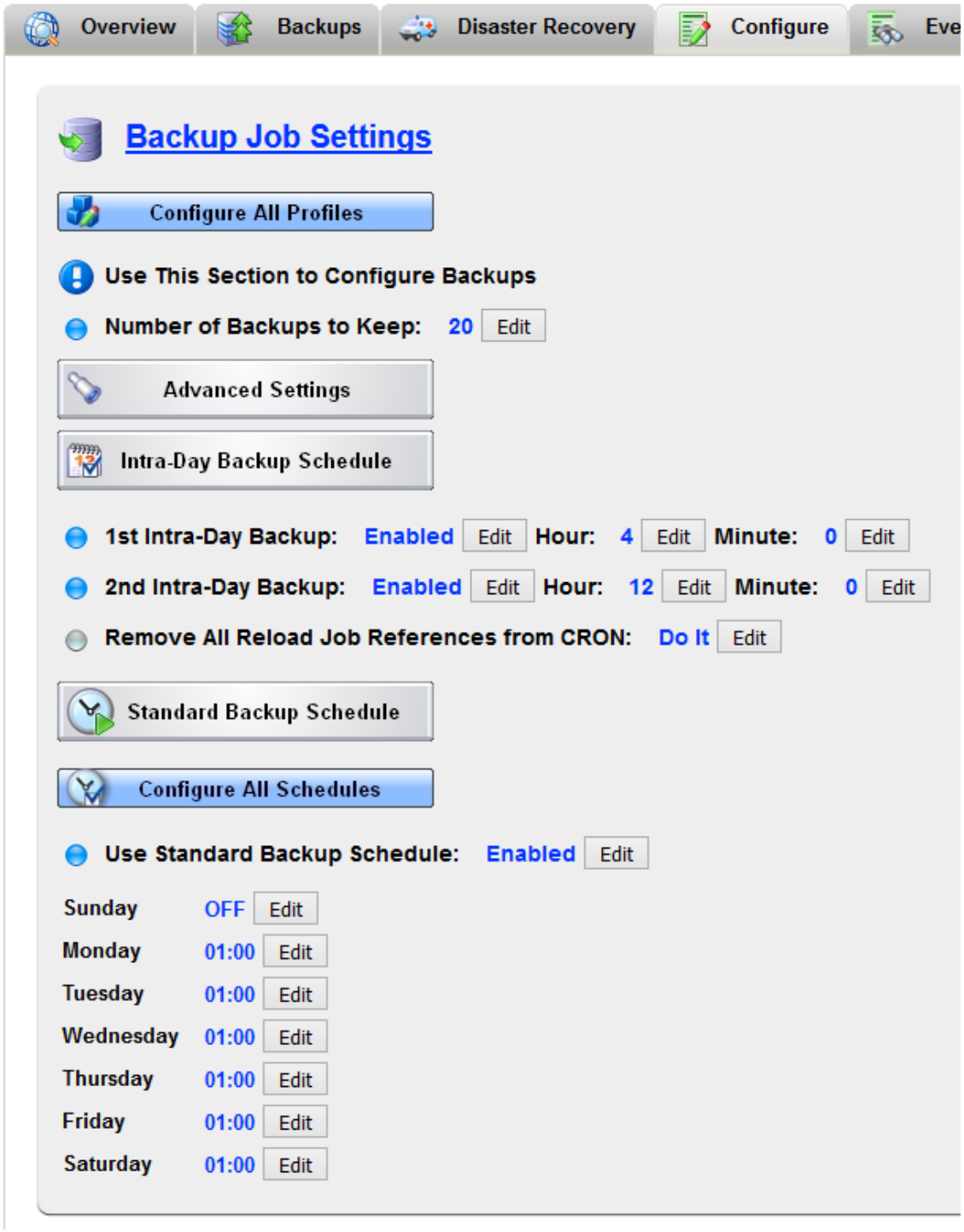
1. Browse to the GroupWise Disaster Recovery Web Administration Console http://<GroupWise Disaster Recovery_Server_Address>:5555



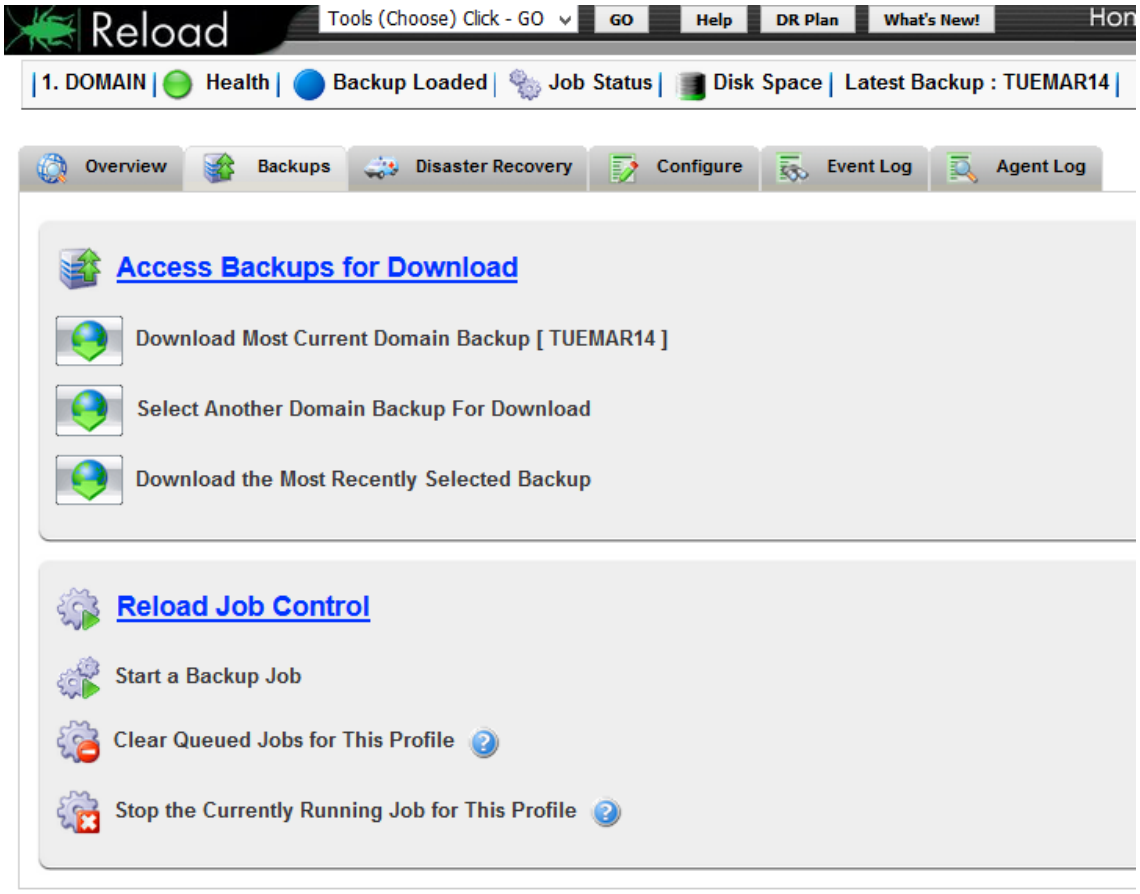
2. Select the Profile



3. Enable Intra-Day backups, because you are only as secure as your last backup: Select the *Configure* tab. Open the *Backup Job Settings* panel. Press the *Intra-Day Backup Schedule* button to reveal and enable Intra-Day Backups. The time is the number of hours after the last full backup it will run.
4. Configure Backup Schedule: Press the *Configure All Schedules* button to reveal when the backups will occur, by default:1:00 AM.

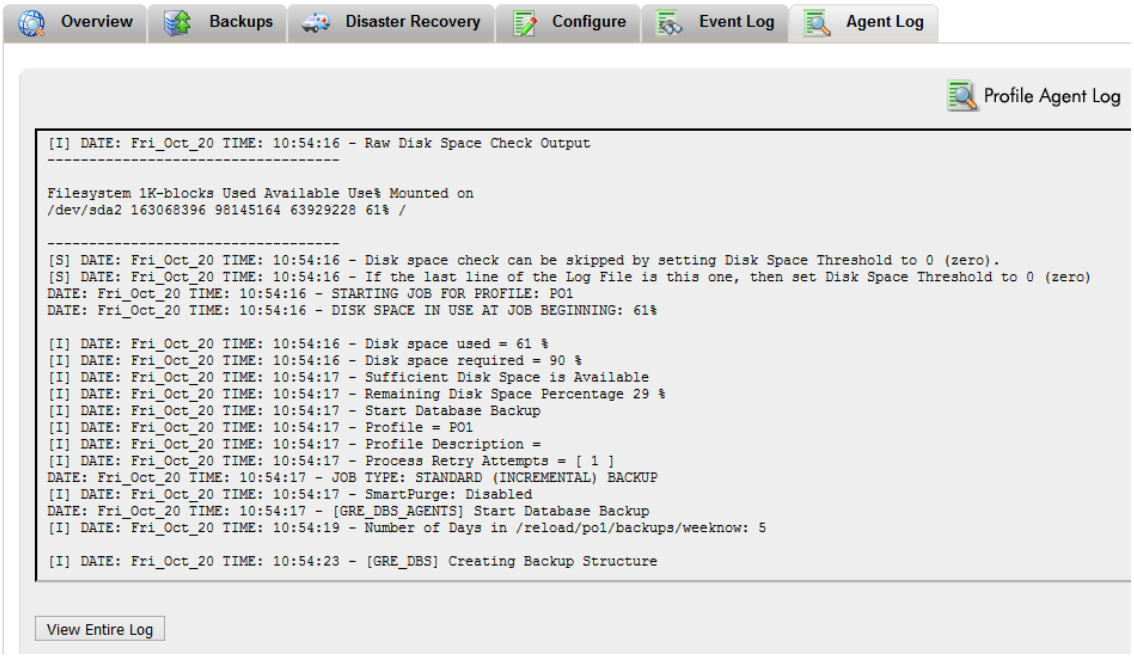
5. 

6. Select the *Backups* tab and open the *GroupWise Disaster Recovery Job Control* panel. Select "Start a Backup Job" to run a job manually.



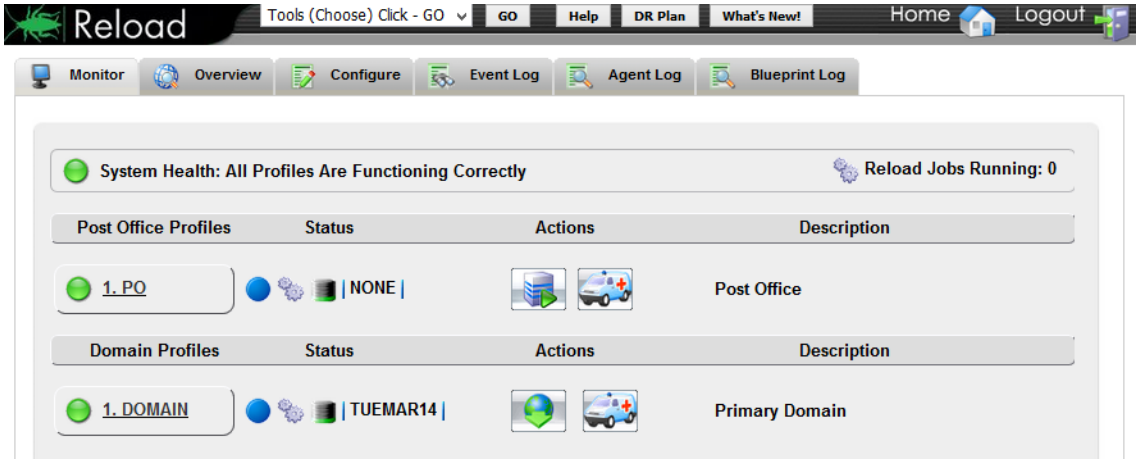
7. On the Home page, the gears will turn green and spin as the job runs.

8. Job progress can be observed in the Agent Log. This screen is static and will need to be refreshed.

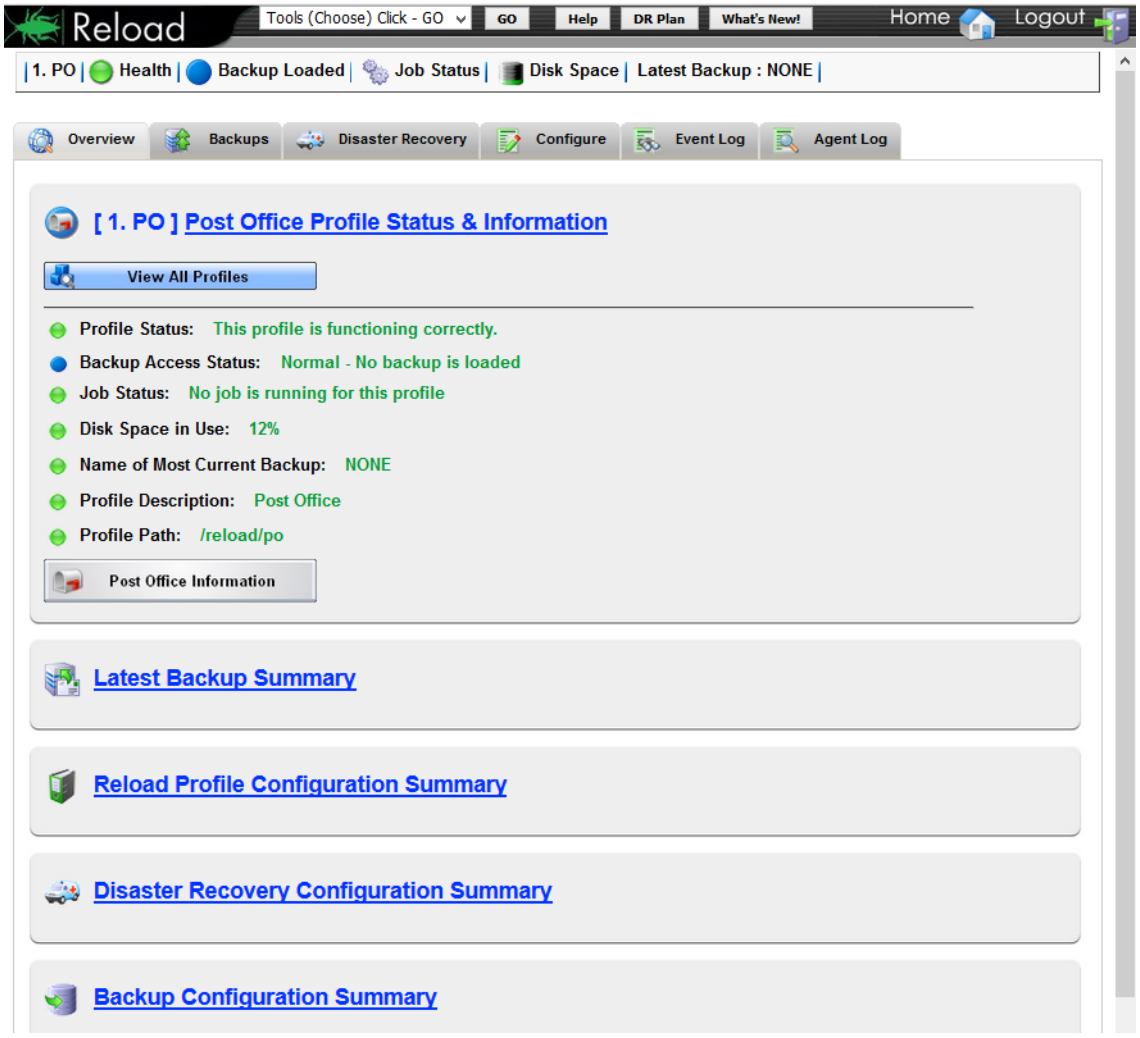
9. 

Post Office Backup Jobs

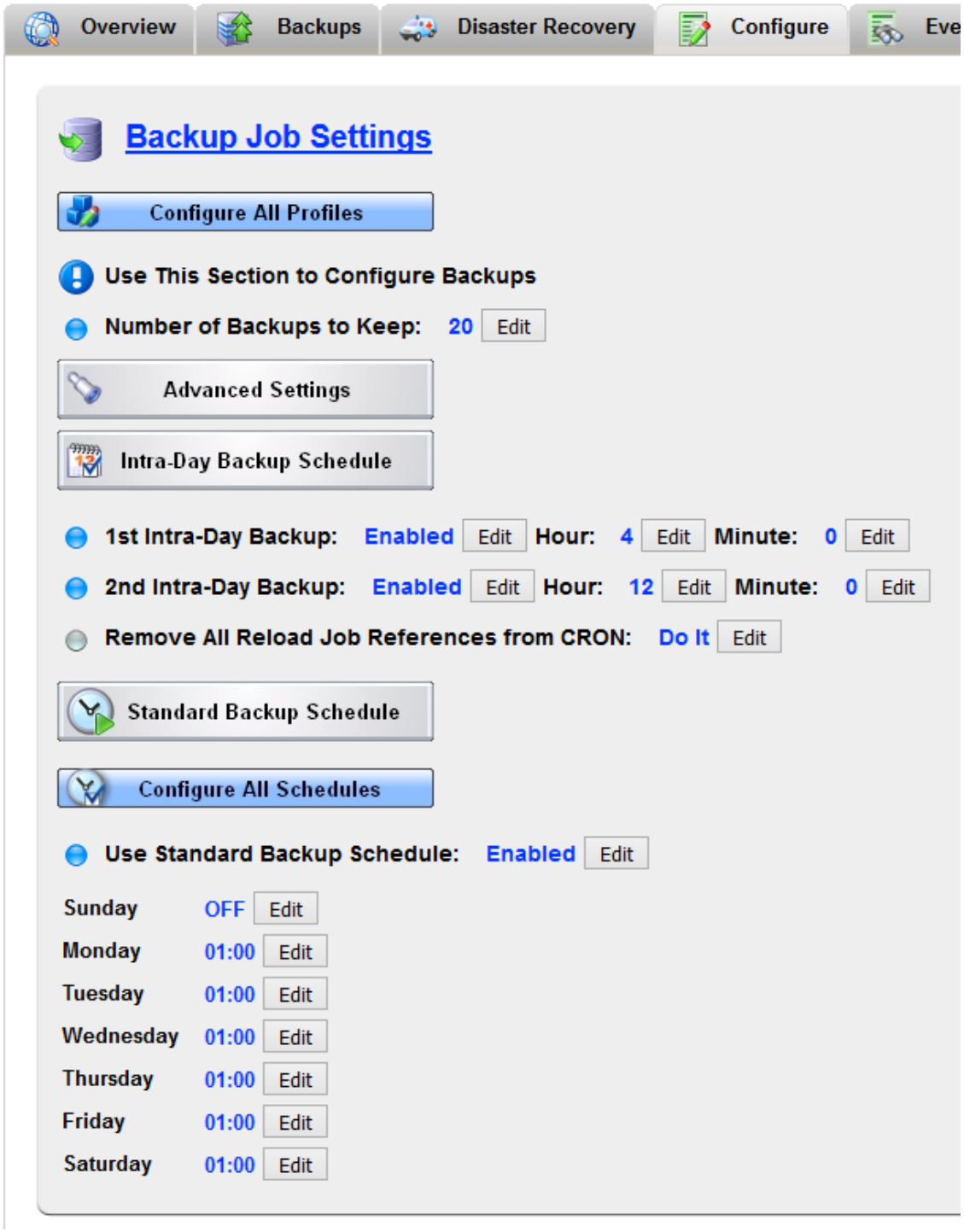
1. Browse to the GroupWise Disaster Recovery Web Administration Console http://<GroupWise Disaster Recovery_Server_Address>:5555



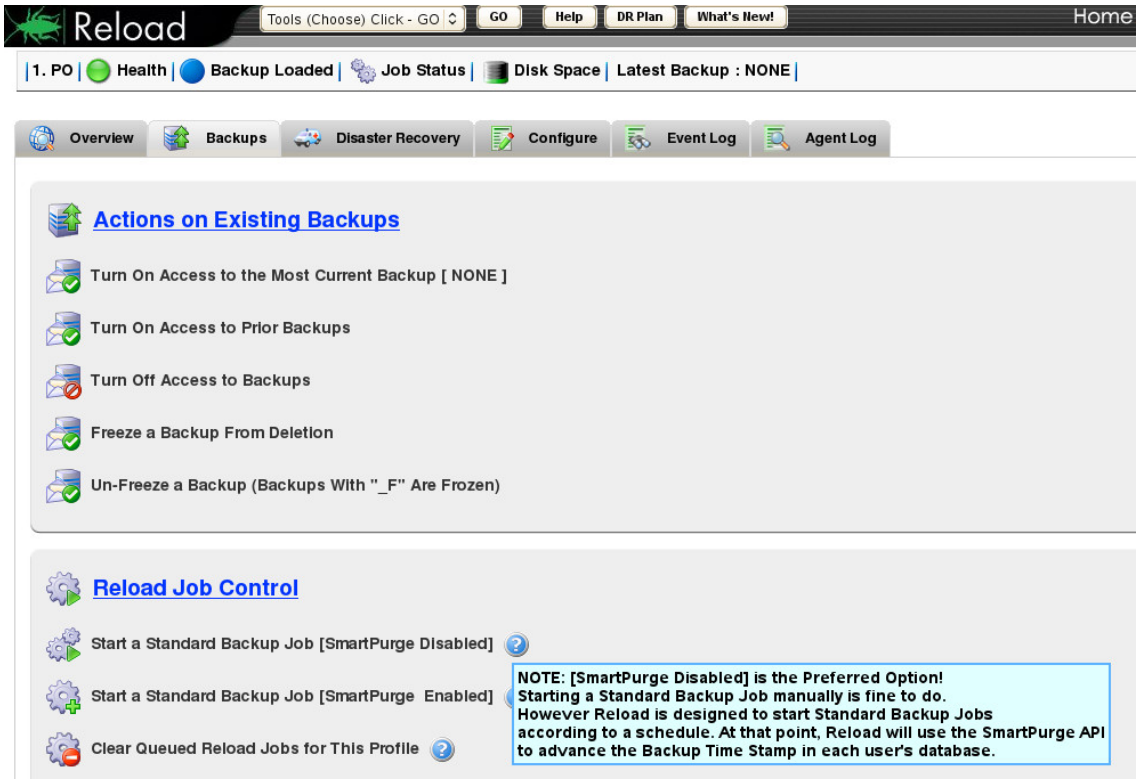
2. Select the Profile



3. Enable Intra-Day backups, because you are only as secure as your last backup: Select the *Configure* tab. Open the *Backup Job Settings* panel. Press the *Intra-Day Backup Schedule* button to reveal and enable Intra-Day Backups. The time is the number of hours after the last full backup it will run.
4. Configure Backup Schedule: Press the *Configure All Schedules* button to reveal when the backups will occur, by default:1:00 AM.

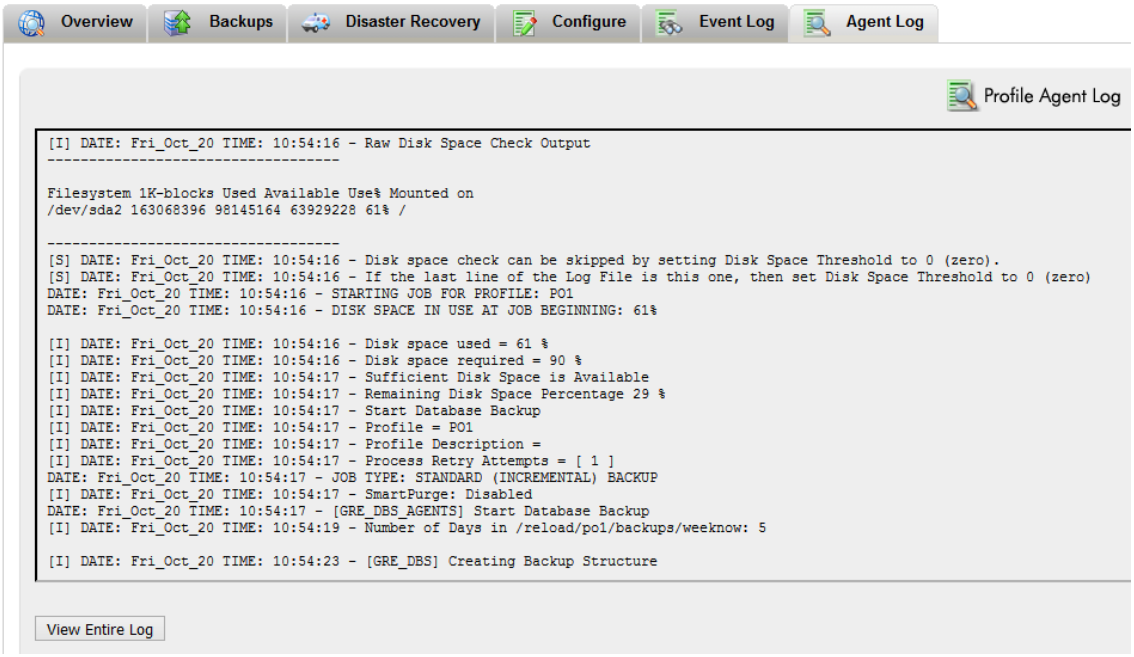
5. 

6. Select the *Backups* tab and open the *GroupWise Disaster Recovery Job Control* panel. Select "Start a Standard Backup Job [SmartPurge Disabled]" to run a job manually.



7. On the Home page, the gears will turn green and spin as the job runs.

8. Job progress can be observed in the Agent Log. This screen is static and will need to be refreshed. It will start with a database backup and creating the backup structure, then list users.

9. 

Post-Backup Tasks

Once GroupWise Disaster Recovery has been installed, profiles created, backups saved and Restore Areas setup, additional configuration tasks may be completed.

These tasks include:

Auto-GroupWise Disaster Recovery for always on backup access

Tape backups for long term storage

The number of backups to keep

Configure Auto-GroupWise Disaster Recovery

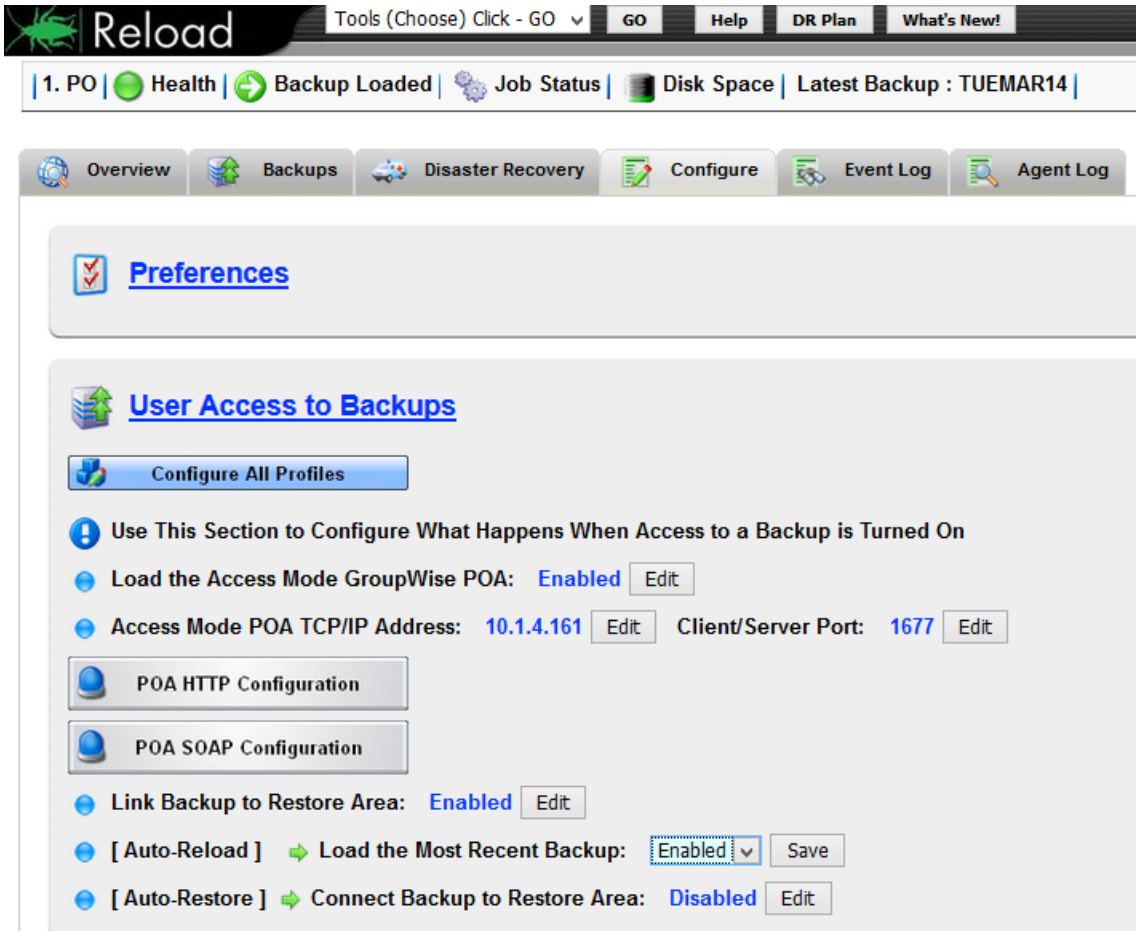
GroupWise Disaster Recovery can be set to always have the latest backup available so users can just use the Restore area without having to make a call to the helpdesk. This won't help if they deleted something a week ago, an older backup will need to be activated but it does reduce calls to the helpdesk.

Prerequisites

1. Profile created
2. Backup stored
3. Restore Area setup

Configure Auto-GroupWise Disaster Recovery

1. Browse to the GroupWise Disaster Recovery Server Web Administration Console
2. Select the Profile for the Post Office
3. Under the *Configure* tab, under the section "*User Access to Backups*", enable "*[Auto-Reload] Load the Most Recent Backup:*"



Configure Tape Backups

GroupWise Disaster Recovery can create TAR files for long term backup storage. GroupWise Disaster Recovery creates a single file from the previous week's worth of backups, but can be set to split it into smaller chunks that will fit the backup media. Advanced settings can be used to run bash scripts before and/or after the tape backup runs.

Prerequisite

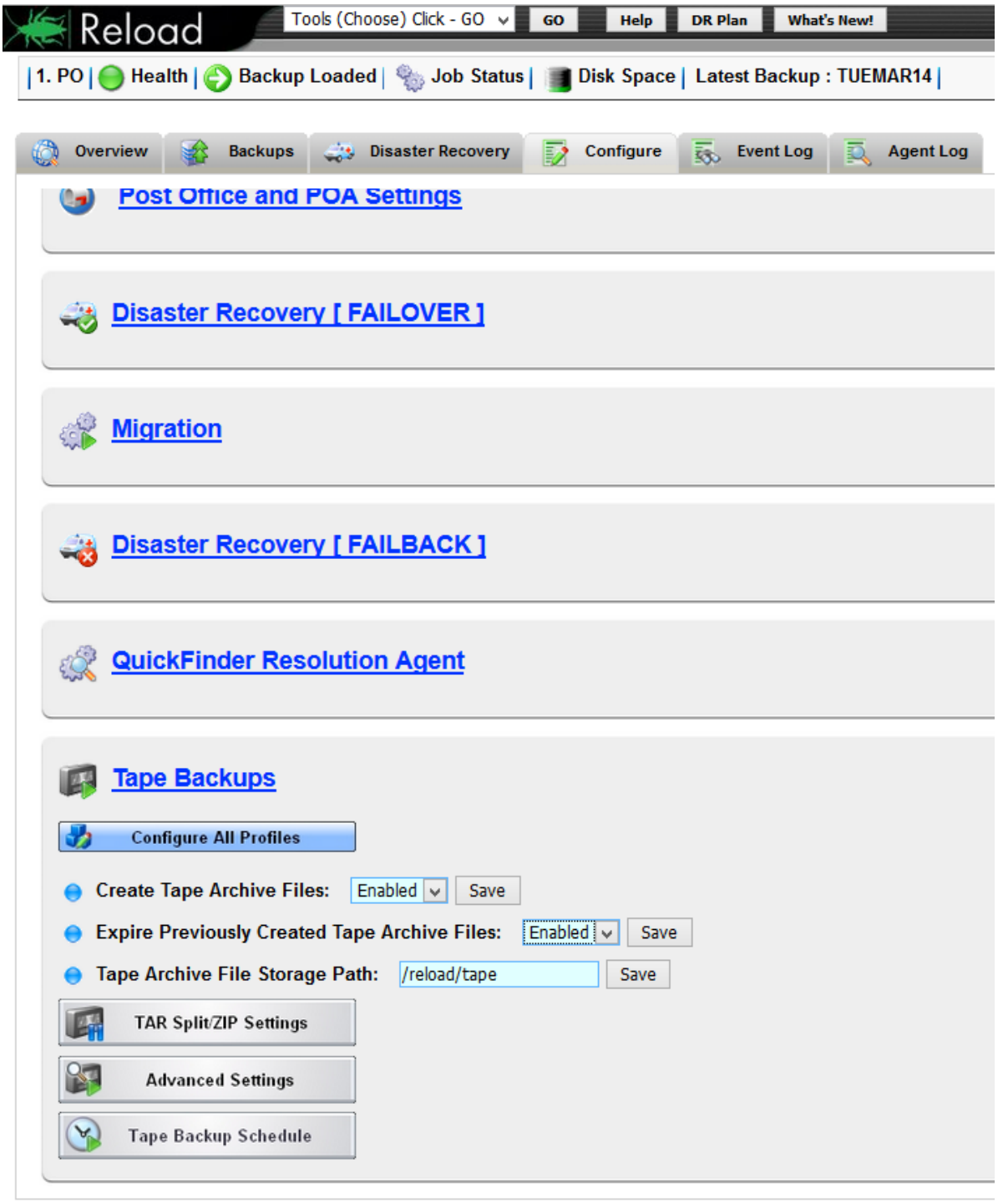
- Create a directory for the tape backup TAR files. This can be a mount to another server. For example,

  ```
  mkdir /reload/tape
  ```

Configure Tape Backups

1. Browse to the GroupWise Disaster Recovery Web Console
2. Select the Profile
3. Select the Configure tab
4. Open the Tape Backup panel
5. Set *Create Tape Archive Files* to Enabled, and save.
6. Set the *Tape Archive File Storage Path*, and save.

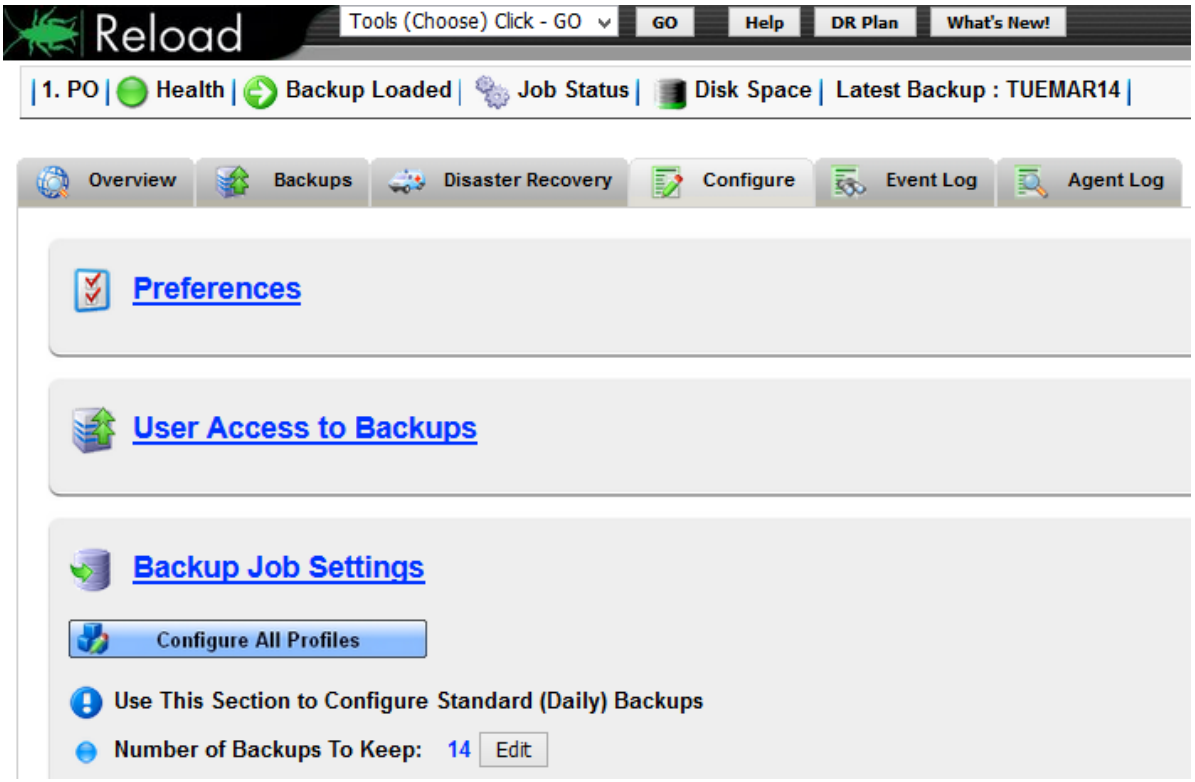
By default, the schedule is Saturday at 2:00AM. This can be changed under Tape Backup Schedule.



Configure Number of Backups to Keep

By default, GroupWise Disaster Recovery keeps 14 days of backups. You can increase or decrease the amount as needed.

This setting is found in the GroupWise Disaster Recovery Web Administration under the *Profile configuration* | *<select desired profile>* | *Configure* | *Backup Job Settings* | *Number of Backups To Keep*



Disaster Recovery Configuration

Disaster Recovery Mode allows the GroupWise Disaster Recovery server to take over the duties of the domain, MTA, GWIA and/or one or more POs.

Configuring Disaster Recovery (DR) takes substantial time, while it could be done during a disaster it would be best to configure Disaster Recovery prior to an actual disaster, when loss of communications may be an issue.

When setup correctly, during a disaster you will only need to enable Disaster Recovery Mode and change the DNS A record to point to the correct server. Your users will need to restart their client to connect to the new server but it should continue on without further disruption.

When designing your disaster recovery plan there are, basically, two types of disasters to prepare for:

- Server failure
- Site failure

A Server failure is just that: the server fails. The power supply or hard drive system fails and the server goes down and doesn't come back up. A system update goes bad or malware got through.

A Site failure is the server room is no longer functional. There is a power failure, or perhaps the sprinkler system went off by accident or the site was hit by a tornado.

Configure Disaster Recovery

This step takes some time to setup, so it is best to do this before the disaster. While it can be done during the disaster it is much harder and takes much longer until mail flow is reestablished.

If Disaster Recovery is setup correctly, it will take only seconds to be live on the GroupWise Disaster Recovery server as the DNS A record is updated and the Disaster Recovery POA is enabled.

IP Addresses

On the GroupWise Disaster Recovery server, for each Post Office Profile:

Provide an available IP address. None of these should be the IP address of the GroupWise Disaster Recovery server.

Bind the IP address to the NIC on the GroupWise Disaster Recovery server. It is recommended to provide an alias to distinguish them easily. This can be set up in: YaST >> Network Devices >> Network Settings, select the appropriate NIC device, select 'Edit', and add the IP address aliases there.

DNS

You will need to set several A Record names in your DNS. This is the one setting you'll have to change outside of GroupWise Disaster Recovery during a disaster. When the disaster is over and the production GroupWise server is ready to go live the A Record will need to be changed back.

By configuring names and using them throughout your system your users will not need to change any settings and will see minimal disruption.

Configure DNS A Records:

For each domain, and post office, create an A Record in the DNS.

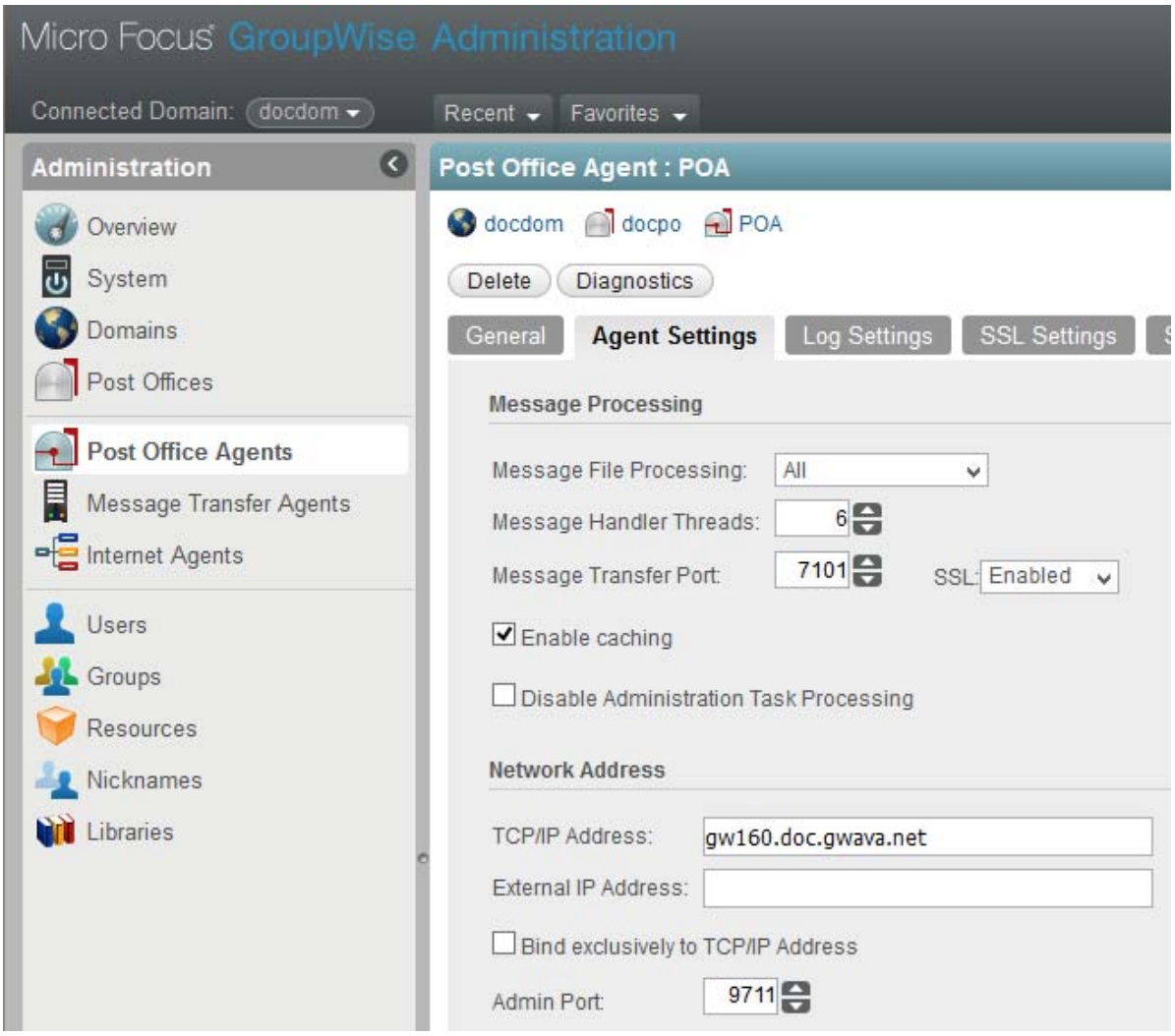
- *GroupWise Server*. For example, gw100.company.com 10.1.1.100
- *Domain*. For example, gwdom.company.com 10.1.1.100
- *Post Office*. For example, gwpo.company.com 10.1.1.100
- *MTA*. For example, gwmta.company.com 10.1.1.100

GroupWise Server

Configure the Live GroupWise server to use domain names.

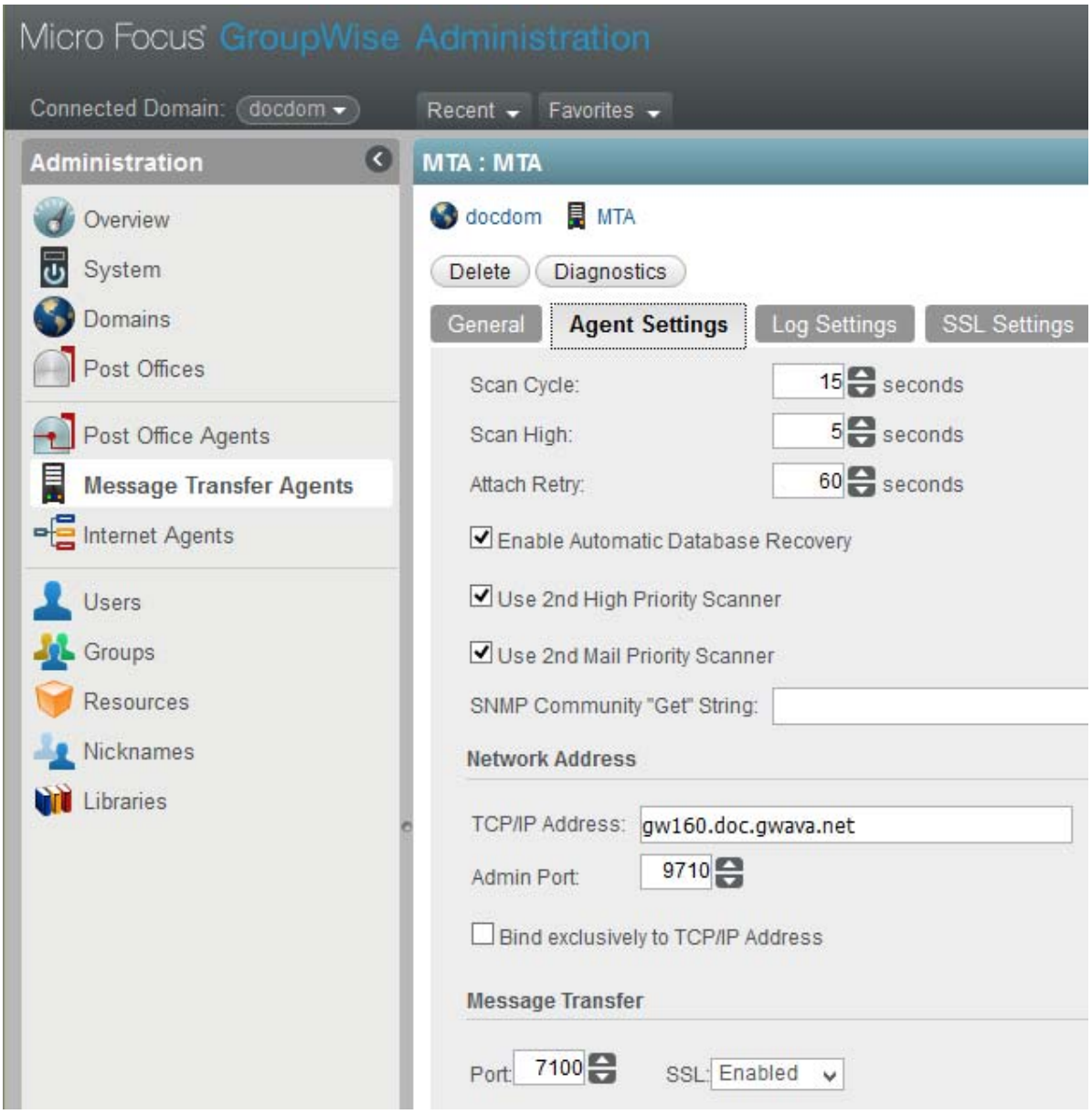
POA

1. Set the POA to use the hostname, in *Groupwise Administration* | *Post Office Agents* | *<poa>* | *Agent Settings* | *Network Address* | *TCP/IP Address*
2. Disable "*Bind exclusively to TCP/IP Address*" and Save
3. Confirm that the MTP port is specified, by default 7101. MTP communication is not only a faster means of communication between MTAs and POAs, but it is essential disaster recovery purposes. If the MTP port is different that will need to be entered into GroupWise Disaster Recovery later on.



MTA

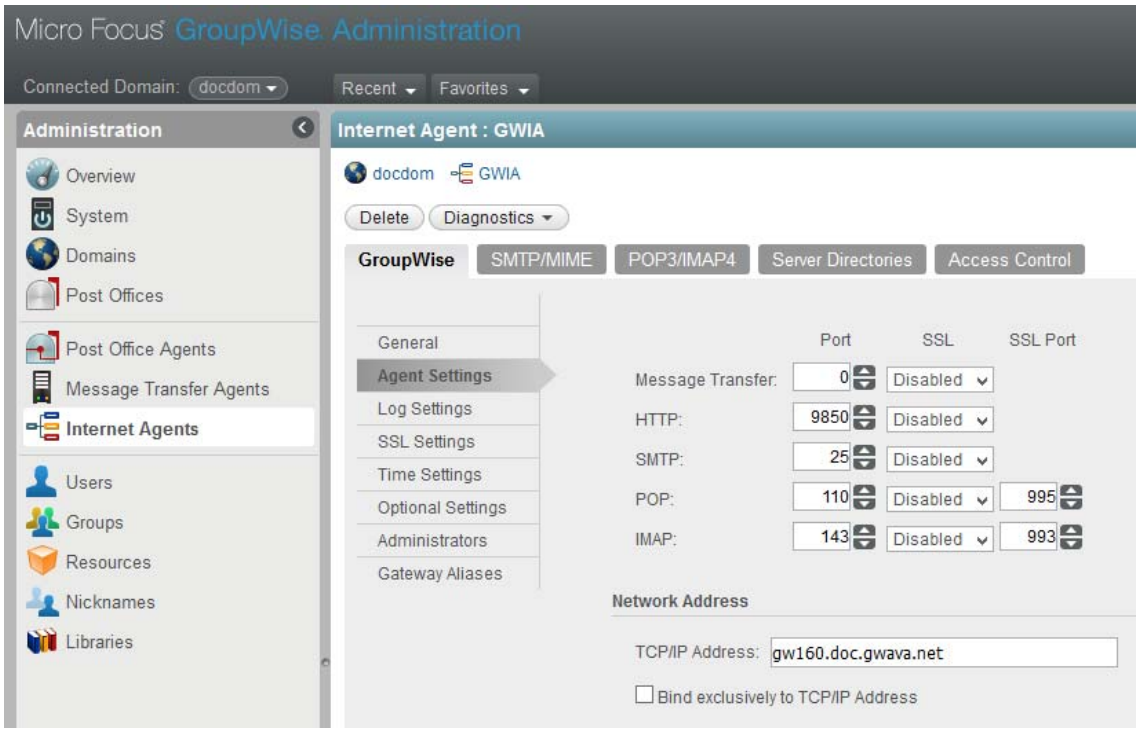
1. Set the MTA to use the hostname, in *Groupwise Administration* | *Message Transfer Agents* | *<mta>* | *Agent Settings* | *Network Address* | *TCP/IP Address*
2. Disable "*Bind exclusively to TCP/IP Address*" and Save
3. Confirm that the MTP port is specified, by default 7100. MTP communication is not only a faster means of communication between MTAs and POAs, but it is essential disaster recovery purposes. If the MTP port is different that will need to be entered into GroupWise Disaster Recovery later on.



GWIA

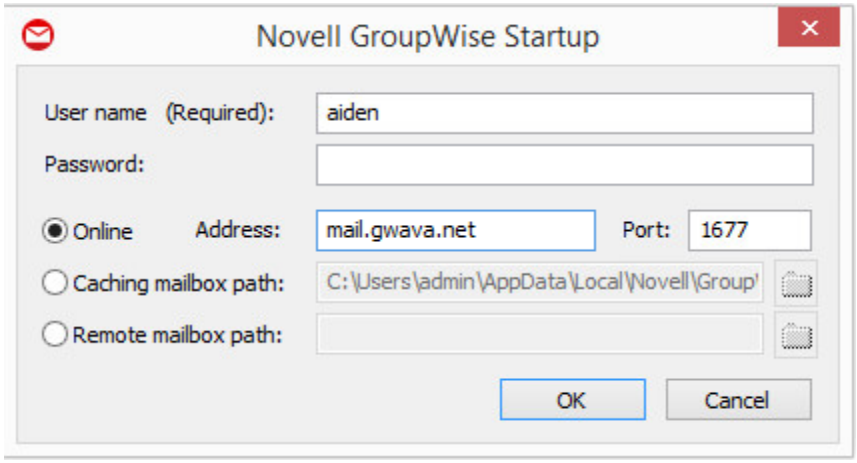
1. Set the GWIA to use the hostname, in *Groupwise Administration* | *Message Transfer Agents* | *<gwia>* | *Agent Settings* | *Network Address* | *TCP/IP Address*

2. Disable "*Bind exclusively to TCP/IP Address*" and Save



GroupWise Client

- Set the GroupWise Client on all workstations to connect using a domain name. For example, gwpo.company.com. This allows the DNS A Record for the Post Office to be changed and the users will not notice a difference. If this is not set, then during a disaster you will be trying to contact all users and telling them what address to connect to.



GroupWise Disaster Recovery Server

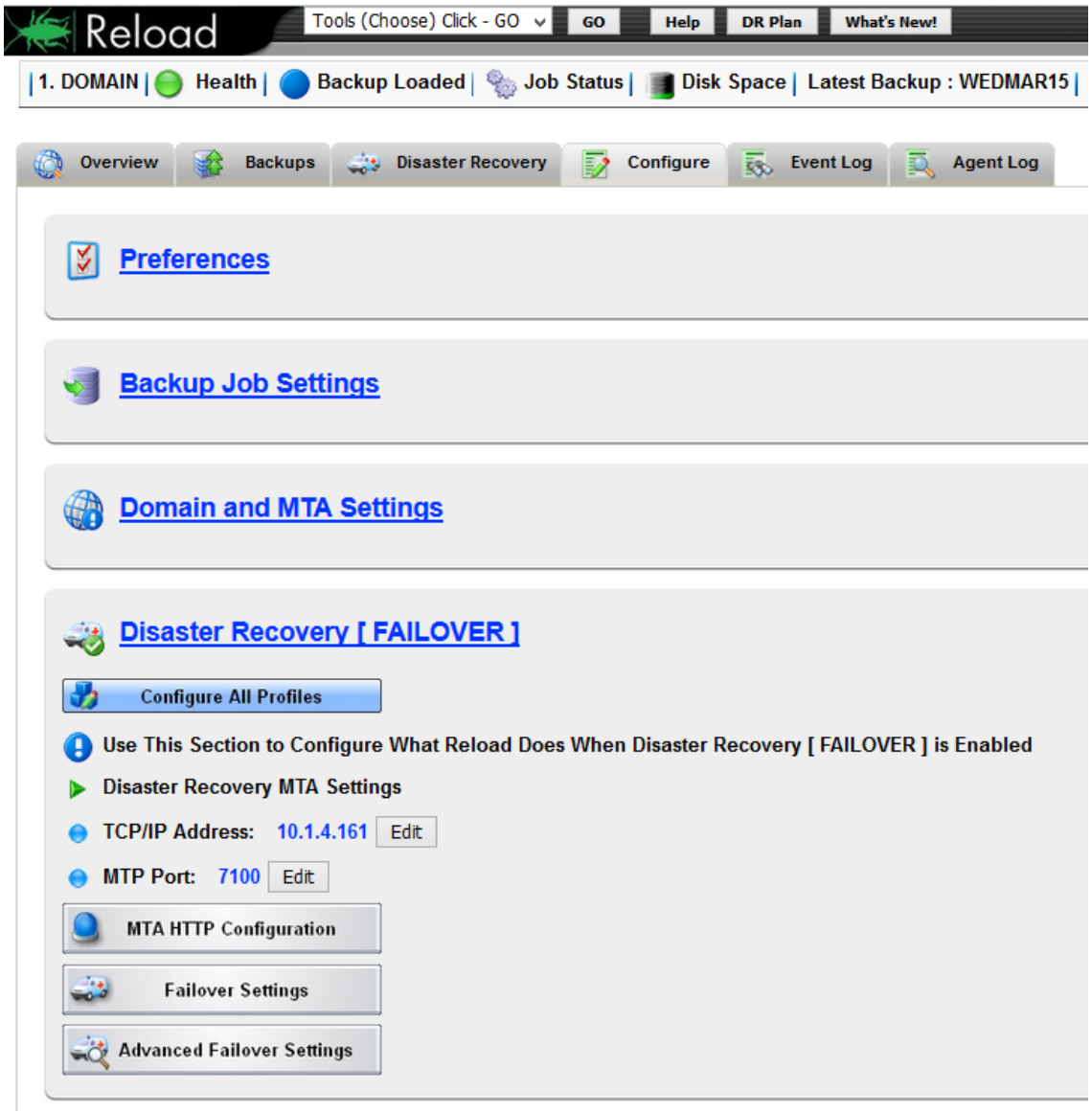
Configure Domain

1. Browse to the Web Administration Console and select the *Domain* profile.

2. Under the Configure tab, open the *Disaster Recovery {FAILOVER]* section
3. The TCI/IP Address should be pre-set to the GroupWise Disaster Recovery server.
4. MTAs and POAs should always be configured to communicate via MTP (Message Transfer Protocol vs. message file queuing and message file scanning) to one another. MTP communication is not only a faster means of communication between MTAs and POAs, but it is essential for disaster recovery purposes.

   Make sure that the MTAs and the POAs have an MTP port specified. Typically the MTP port for the MTA is 7100, and the MTP port for the POA is 7101.
5. Configure the profile settings to match those of the live GroupWise domain. Confirm the ports used.

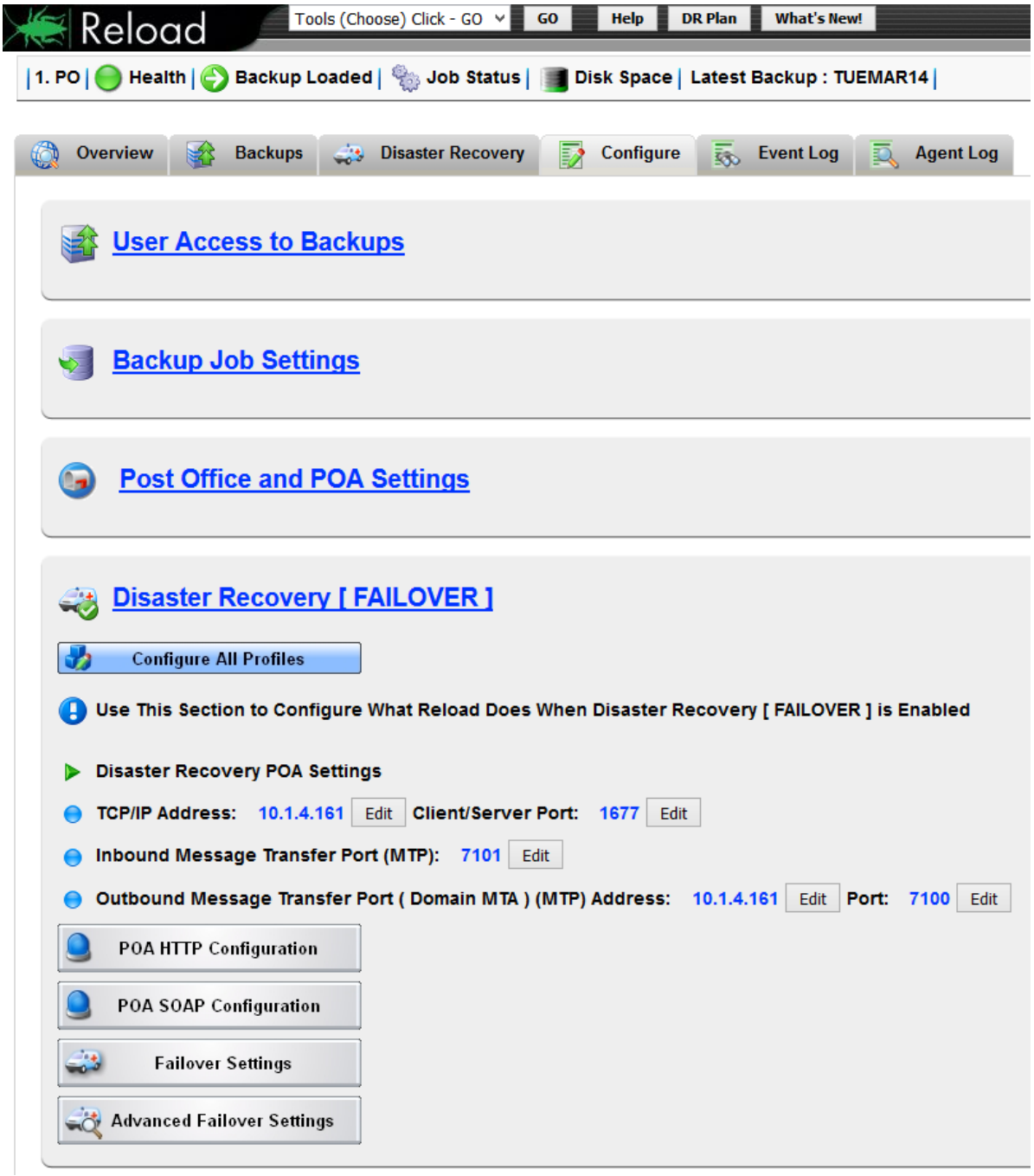
   If you have multiple domains you will want to set this to separate addresses bound to the network card.



Configure Post Office

1. Browse to the GroupWise Disaster Recovery Web Administration Console and select the *Post Office* profile
2. Under the Configure tab, open the *Disaster Recovery {FAILOVER]* section
3. The TCI/IP Address should be pre-set to the GroupWise Disaster Recovery server
4. Configure the profile settings to match those of the live GroupWise domain

   If you have multiple post offices you will want to set this to separate addresses bound to the network card.
5. Outbound Message Transfer Port (Domain MTA) (MTP) Address



Testing Disaster Recovery

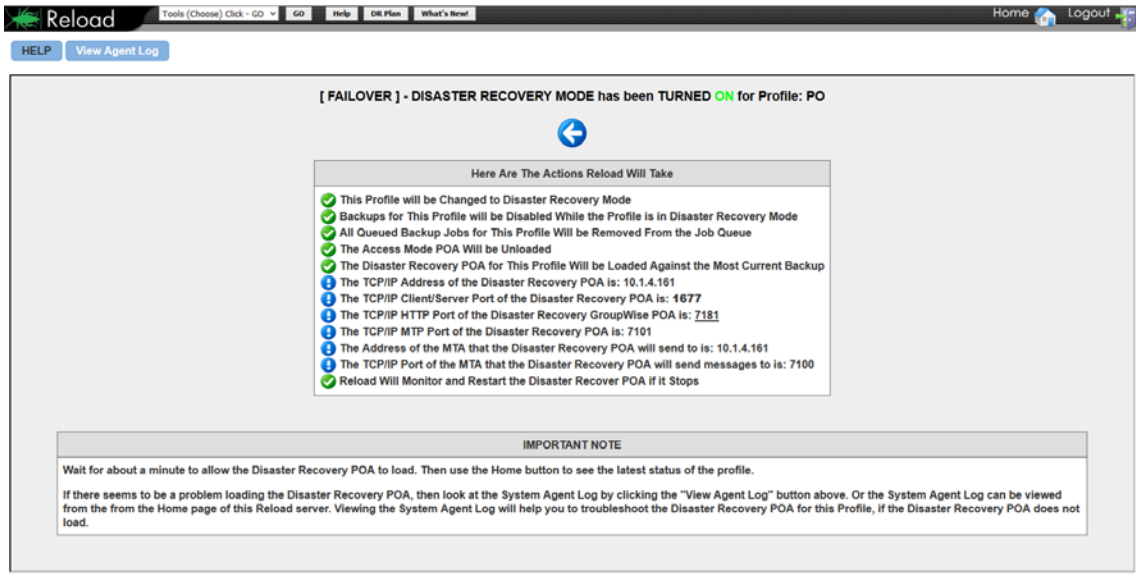
Disaster Recovery can be tested without downing the production GroupWise server by activating the Disaster Recovery POA and connecting to it with a GroupWise client.

A full-scale test should be run that shuts down the production mail server. Attempts to send and receive from external email systems so all parts are tested and mail flows properly. DNS changes, or GroupWise systems changes can effect Disaster Recovery Mode functionality. A full-scale test where the product GroupWise POA is shut down should be run yearly.

Post Office Test

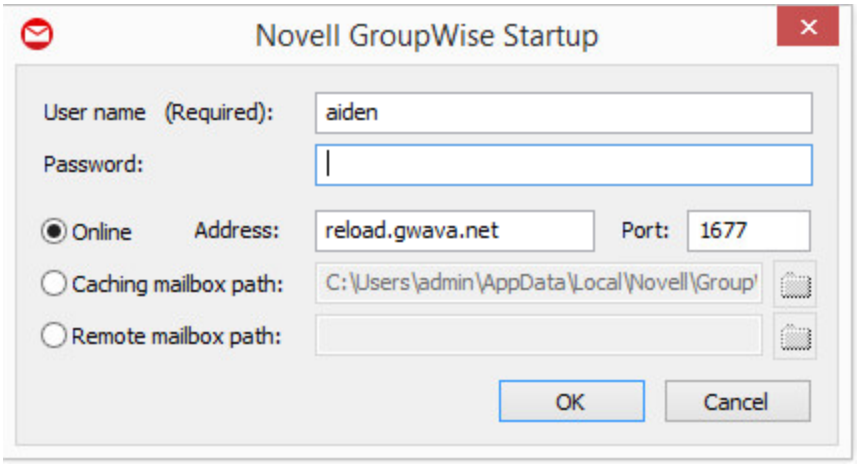
The simplest test is to enable Disaster Recovery mode and see if a client can connect by entering the IP of the GroupWise Disaster Recovery server DR POA

1. Close the GroupWise client if it is open
2. Browse to the GroupWise Disaster Recovery Web Administration Console
3. Click on the Post Office profile ambulance to engage Disaster Recovery Failover Mode



4. Went Ambulance lights are on and the Red Arrow is up the DR POA is active.

5. Open the GroupWise client and instead of logging into the production Post Office, enter the hostname or IP address of the GroupWise Disaster Recovery server.



Test the Disaster Recovery system:

1. Send a message internally to someone on the same Post Office.
2. Send a message internally to someone on the same Domain.
3. Send a message externally to someone on the Internet.

   End the test:
4. Click on the Post Office profile ambulance to disengage Disaster Recovery Failover Mode.

The ambulance lights will turn off.

If a backup was loaded before Disaster Recovery mode was enabled, the red up arrow will change to a green right arrow.

Otherwise, the red up arrow will change to a blue dot.

Create Disaster Recovery GWIA

This step is optional, it depends on the design of your GroupWise system, and has nothing to do with GroupWise Disaster Recovery itself.

If your GroupWise server fails you may lose the GWIA as well and mail will not flow. It is prudent to set up a secondary GWIA for disaster recovery.

Setting up a GWIA is a GroupWise function. Please see GroupWise documentation for setting up an alternate GWIA for a domain (https://www.novell.com/documentation/groupwise2014r2/gw2014_guide_admin/data/adm_gwia_config_alternate.html).

Prerequisite

Set up, configure and test Disaster Recovery before a disaster.

Concept

1. Create a secondary GW domain on a server in the off-site disaster recovery location.
2. Create the GWIA off the secondary GW domain.
3. In GroupWise administration, define the GWIA as the secondary GWIA.

Retain Integration

Retain archives best when archiving the items directly. However, as an alternative to archiving messages directly from GroupWise, GroupWise Disaster Recovery can run a POA that Retain can archive from. This is useful for archiving data from unstable GroupWise servers or dealing with archiving from tape backups. This is different from the GroupWise Disaster Recovery for Retain product which backs up the Retain server to the GroupWise Disaster Recovery server.

This feature sets up a POA that is active almost all the time for Retain to connect to archive from, except for short periods as GroupWise Disaster Recovery switches to the latest backup.

Prerequisites

Since this requires running a POA, it is best to bind an extra IP address to the server for the Retain POA or you will need to make sure to change the POA settings in such a way that it does not interfere with the Access Mode POA or Disaster Recovery POA.

There must be an existing Post Office Profile and backup in place.

GroupWise Disaster Recovery Setup

Retain Integration is setup on a per Profile basis. Each Post Office Profile will have to be configured to use this feature.

On the GroupWise Disaster Recovery server, go to GroupWise Disaster Recovery Administration by running:

reload

Then go to *Profiles* | *Post Office Profile*

1. Select the desired profile
2. Select "Advanced Profile Configuration Menu"
3. Select "Retain Integration Settings"
4. Select "Retain to Reload Integration Configuration Wizard"
    a. Enter the GroupWise Post Office name
    b. Enter the GroupWise Domain name
    c. Enter the Retain Worker Password (This can be set in the Retain Console, by default it is the Retain admin password)

d. Enter the IP address and ports the Retain POA will bind to. If this POA will be sharing the IP address with any other GroupWise Disaster Recovery POA, the Client, SOAP, and HTTP connection ports must be unique to avoid port conflicts. GroupWise Disaster Recovery should be installed on a machine other than the live POA server, but the standard ports are usually best used for one of the other GroupWise Disaster Recovery POAs, (Disaster, Restore, and Access). Pick a port for each connection which you know is open. Retain will pull all necessary connection information from the GroupWise Disaster Recovery server. There is no need to enter these settings into the Retain Server.

e. To mitigate the chances of getting Retain Worker archive errors while working against a GroupWise Disaster Recovery POA, it is *STRONGLY* recommended that GroupWise Disaster Recovery is set to create highly consistent backups. This setting is located at *Main menu* | *Profiles* | *(Select Profile)* |*Standard* | *Advanced* | *Consistency: Set to highest*.

Retain Setup

On the Retain Web Console:

1. Set the worker password:
   a. This can be set in the Retain Web Console under *Workers* | <*desired worker*> | *Connection tab*, by default it is the Retain admin password
   b. If the password is changed, the Worker bootstrap will need to be updated.
   c. To remove an existing Worker bootstrap:
      i. On the Retain server, stop tomcat
      ii. Navigate to /opt/beginfinite/retain/RetainWorker/WEB-INF/cfg/ or wherever the worker is stored and remove RetainWorker2.cfg
      iii. Start tomcat
2. Create a Profile for use with GroupWise Disaster Recovery:
   a. Set the Scope "Date Range to Scan":
   b. If using *Retain 4.1 or higher*: set to New Items stores which items have been archived internally.
   c. If using *Retain 4.0.3.1 or lower*: set to Publish all messages newer than last stored message (fast) and the "Set Storage Flags" must be set to "Item Store Flag"
3. Create a Job as normal with Schedule, Profile, and Worker:
   a. Under the *Reload tab*:
      i. Set "Enable Reload Integration"
      ii. Set "Server Protocol" http or https
      iii. Set "Server Host Name" to the Reload server hostname or IP address
      iv. Set "Server Port", default 5555
   b. Select Mailboxes to dredge

Now the job will dredge the GroupWise Disaster Recovery server rather than the GroupWise server.

6 Restoration

Restoring Items Overview

Since GroupWise Disaster Recovery is a backup solution it has the ability to restore items to GroupWise.

That are two methods for restoring items: Restore mode and Access mode.

Restore mode uses the GroupWise restore area manager to allow GroupWise to access the backed up items directly.

Access mode uses a POA on the GroupWise Disaster Recovery server that the GroupWise client can access directly, the items can be archived and then restored after reconnecting to the production GroupWise system.

Prerequisites

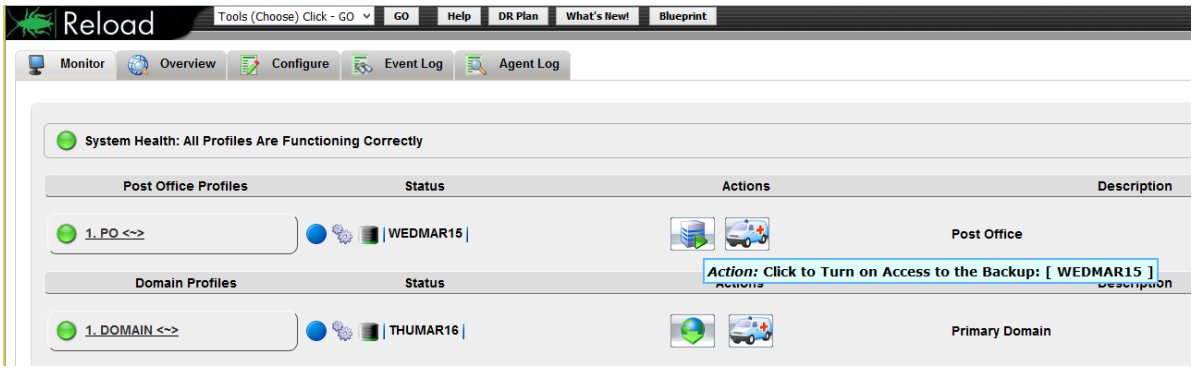
1. Configure the Restore Area
2. Have backups

Loading a Backup

On the GroupWise Disaster Recovery server

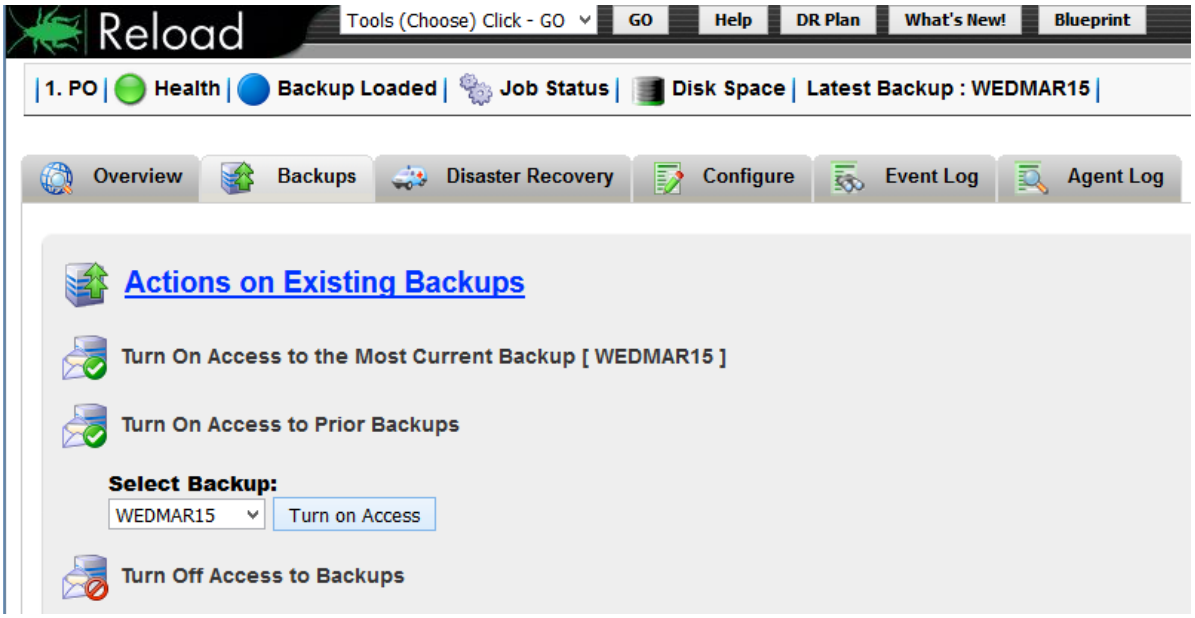
Most Recent Backup

1. To load the most recent backup browse to *GroupWise Disaster Recovery Web Administration Console* | *<Profile>* | *Turn On Access to Backup* action button



Prior Backup

1. To load a prior backup browse to *GroupWise Disaster Recovery Web Administration Console* | *<Profile>* | *Backups tab* |*Turn On Access To Prior Backups* | *<Backup>*



Restore Mail Items

One or more items can be restored to the user's mailbox. There are two modes for restoring items: Restore mode and Access mode.

- "Restore Mode" on page 156 uses GroupWise's restore area to allow the user to use the GroupWise client to restore their items.
- "Access Mode" on page 158 has the Client access the GroupWise Disaster Recovery POA directly where the item(s) can be archived and then unarchived once attached to the production GroupWise server.

Restore Mode

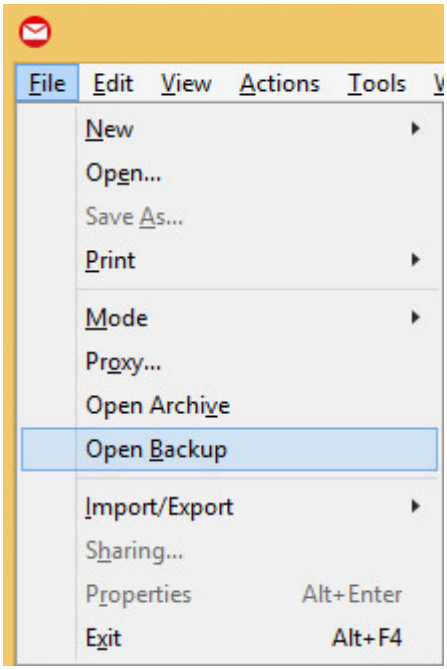
Restore mode uses GroupWise's restore area to allow the user to use the GroupWise client to restore their items.

On the GroupWise Disaster Recovery server

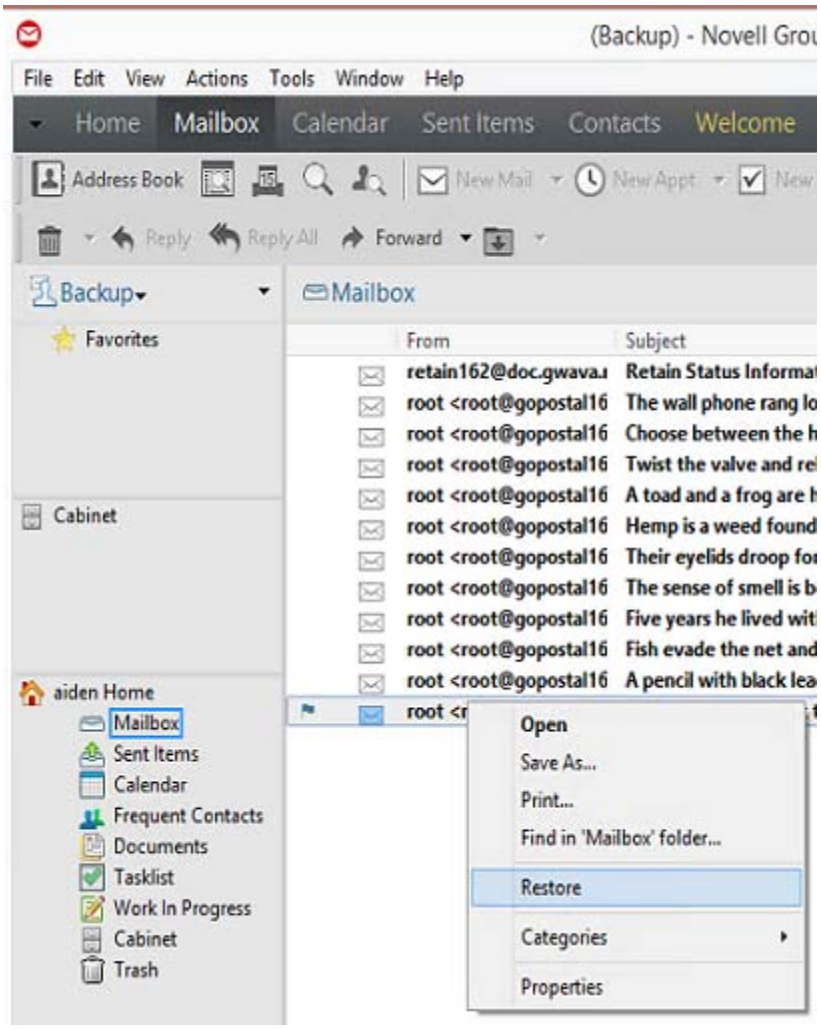
- Load a backup on the GroupWise Disaster Recovery server from a time period where the item existed

On the GroupWise Client Workstation

1. On the user's workstation open the GroupWise client
2. Select "*File* | *Open Backup*". This will show the items on the GroupWise Disaster Recovery POA and *not* available on the production GroupWise server



3. Select the item(s) to be restored
4. Right-click and select "*Restore*"



Access Mode

Access mode has the Client access the GroupWise Disaster Recovery POA directly where the item(s) can be archived and then unarchived once attached to the production GroupWise server.

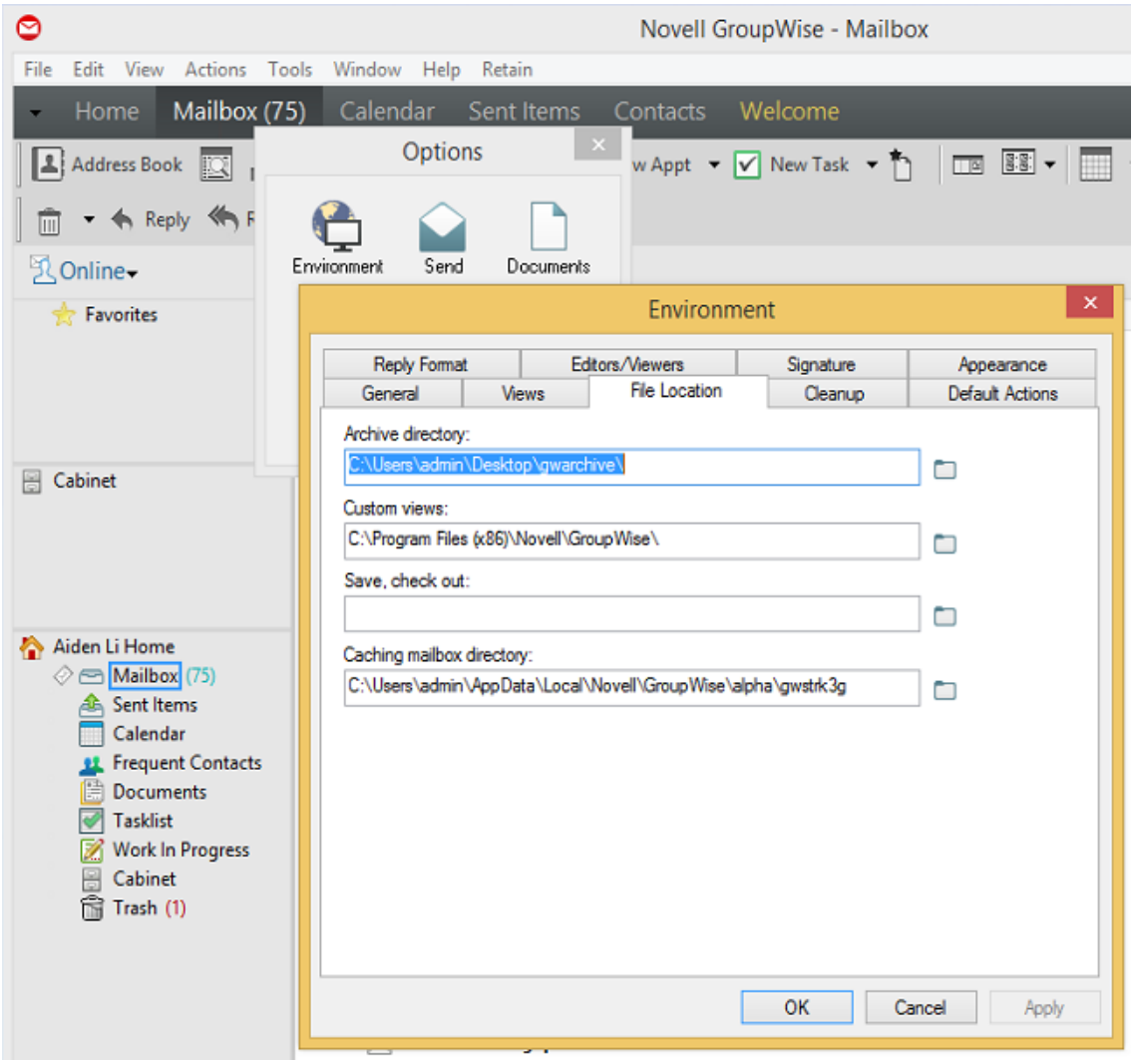
Personal archives must be enabled in GroupWise Administration.

On the GroupWise Disaster Recovery server

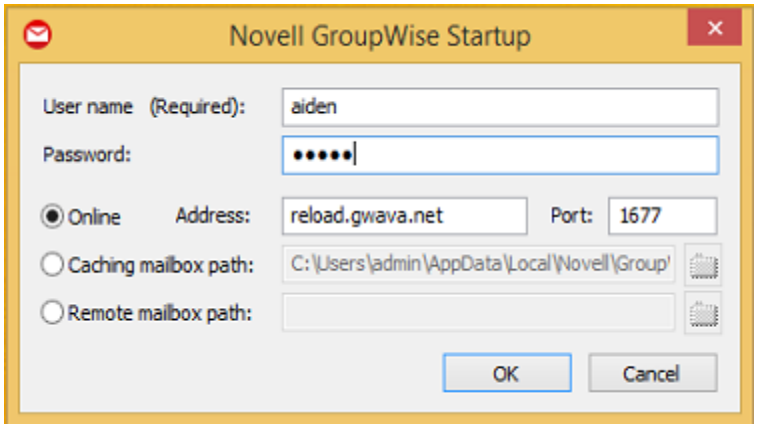
1. If needed, enable the access mode POA in *GroupWise Disaster Recovery Web Administration Console* | *<Profile>* | *Configure* | *User Access to Backups*
2. Load a backup on the GroupWise Disaster Recovery server from a time period where the item existed
3. The address the client must connect to can be found in the *GroupWise Disaster Recovery Web Administration Console* | *<Profile>* | *Backups tab* | *GroupWise Client Access to GroupWise Disaster Recovery Backups*

On the GroupWise Client Workstation

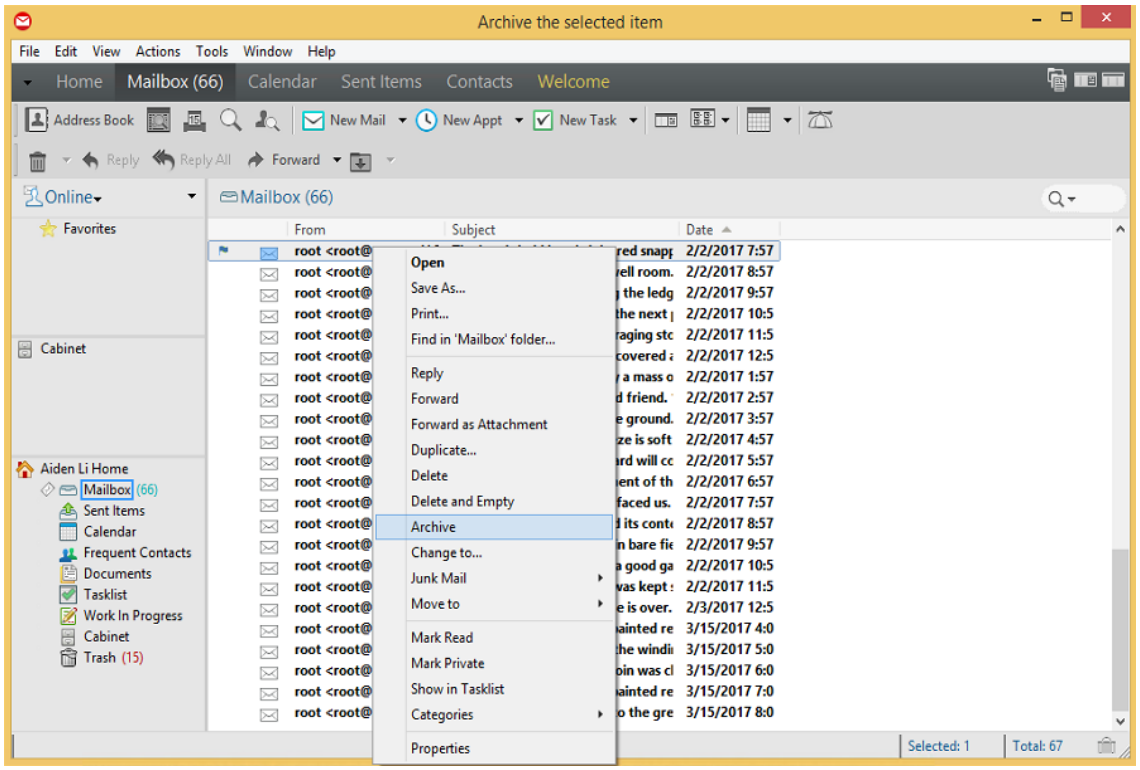
1. An archive directory must be set in *GroupWise Client* | *Tools* | *Options* | *Environment* | *File Locations* | *Archive Directory*



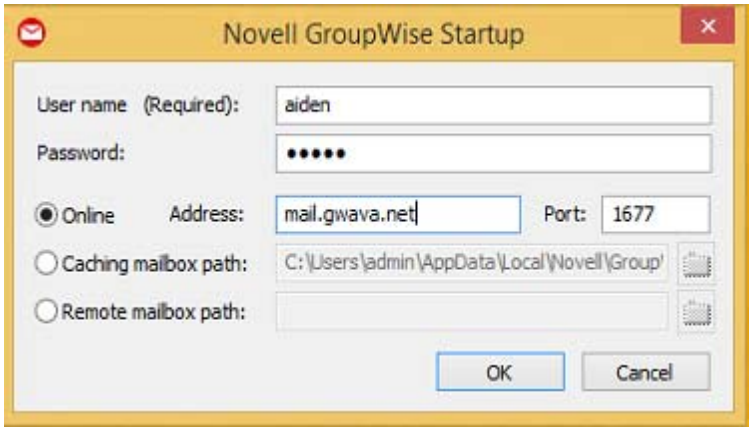
2. Open the GroupWise client and connect to the POA on the *GroupWise Disaster Recovery server*



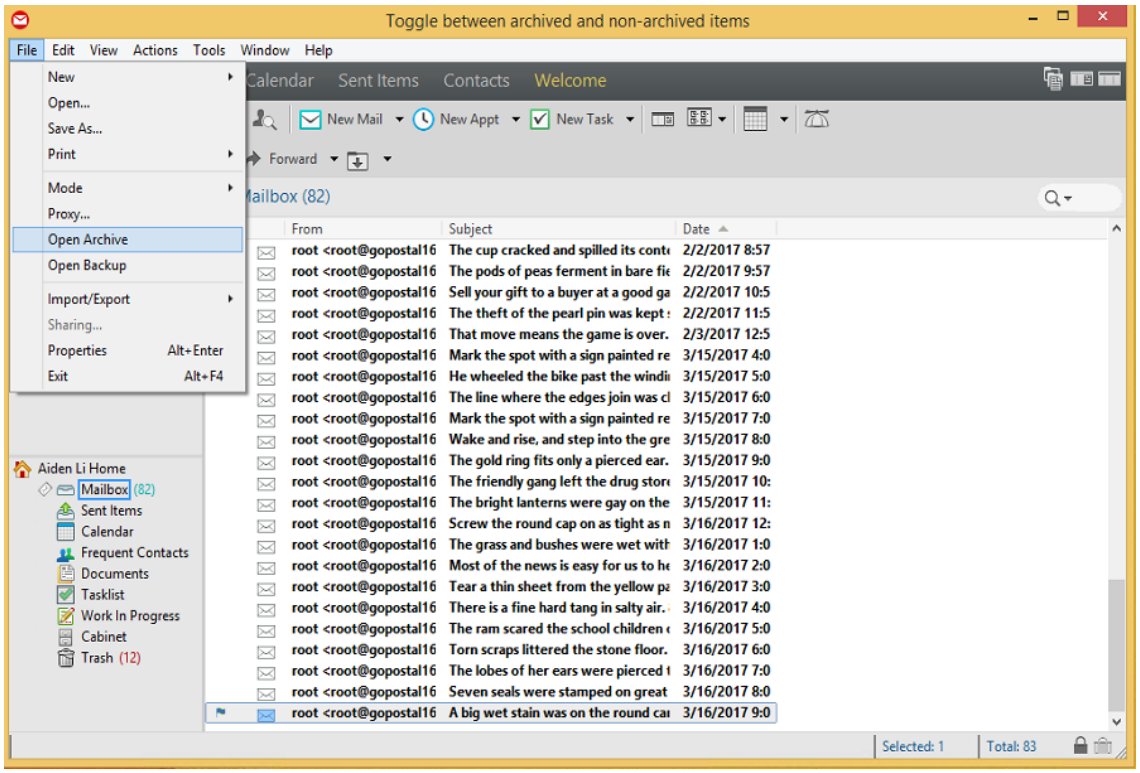
3. Right-click on the item and select "*Archive*"



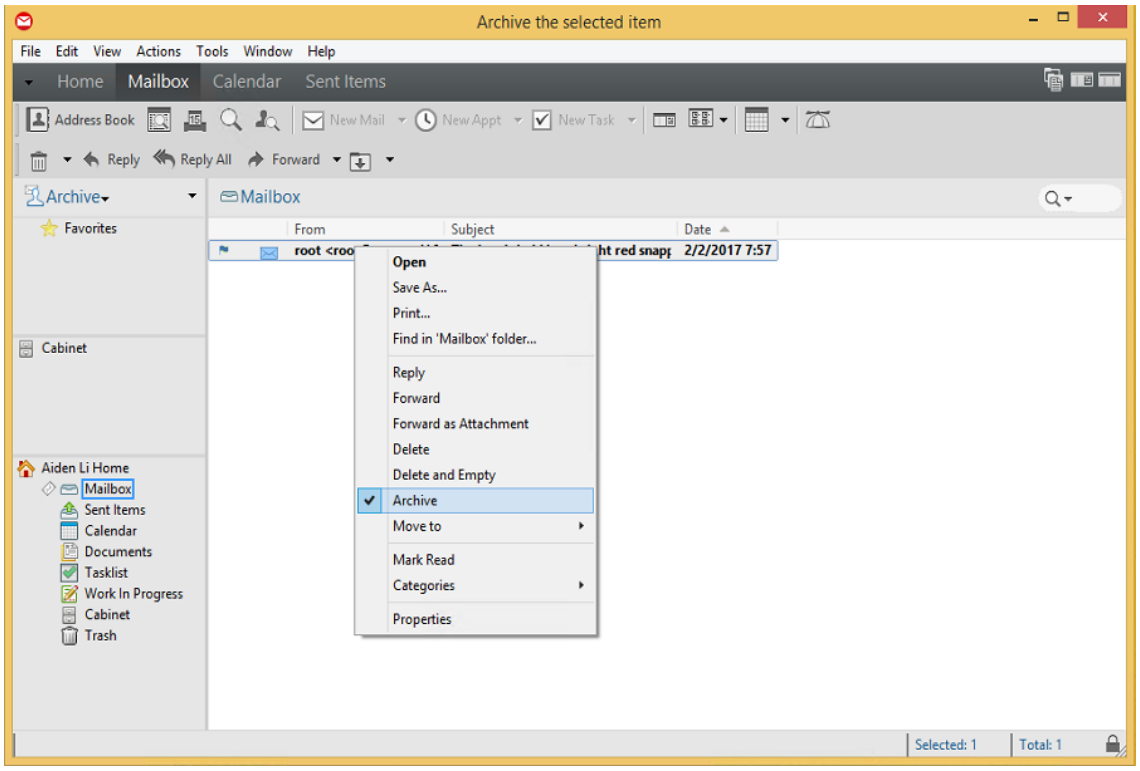
4. *Exit* GroupWise Client
5. Reopen the GroupWise Client and connect to the POA on the *Production GroupWise server*



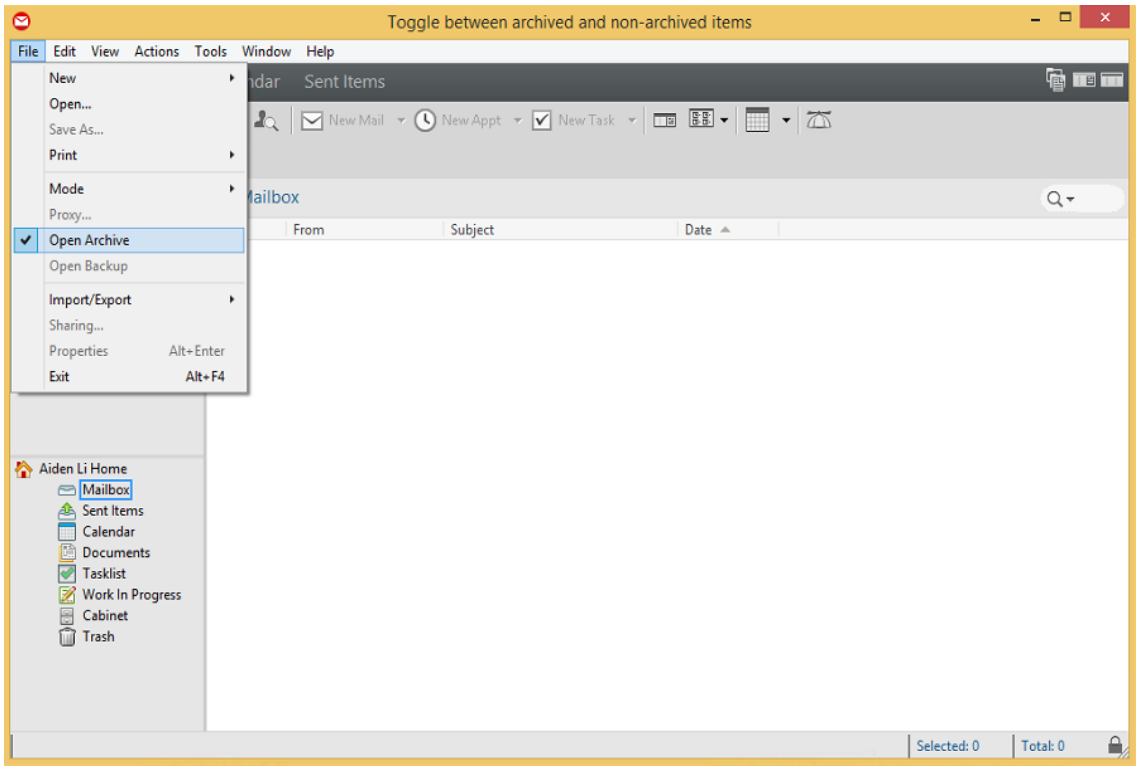
6. Select "*File* | *Open Archive*"



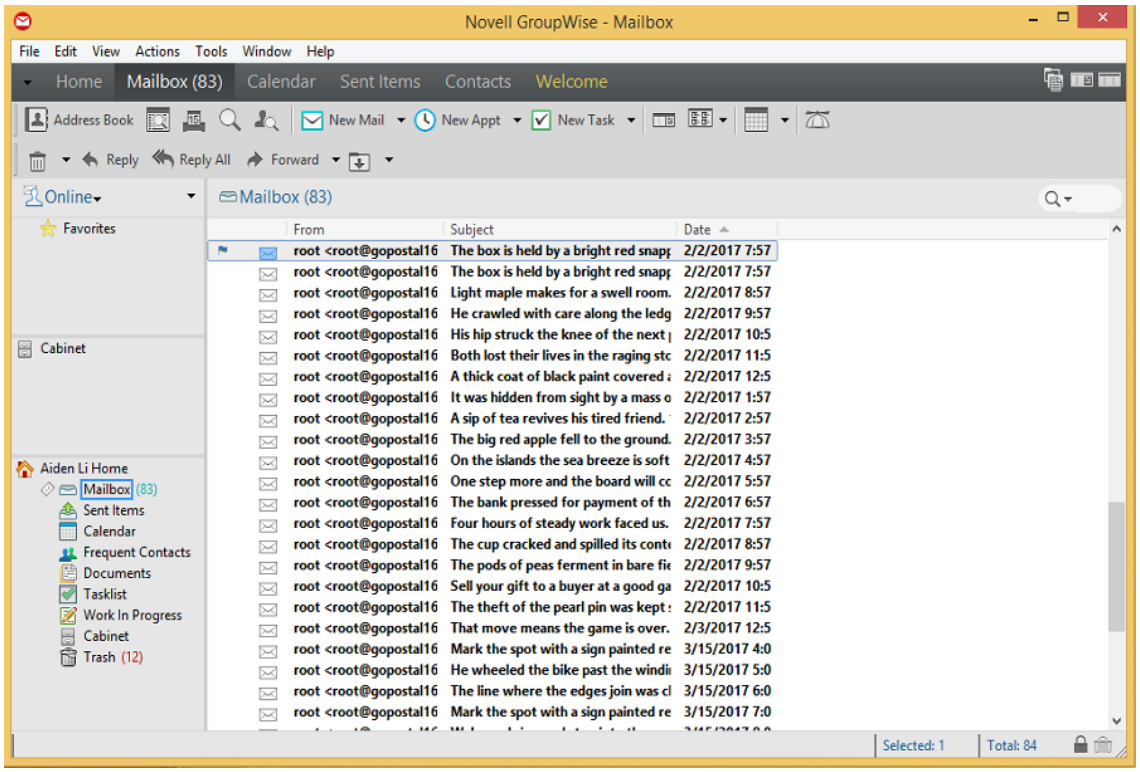
7. Right-click on the item and disable "*Archive*"



8. Select "*File*" and disable "*Open Archive*"



9. The item will appear in the mailbox



Restore a User's Address Book

Address book items can only be restored using Access Mode. The address book includes the GroupWise Address Book, Frequent Contacts, the user's Address Book, &etc.

Access Mode

Access mode has the Client access the GroupWise Disaster Recovery POA directly where the item or items can be archived and then unarchived once attached to the production GroupWise server.

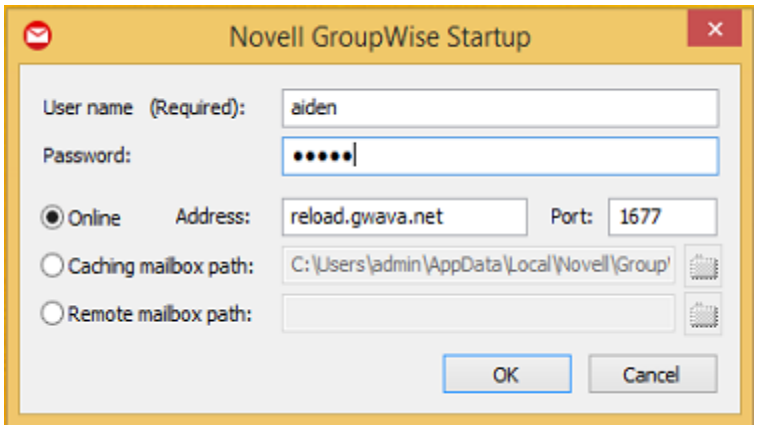
Personal archives must be enabled in GroupWise Administration.

On the GroupWise Disaster Recovery server

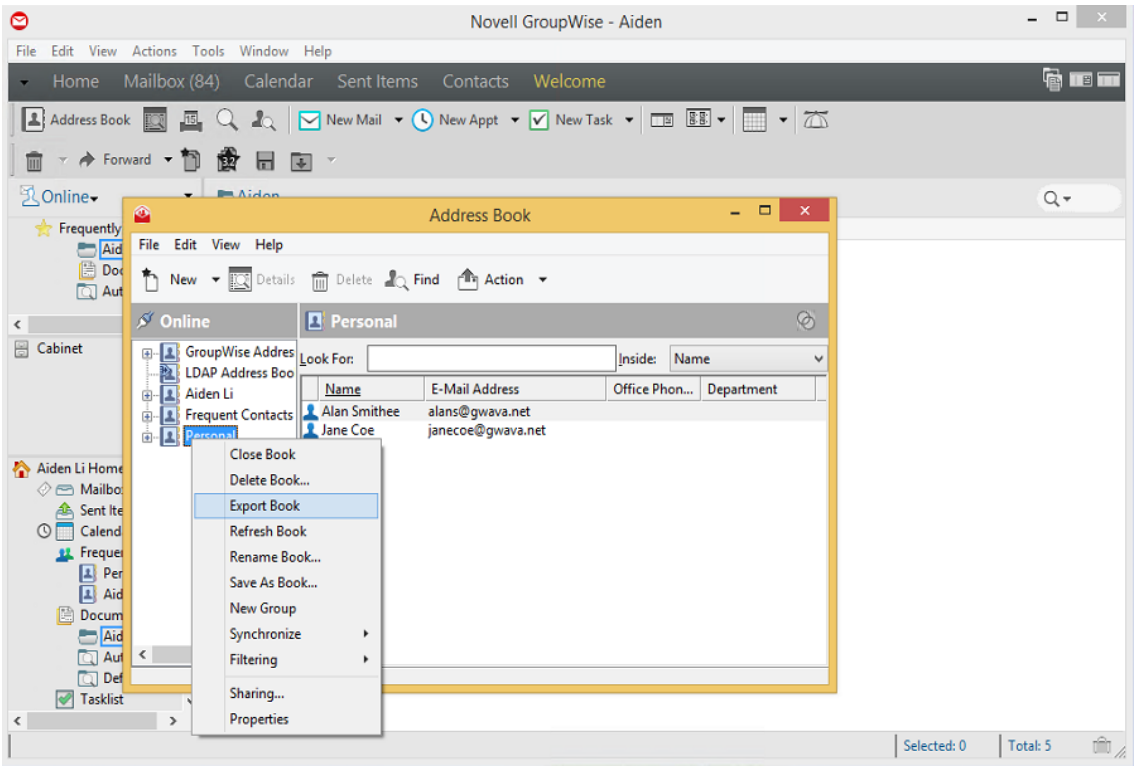
1. If needed, enable the access mode POA in *GroupWise Disaster Recovery Web Administration Console* | *<Profile>* | *Configure* | *User Access to Backups*
2. Load a backup on the GroupWise Disaster Recovery server from a time period where the item existed
3. The address the client must connect to can be found in the *GroupWise Disaster Recovery Web Administration Console* | *<Profile>* | *Backups tab* | *GroupWise Client Access to GroupWise Disaster Recovery Backups*

On the user's GroupWise client

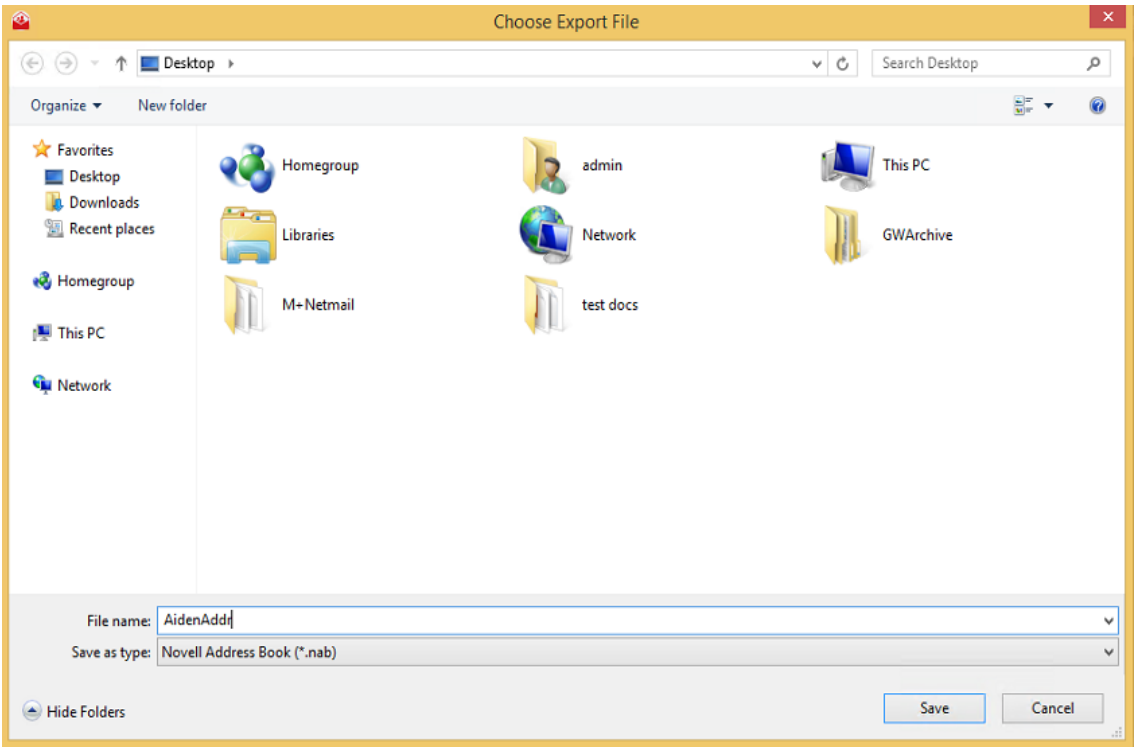
1. Open the GroupWise client and connect to the POA on the *GroupWise Disaster Recovery server*



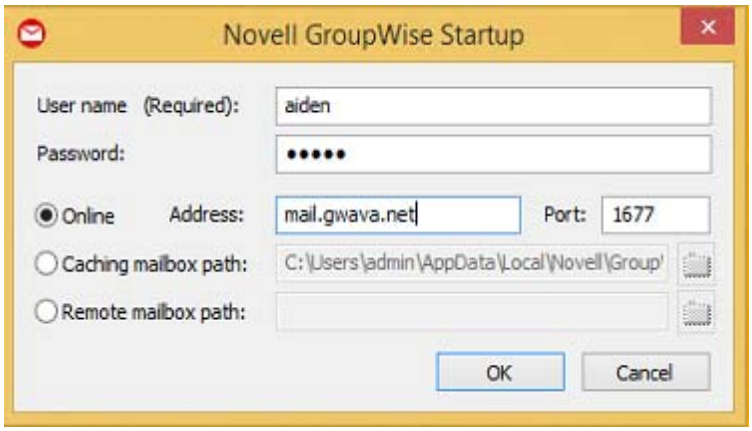
2. Select the contacts to restore or an address book
3. Select "*File* | *Export*"



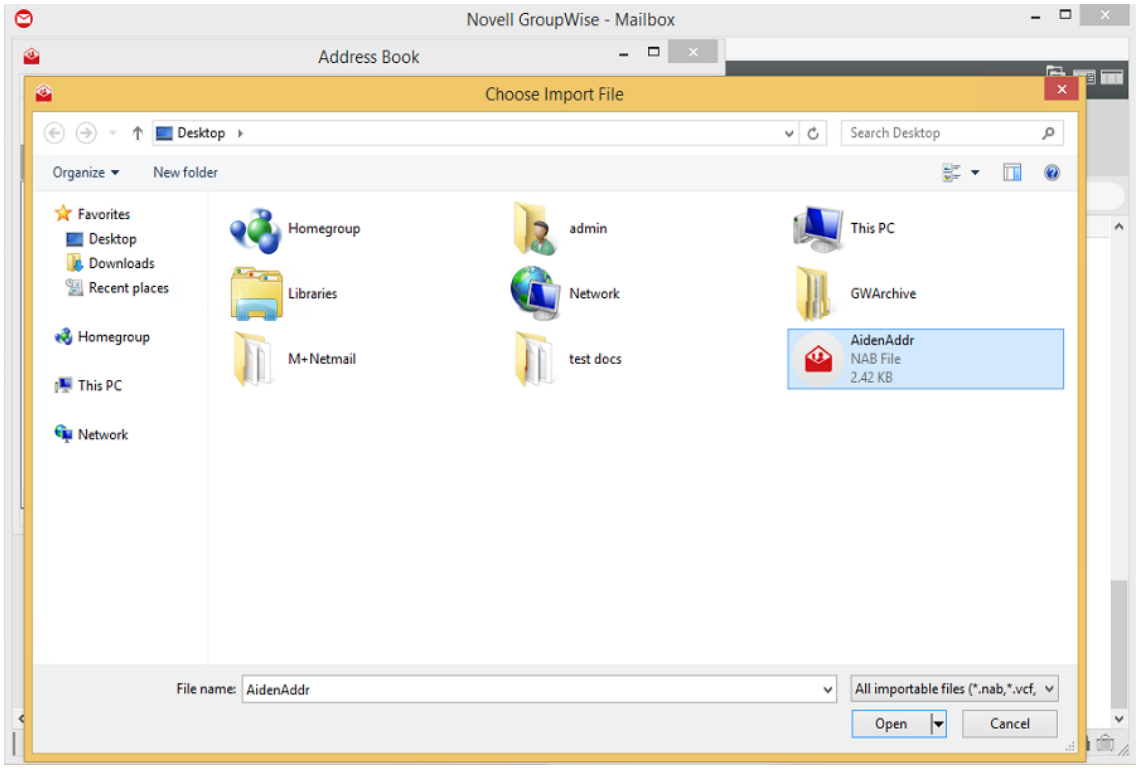
4. Export the items to a local .NAB file



5. Close the client
6. Reopen the GroupWise Client and connect to the POA on the *Production GroupWise server*

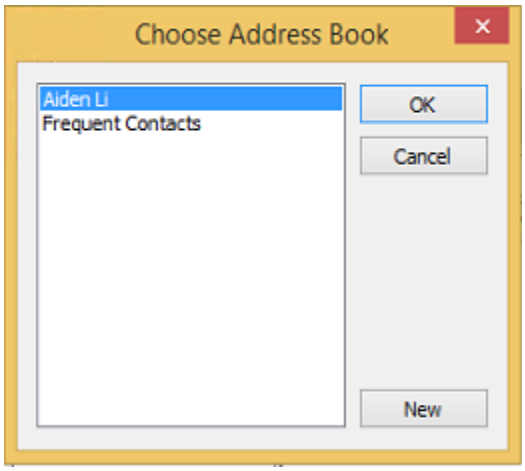


7. Open the address book and select a book
8. Select "*File* | *Import*"



9. Browse to the file and Open it

10. Select the book to import to



Restore a User's Calendar Items

Calendar items can only be restored using Access Mode.

Access Mode

Access mode has the Client access the GroupWise Disaster Recovery POA directly where the item or items can be archived and then unarchived once attached to the production GroupWise server.

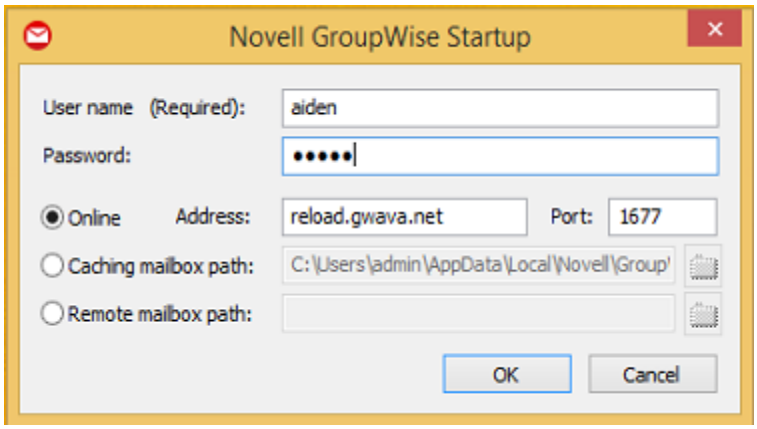
Personal archives must be enabled in GroupWise Administration.

On the GroupWise Disaster Recovery server

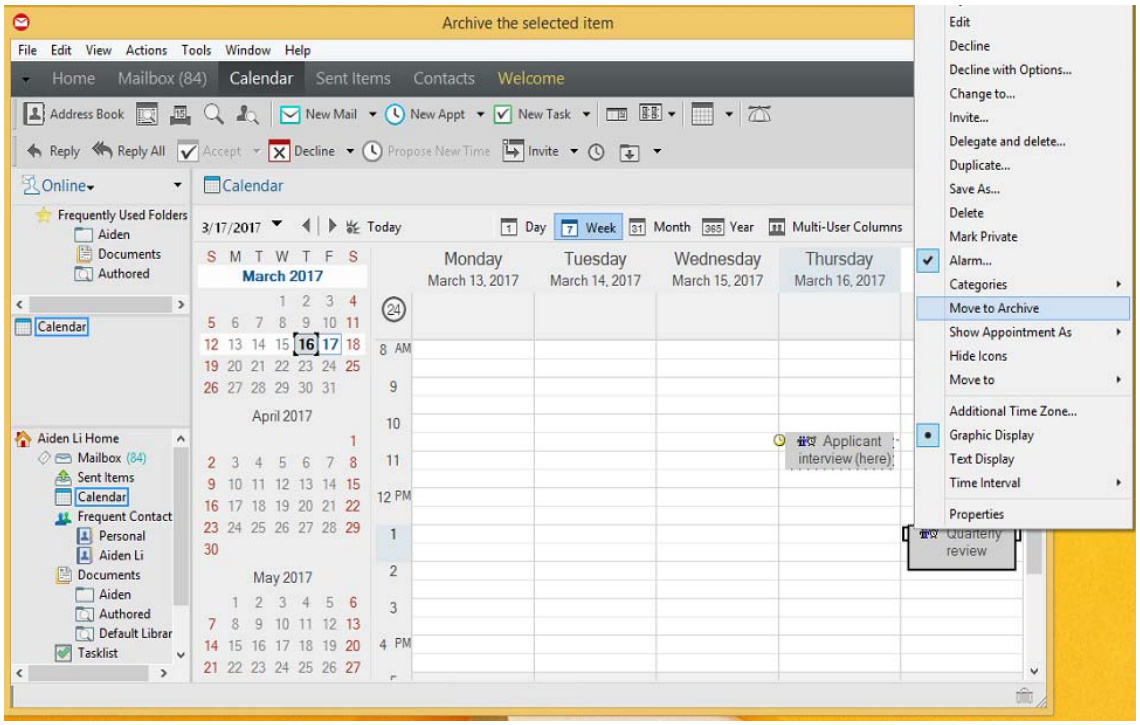
1. If needed, enable the access mode POA in *GroupWise Disaster Recovery Web Administration Console* | *<Profile>* | *Configure* | *User Access to Backups*
2. Load a backup on the GroupWise Disaster Recovery server from a time period where the item existed
3. The address the client must connect to can be found in the *GroupWise Disaster Recovery Web Administration Console* | *<Profile>* | *Backups tab* | *GroupWise Client Access to GroupWise Disaster Recovery Backups*

On the user's GroupWise client

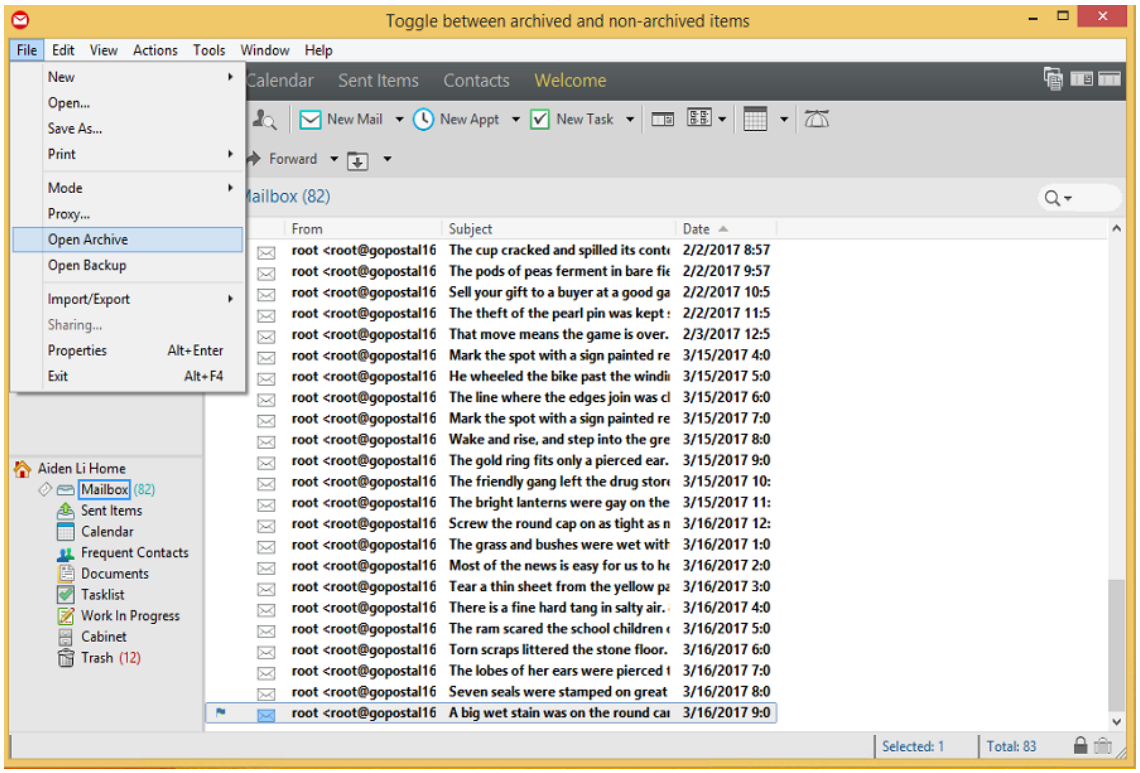
1. Open the GroupWise client and connect to the POA on the *GroupWise Disaster Recovery server*



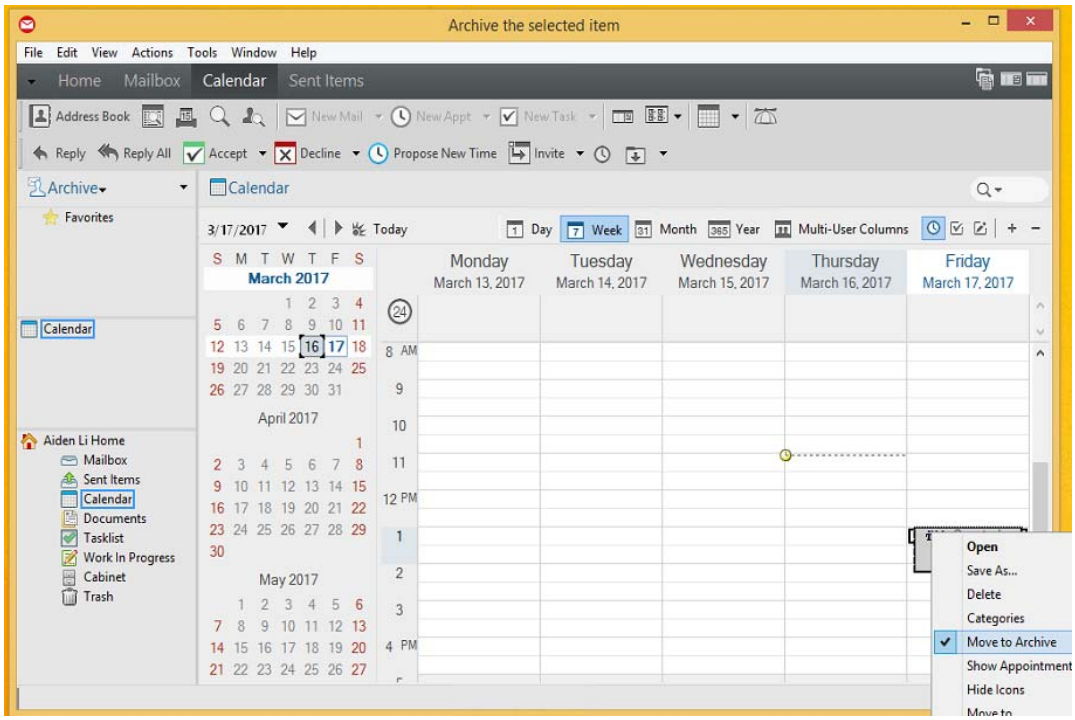
2. Select the calendar item to restore
3. Right-click and select "*Move to Archive*"



4. Close the client
5. Reopen the GroupWise Client and connect to the POA on the *Production GroupWise server*
6. Select "*File* | *Open Archive*"



7. Browse to the item
8. Right-click and select "*Unarchive*"



Restore Documents to Document Management

Document items can only be restored using Access Mode

Access Mode

Access mode has the Client access the GroupWise Disaster Recovery POA directly where the item(s) can be archived and then unarchived once attached to the production GroupWise server.

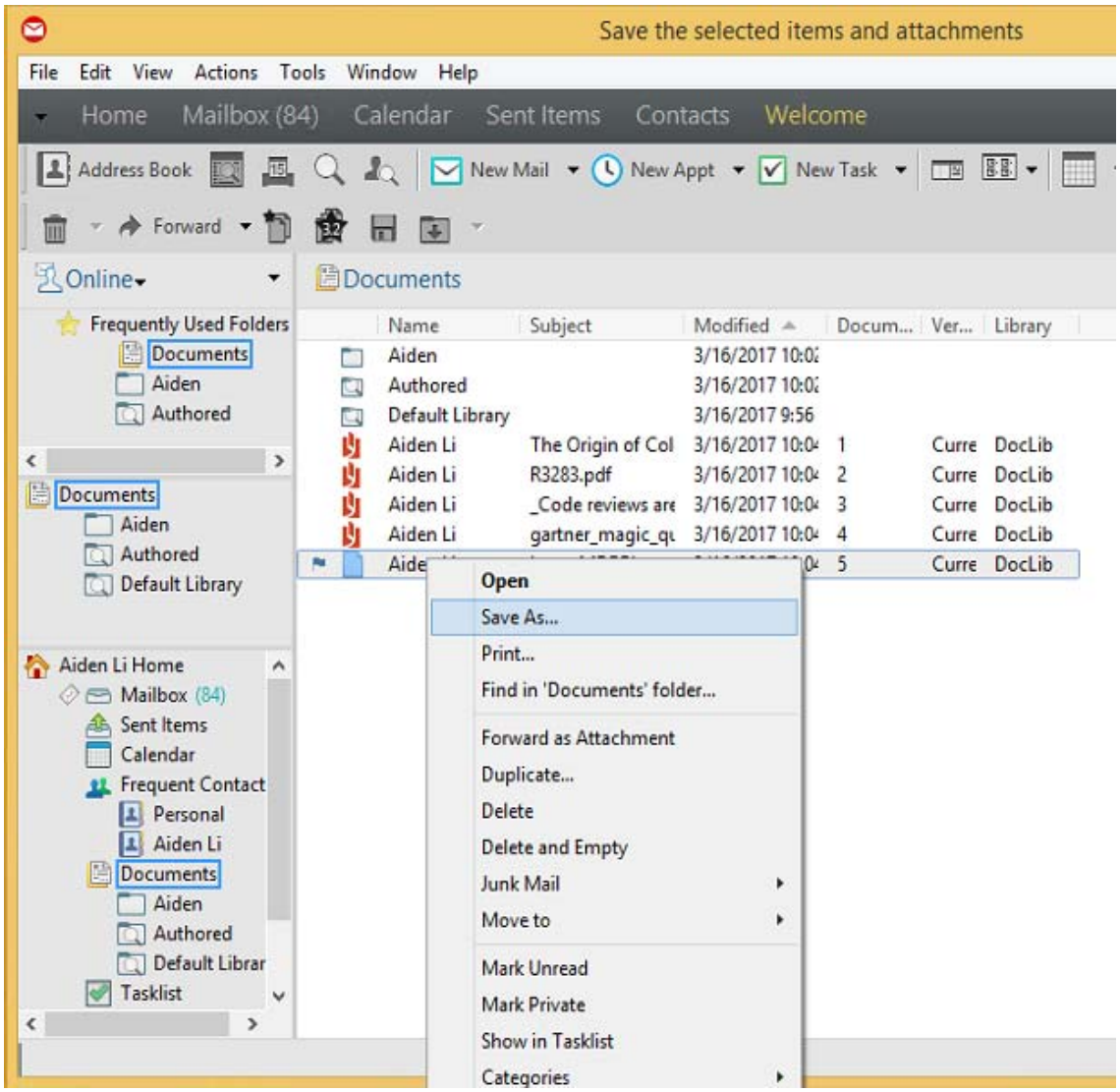
Personal archives must be enabled in GroupWise Administration.

On the GroupWise Disaster Recovery server

1. If needed, enable the access mode POA in *GroupWise Disaster Recovery Web Administration Console* | *<Profile>* | *Configure* | *User Access to Backups*
2. Load a backup on the GroupWise Disaster Recovery server from a time period where the item existed
3. The address the client must connect to can be found in the *GroupWise Disaster Recovery Web Administration Console* | *<Profile>* | *Backups tab* | *GroupWise Client Access to GroupWise Disaster Recovery Backups*

On the user's GroupWise client

1. Open the GroupWise client and connect to the POA on the *GroupWise Disaster Recovery server*
2. Select the document to restore
3. Save to disk



4. Close the client
5. Reopen the GroupWise Client and connect to the POA on the *Production GroupWise server*
6. Re-introduce the document to GroupWise

Restore Deleted User

Occasionally a user and all their items is inadvertently deleted from GroupWise. GroupWise Disaster Recovery can restore the user and their items.

This assumes that the deletion was caught and the user was not recreated in GroupWise Administration, which would create the user with a different FID.

If the user was recreated in GroupWise with a different FID, that user will have to be renamed so the original user can be restored. If that new user has received mail, the mail will need to be forwarded once the restoration is complete.

Prerequisites

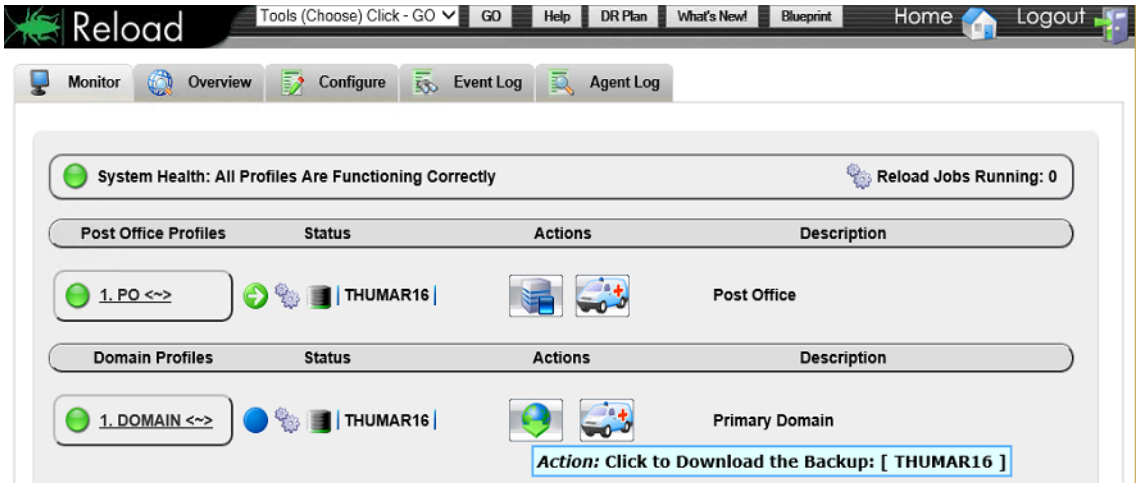
1. GroupWise 2014, or 2014 R2
2. Domain backup
3. Post Office backup
4. Restore Area setup

Download wpdomain.db from GroupWise Disaster Recovery

From the GroupWise server:

Current Domain Backup

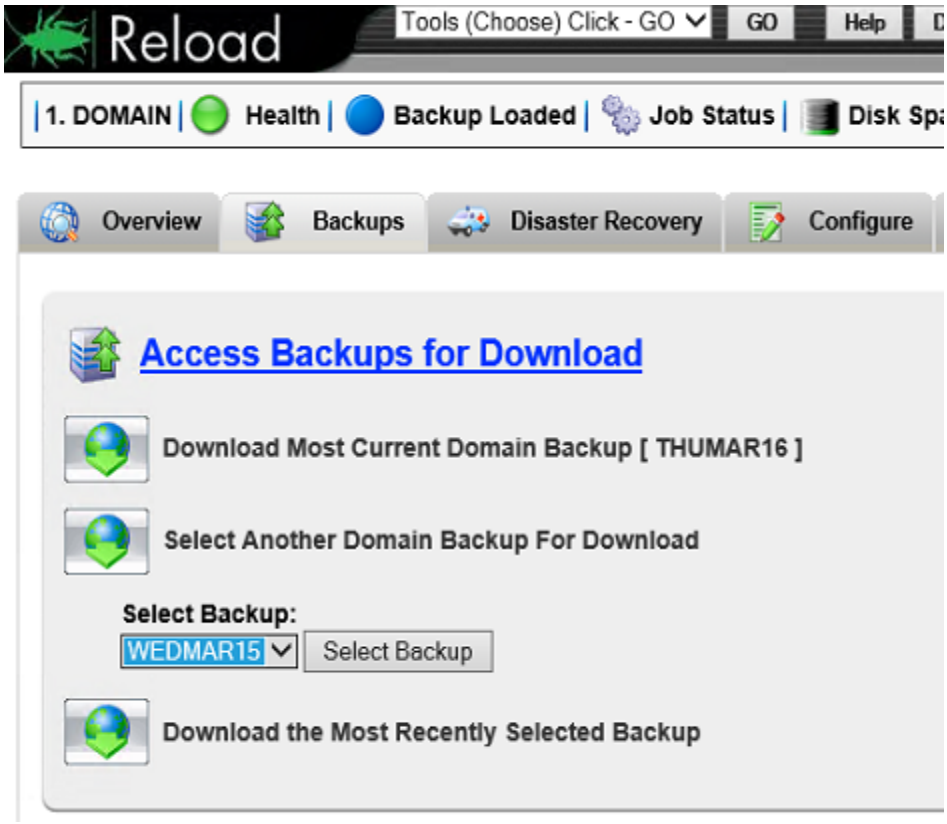
1. Browse to *GroupWise Disaster Recovery Web Administration Console* | *<Profile>* | *Click to Download the Backup* action button



2. Download the ZIP File
3. If not on the GroupWise server, copy the ZIP file to the GroupWise server

Previous Domain Backup

1. Browse to *GroupWise Disaster Recovery Web Administration Console* | *<Profile>* | *Backups tab* | *Select Another Domain Backup to Download*



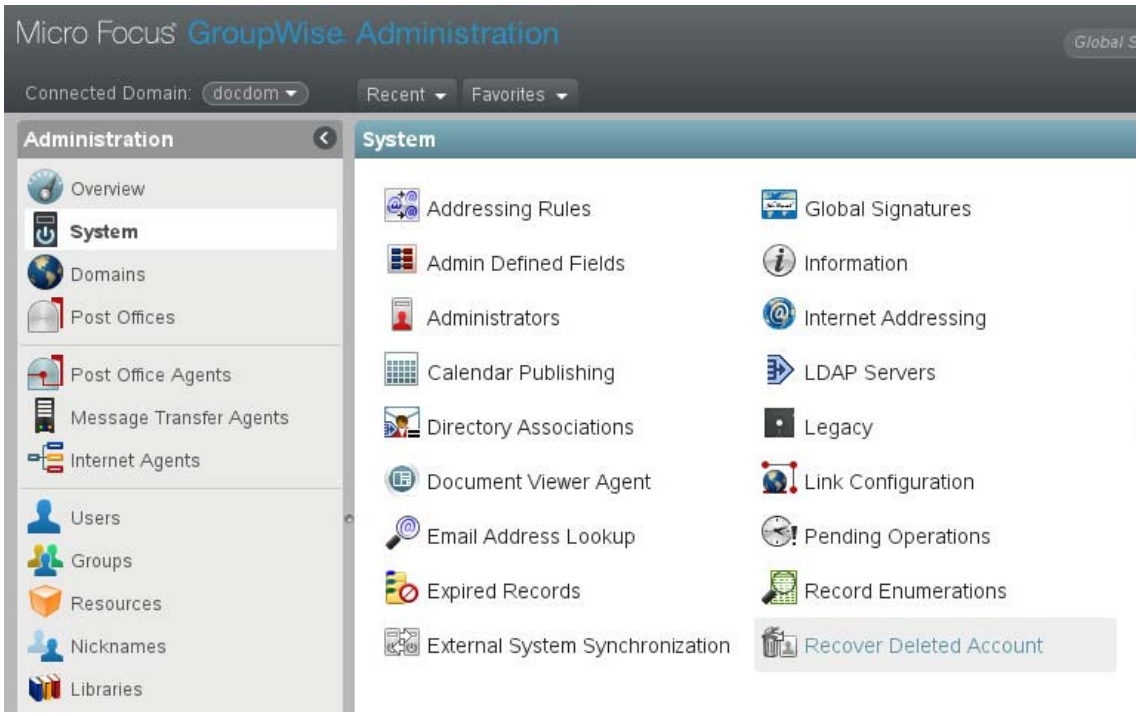
2. Select the Domain backup the user was a part of, press Select Backup, and a new window will appear
3. Wait about 20 seconds for the zip to be created
4. Click on "*Download The ZIP File That Was Just Created*"

5. Download the ZIP File
6. If not on the GroupWise server, copy the ZIP file to the GroupWise server

Restore the User

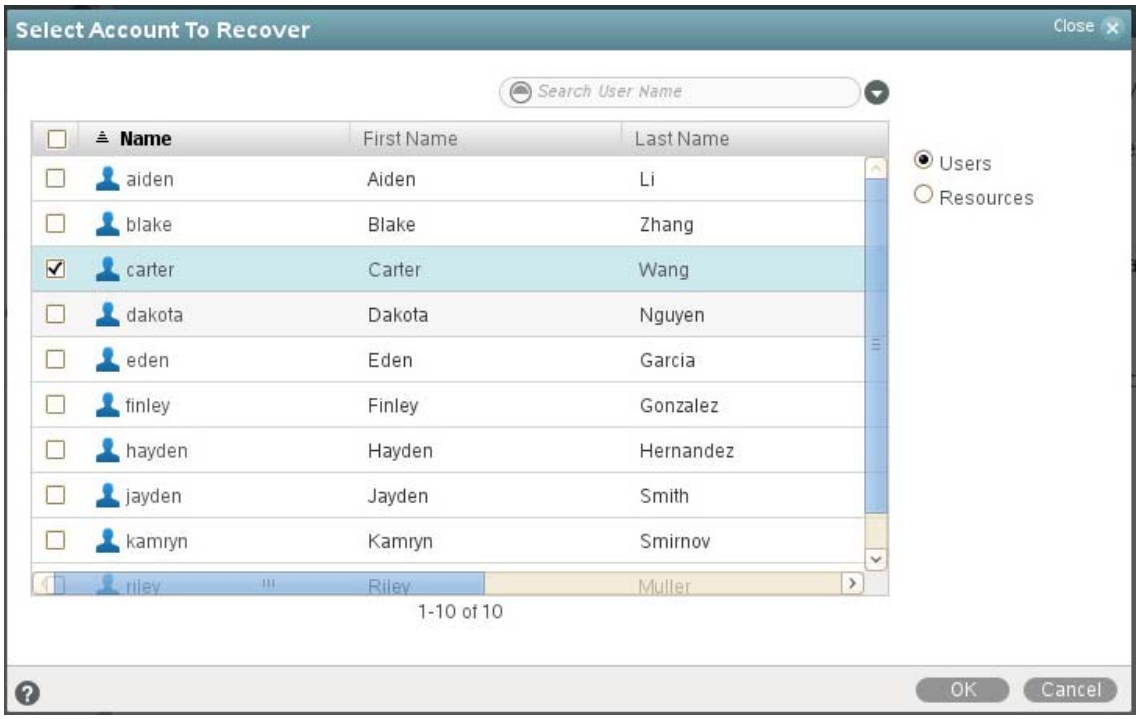
On The GroupWise server:

1. Unzip the wpdomain.db file
2. Browse to *GroupWise Administration* | *System* | *Recover Deleted Account*

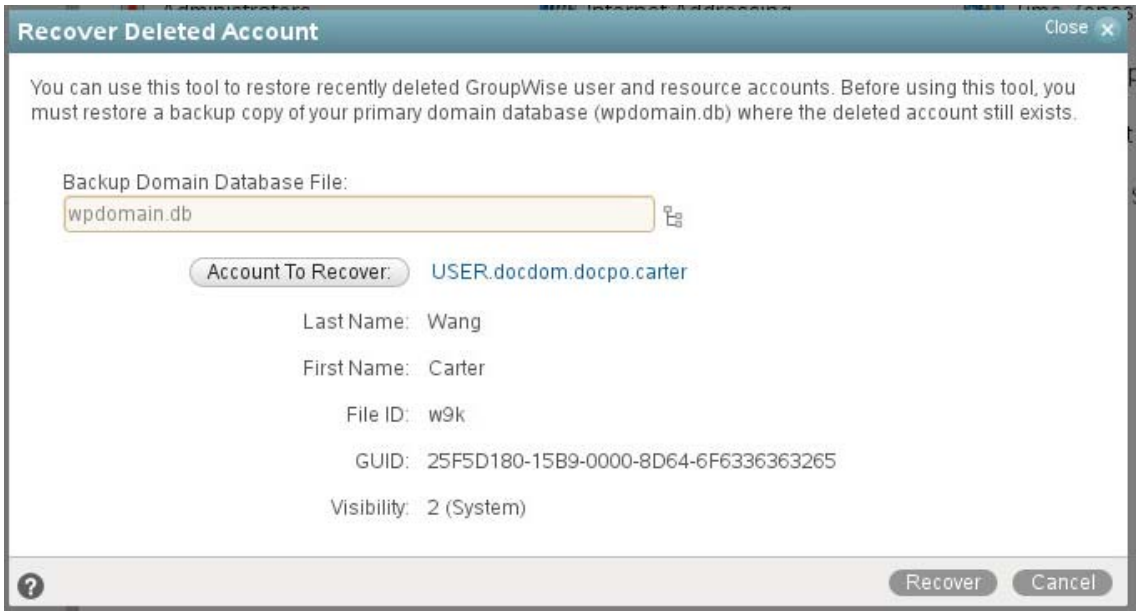


3. Browse to the location of the wpdomain.db file

4. Click on the Groupwise world icon in the section "*Account to Restore*"
5. Select the user to be restored



6. Click Restore



7. Click Done when recovery is complete

Restore All Items

1. Load a backup on the GroupWise Disaster Recovery server from a time period where the user existed
2. Browse to *GroupWise Administration* | *User*| *<Restored User>*

3. Select "*More* | *Restore* | *Yes*"

4. Items will be restored to the mailbox, this will take time depending on the amount of mail and the speed of the system

Restore From a Tape Backup

GroupWise Disaster Recovery can create TAR files for long term storage and can restore from those TAR files if they are made available.

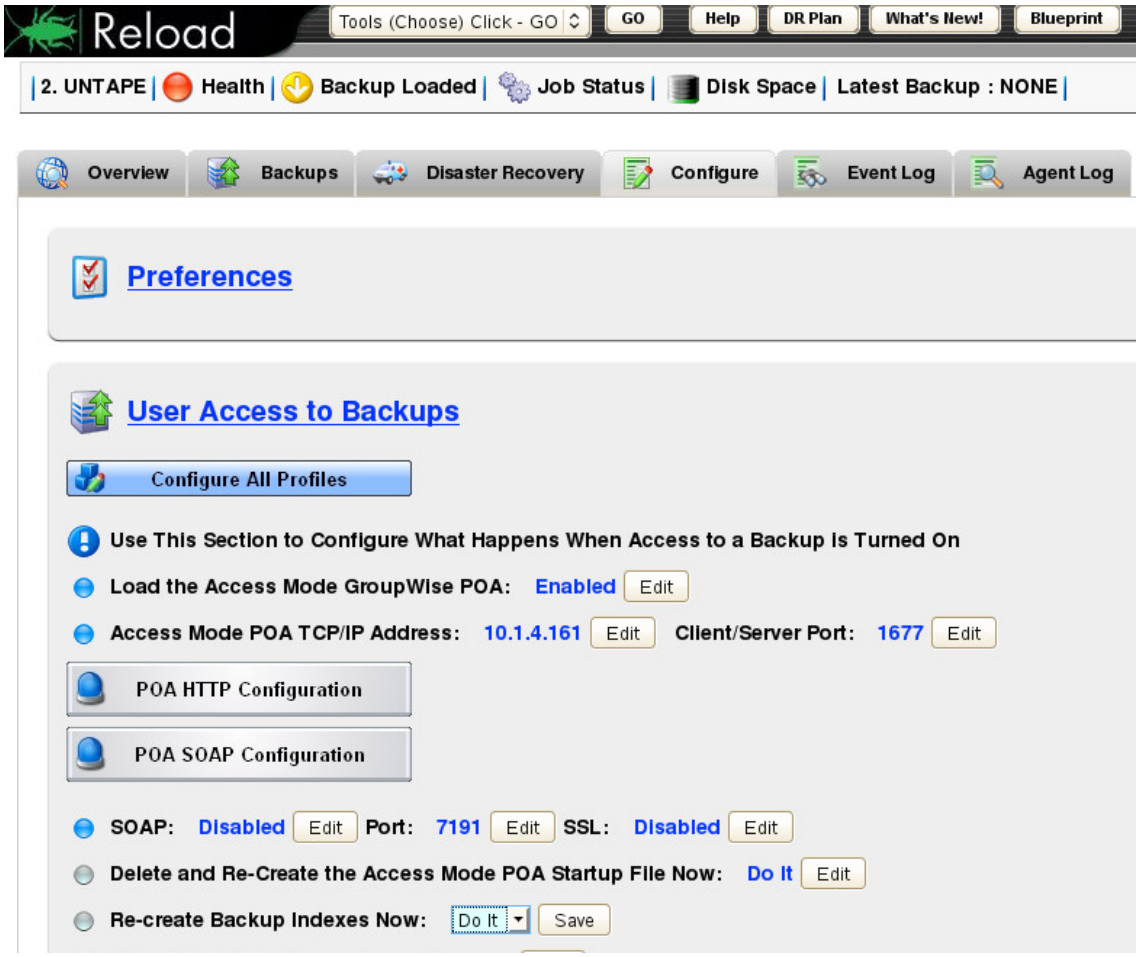
The simplest way to restore items from a tape backup is to create a new profile, copy the backup to the folder of the new profile and connect to the Access Mode POA. This prevents the need to merge BLOB files in an existing profile.

NOTE: Keeping backups frozen for the long term will impact disk space as GroupWise Disaster Recovery will not be able to remove items.

For long term access to data we recommend our Retain (https://www.gwava.com/unified-archiving) archiving product.

On the GroupWise Disaster Recovery Server

1. Increase the number of backups to keep so they are not removed by the cleanup routine (doubling is good) *GroupWise Disaster Recovery Web Administration Console* | *<Profile>* | *Configure*| *Backup Job Settings panel* | *Number of Backups to Keep*
2. Copy the TAR file to the GroupWise Disaster Recovery server
3. Extract the file with the tar command. This will merge the data to the profile as long as it has the same name. If the profile was renamed between the tape backup and the restore then a profile with the old name will need to be created. For example *tar -xf <file.tar> /<GroupWise Disaster Recovery Data Directory>*
4. Browse to *GroupWise Disaster Recovery Web Administration Console* | *<Profile>* | *Configure*| *User Access to Backups panel* | *POA SOAP Configuration section* | *Re-create Backup Indexes Now* | *Do It* and press Save



5. Allow several minutes for the GroupWise Disaster Recovery daemon to scan the directory and add the files
6. Browse to *GroupWise Disaster Recovery Web Administration Console* | *<Profile>* | *Backups* | *Freeze a Backup From Deletion*
7. Browse to *GroupWise Disaster Recovery Web Administration Console* | *<Profile>* | *Backups* | *Turn On Access to Prior Backups*
8. Choose the desired backup and press "*Turn on Access*"

9. Allow the backup to load
10. Connect to the Access Mode POA (Restore_Mail_Items.htm#Access_Mode) and restore the items.

Post Restore Tasks

Once the restore operation is complete the TAR file or files can be removed, extra backups will need to be unfrozen, and number of backups kept reduced to free up space on the GroupWise Disaster Recovery server. Once backups are un-frozen GroupWise Disaster Recovery will remove them during the next backup job.

1. Browse to *GroupWise Disaster Recovery Web Administration Console* | *<Profile>* | *Backups* | *Un-Freeze a Backup (Backups With "_F" Are Frozen)*
2. Reduce the number of backups to keep to normal levels. Default is 14 days. *GroupWise Disaster Recovery Web Administration Console* | *<Profile>* | *Configure*| *Backup Job Settings panel* | *Number of Backups to Keep*
3. Remove old TAR files from the server

7 Disaster Recover Mode

Activating Disaster Recovery mode

If the Production GroupWise server has gone down it is obvious that it isn't coming backup anytime soon, it is time to activate GroupWise Disaster Recovery's Disaster Recovery mode.

This involves enabling Disaster Recovery Failover Mode on the GroupWise Disaster Recovery server and changing the A Record of the post office server on the DNS.

1. Browse to the GroupWise Disaster Recovery Web Administration Console
2. Click on the Post Office profile ambulance to engage *Disaster Recovery Failover Mode*
3. Go to the DNS and *change the DNS A Record IP address* of the post office server to the IP address of the GroupWise Disaster Recovery server
4. Test mail flow with a client
5. *Contact GroupWise Disaster Recovery Technical Support (http://support.gwava.com/) for assistance*

Post Disaster Migration

After the disaster is over you will have data on the GroupWise Disaster Recovery server that does not exist on the GroupWise server. That data will need to be migrated to the GroupWise server.

Pre-migrate Data

1. Run the migration tool. This gets the messages you sent or received during the DR period back to the production post office. This can only be done from the GroupWise Disaster Recovery administration console.

   1a. *Recovery* | *POST OFFICE PROFILE* | *[post office]* | *Migrate*

   1b. Start at "Step #1" - highlight it and press ENTER to begin the pre-migration process.

   1c. After Step 1 has completed, have the users exit the client and press ENTER on "Step #2". This takes you to the Disaster Recovery POA Settings menu. Go to "Unload" and press ENTER. This unloads the DR POA but leaves GroupWise Disaster Recovery in disaster recovery mode.

   1d. Once Step 2 has completed, go back to the migration menu and initiate Step #3 (full migration). Wait until this process has completed before moving to the next task (turning off DR).

Revert to Normal Mode

1. Turn off Disaster Recovery (click on the ambulance button from the web interface).
2. Verify that GroupWise Disaster Recovery has properly re-enabled your backup schedules and that the DR POA has unloaded.
3. Change the DNS A record for the production POA. It should now reflect the IP address of the actual post office or live POA.

Migrate Final Data

1. Load the production post office POA.

- If running GroupWise 2014 or higher on Linux, there is a script for restoring all mail:

A script was created by GWAVA with the assistance of Micro Focus that makes merging two versions of a post office very simple. This script requires the version of GroupWise to be GroupWise 2014 or higher.

1. Set up a Restore Area that uses the GroupWise Disaster Recovery server, see the GroupWise Disaster Recovery configuration documentation for more details
2. Use the GroupWise Restore Script (gwrestore.sh) [http://reload.gwava.com/gwrestore.sh] script
3. Make sure to modify the Variables section of the GroupWise Restore Script

   ---

   NOTE: If you modify the script on a Windows machine, to convert the script to Linux format use the "dos2unix" command on the Linux server once it is saved on the Linux server. Example:

   ```
   dos2unix  gwrestore.sh
   ```
4. Make the gwrestore.sh script executable:

   ```
   chmod 777 gwrestore.sh
   ```
5. Run the gwrestore.sh script

   ```
   ./gwrestore.sh
   ```
6. The GroupWise Restore Script tells the GroupWise system to create a restore request for each user in the post office specified in the variable section of the script.
7. The GroupWise POA then looks inside of the message store in the GroupWise Restore Area associated with the GroupWise Disaster Recovery server, and brings across any mail items on the version of the post office on the GroupWise Disaster Recovery Server into the message store on the GroupWise post office.

8 Logs

GroupWise Disaster Recovery logs what it does to make troubleshooting easier.

GroupWise Disaster Recovery Web Console

The GroupWise Disaster Recovery Web Console has tabs to display the most recent entries of the Event, Agent and, if installed, the Blueprint logs. There are also links to the day's full logs as well as the Daemon, Error and Audit logs

For support purposes, GroupWise Disaster Recovery will create a single zip file of all the logs which can be downloaded from the GroupWise Disaster Recovery Web Administration page:

- Browse to GroupWise Disaster Recovery Web Administration
- Select "Tools | Download Logs | GO | "Download The RELOAD SUPPORT.ZIP File"

Command line

Alternatively, the log files may found on the GroupWise Disaster Recovery server in:

```
/opt/beginfinite/reload/logs
```

```
/opt/beginfinite/reload/save
```

```
/opt/beginfinite/reload/support/reload_support.zip
```

Details

There are a number of logs: found in /opt/beginfinite/reload/logs

EVENT.LOG = General logging.

AGENT.LOG = Detailed log file of all GroupWise Disaster Recovery activity.

ERROR.LOG = Error state reported to the system. The error that occurred and its time stamp

MONITOR.LOG = GroupWise Disaster Recovery version and build, license information, profile names, Groupwise agent version, and other general GroupWise Disaster Recovery configuration information.

DAEMON.LOG = Checks for jobs, generating the diagnostic log, and the support (reload_support.zip) log file.

DIAGNOSTICS.LOG = Server statistics like kernel version, disk space, processor, memory, NIC, resolv.cfg, hosts, and fstab.

<profile>.EVENT.LOG = Contains almost all of the data that is in the event.log that is specific to the profile.

<profile>.AGENT.LOG = Contains almost all of the data that is in the agent.log that is specific to the profile.

*.TEST.LOG = test connectivity, rights, enables profile, and lists what OS the GroupWise is installed on.

UPGRADE.LOG = Upgrade process activity.

AUDIT.LOG = Record of all actions.

9 Blueprint

Blueprint for GroupWise Disaster Recovery version 1.6 Overview

Blueprint for GroupWise Disaster Recovery extracts important business intelligence data from your GroupWise message store by performing in-depth analysis on your GroupWise Disaster Recovery backups.

Driven by customer needs, Blueprint for GroupWise Disaster Recovery plugs directly into your existing GroupWise Disaster Recovery server and leaves your GroupWise system stress-free while delivering timely reports that you can easily analyze and put into action — even on your mobile device or tablet computer.

GroupWise Mail Analysis — Blueprint for GroupWise Disaster Recovery will help you analyze, down to a user level, how much space you need for your message store and for your archive solution.

With Blueprint for GroupWise Disaster Recovery, you can create mailbox usage policies with all of this information and more:

- The cumulative size of all users' mailbox items over X days (90 days, 60 days, etc.)
- The cumulative size of all users' mailbox items under X days (90 days, 60 days, etc.)
- How many and what type of items are in a user's mailbox
- Which users have mailbox storage limits, what the limits are, and how close a user is to their limit

  Reduce Costs — GWAVA Blueprint for GroupWise Disaster Recovery can help you cut your IT costs.
- Identifies inactive users
- Determines client types (full license vs. limited license)
- Assesses clients' GroupWise versions to help assure that all users have upgraded
- Provides the information you need to accurately calculate your GroupWise and archiving storage needs
- Identifies users that are over-using resources

Usable Reporting — Blueprint for GroupWise Disaster Recovery generates navigable HTML reports for each post office and sends them to your email. View and print these reports from anywhere, including iPhones, iPads and Android devices.

Summary Reports — provide at-a-glance information for executive review and quick analysis.

User Analysis Reports — lets you drill down by each user and provide action items for follow-up. View mailbox limits, usage, item types, activity, license and version information and more.

Spreadsheet Reports — Blueprint for GroupWise Disaster Recovery generates *.CSV files with all of the information in the HTML reports, and much more. These *.CSV files can then be pulled into a spreadsheet application so you can sort and manipulate the data, making it easy to analyze and localize the data.

Simply Usable — Blueprint for GroupWise Disaster Recovery e-mailed reports are friendly to all platforms and configurations. If you want to share mailbox size information with a particular user, just click on the user's name within the Blueprint report, and a mail message will open up with the user's mailbox size information in the message body.

Intended Audience

This manual is intended for IT administrators in their use of Blueprint or anyone wanting to learn more about Blueprint. It includes installation instructions and feature descriptions.

Installation

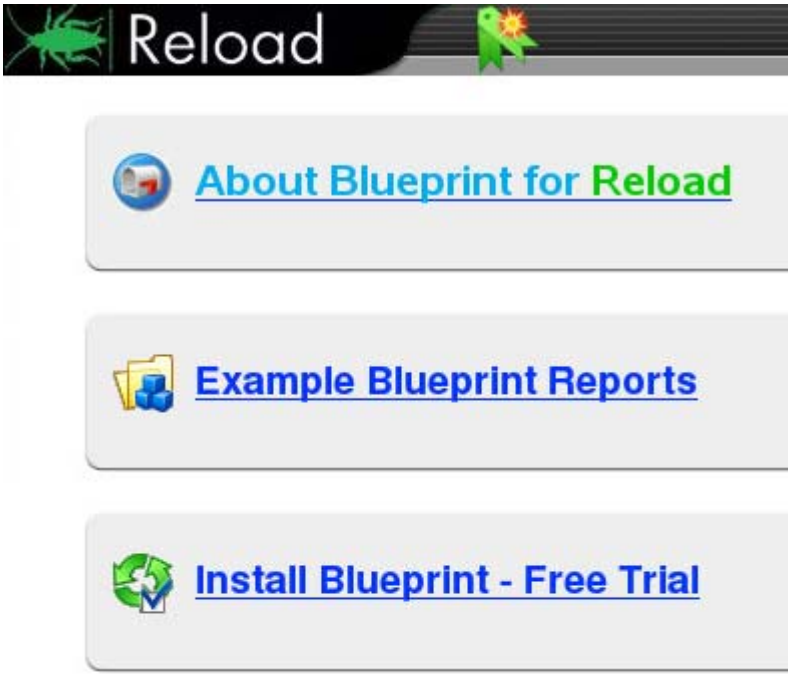
Blueprint comes with every installation of GroupWise Disaster Recovery, but will not be installed by default. It can be downloaded (http://download.gwava.com/download.php?product=Blueprint&version=current) separately.

As it is a separate product, Blueprint requires a separate "Licensing" on page 186.

Installation

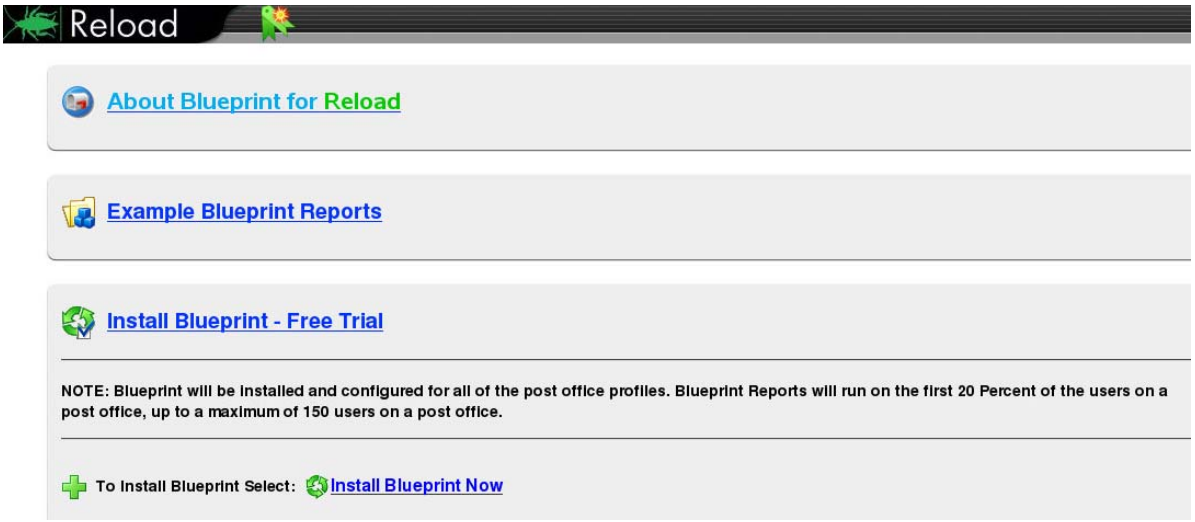
Install Blueprint by clicking the Blueprint button on the top navigation bar of the GroupWise Disaster Recovery Web Administration page.

This will open a new tab.

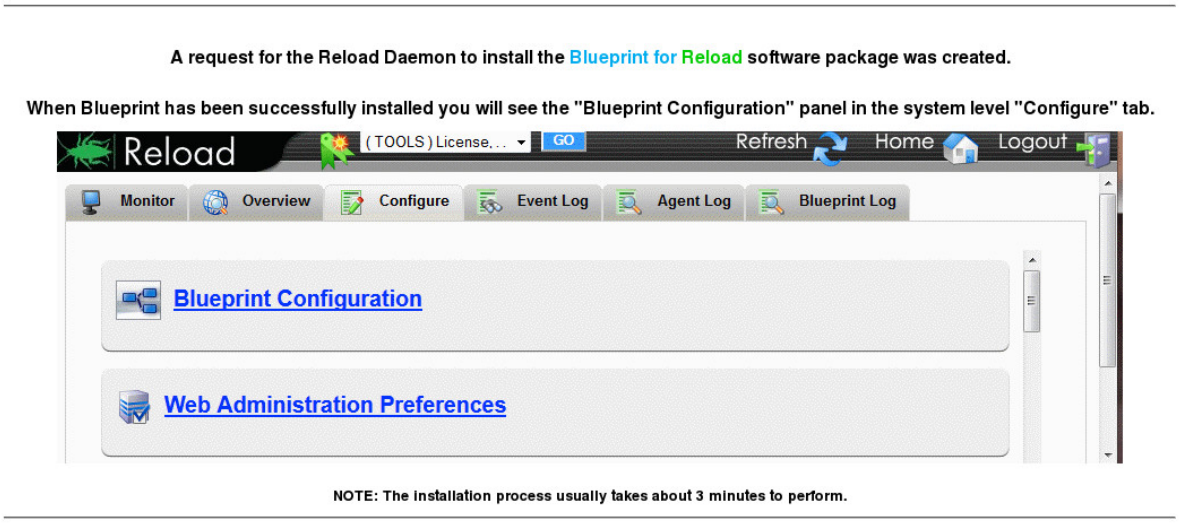


You may open each panel for more information.

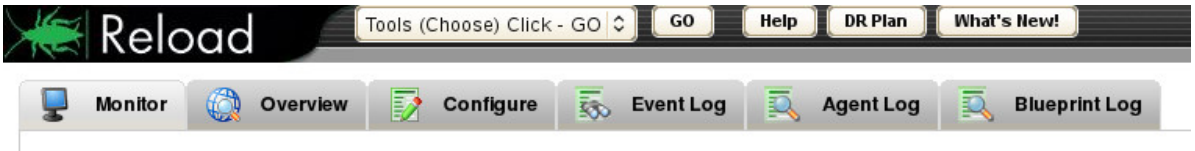
- **About Blueprint for GroupWise Disaster Recovery** provides bulletpoints on the benefits of Blueprint
- **Example Blueprint Reports** provides fictitious example reports to show you how it looks
- **Install Blueprint - Free Trial** allows you to install Blueprint with a 30-day free trial license



Select *Install Blueprint Now*, a new tab will open as a request to the GroupWise Disaster Recovery daemon to install Blueprint is sent. It will take a short time for Blue to be installed.



The installation will be complete when the Blueprint Log tab appears.



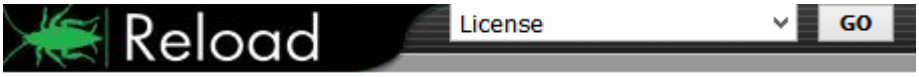
Licensing

Blueprint comes with a 30-day free trial period, once the trial period is over reports will no longer be created.

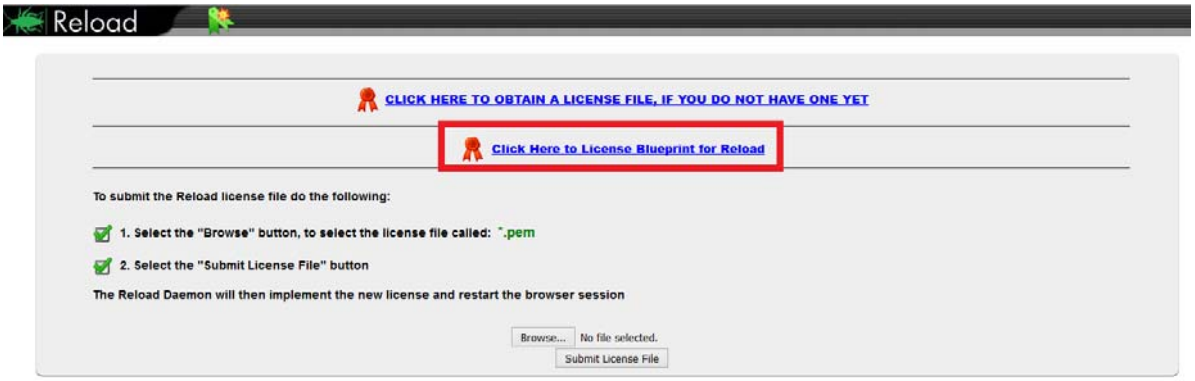
To license Blueprint talk to your sales representative for a validation key

Enter the validation key at licenses.gwava.com (https://licenses.gwava.com/) to download your license PEM file

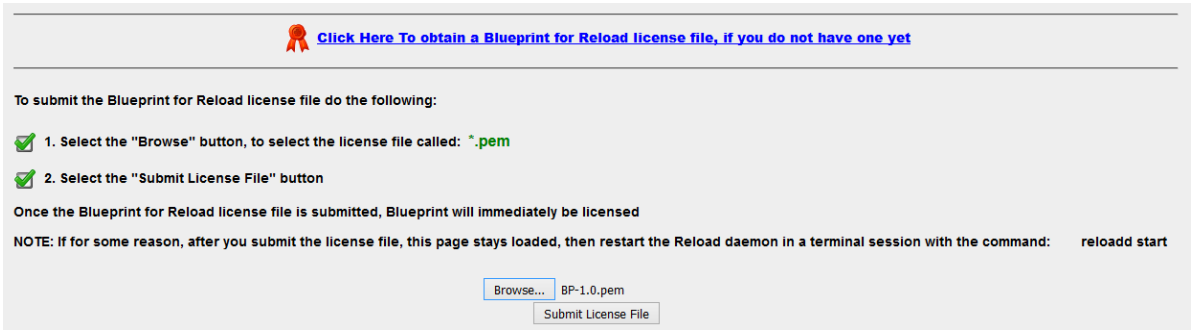
Browse to the GroupWise Disaster Recovery Administration Console and select License from the top navigation bar drop-down menu and press Go



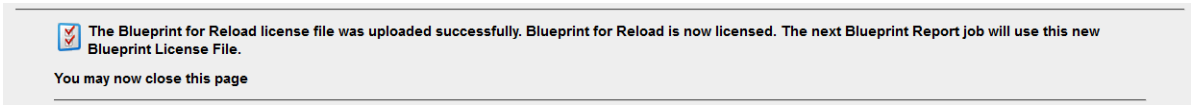
Select *Click Here to License Blueprint for* GroupWise Disaster Recovery this will open a new tab



Browse to the location of the PEM file and Submit the license file



The license will be uploaded successfully



Upgrading Blueprint

Blueprint will check for upgrades every 3 days. It will download a small manifest file to determine if there has been a version change and if so it will download and install the update.

If the GroupWise Disaster Recovery server does not have access to the internet then the update can be downloaded from http://download.gwava.com/download.php?product=Blueprint&version=current

Copy the file to the GroupWise Disaster Recovery Server and place in

```
/opt/beginfinite/blueprint/upgrade
```

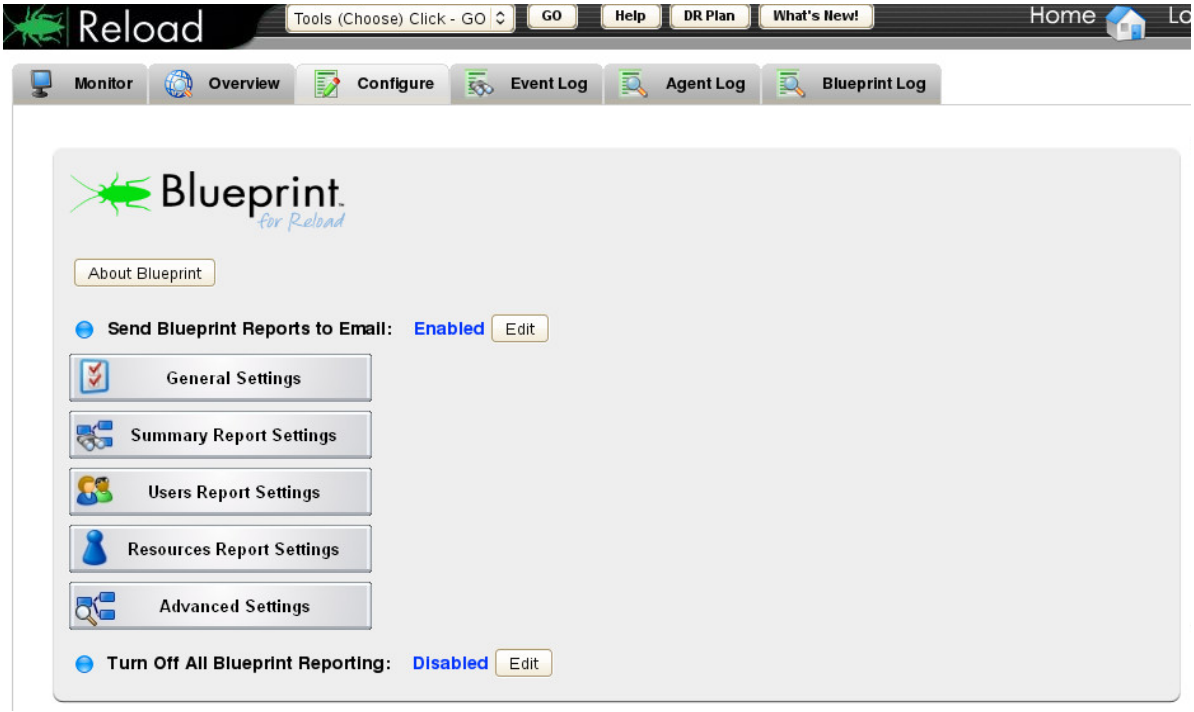
At a command prompt, type:

```
blueprint upgrade
```

Configuration

Once Blueprint has completed installation, it needs to be configured.

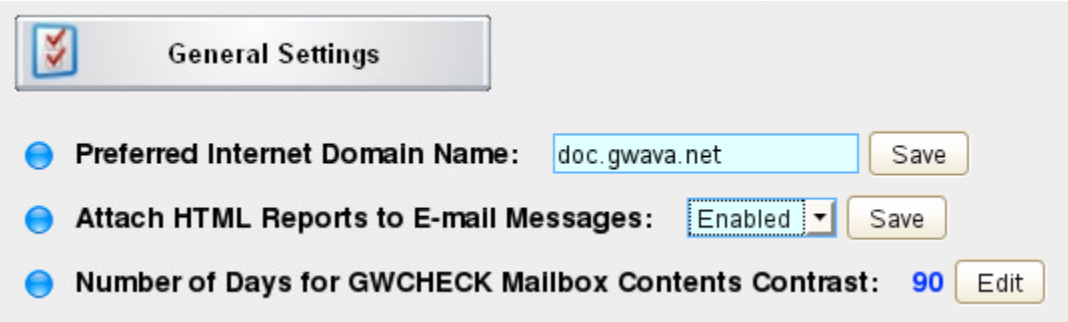
Select the Configure tab and open the Blueprint panel.



General Settings

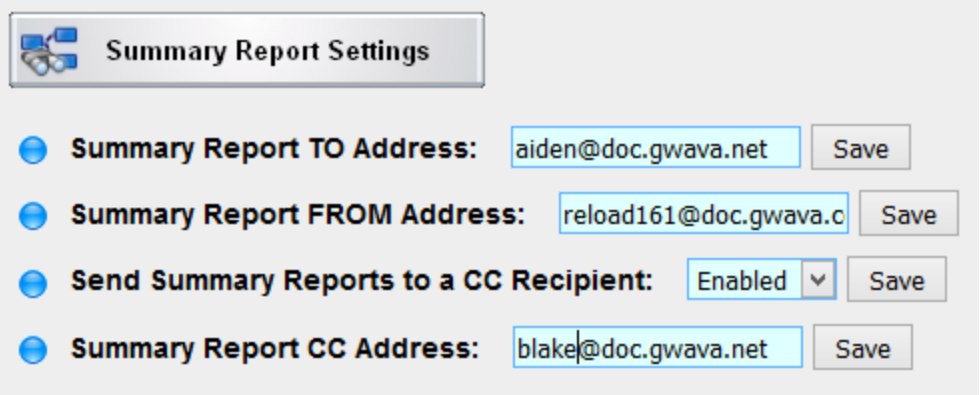
1. Set your *Preferred Internet Domain Name* to your email system
2. You may enable *Attach HTML Reports to E-mail Messages*

3. *Number of Days for GWCHECK Mailbox Contents Contrast* is set to 90 days, by default



Summary Report Settings

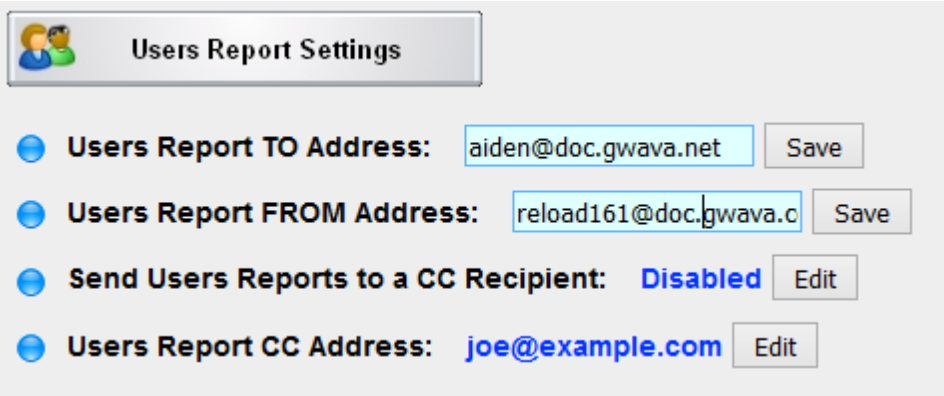
1. **Summary Report TO Address** Who should receive the summary
2. **Summary Report FROM Address** This is arbitrary so it can be something easy to understand where it came from
3. **Send Summary Reports to a CC Recipient** This is optional
4. **Summary Report CC Address** An additional user can receive a copy of the report.



Users Report Settings

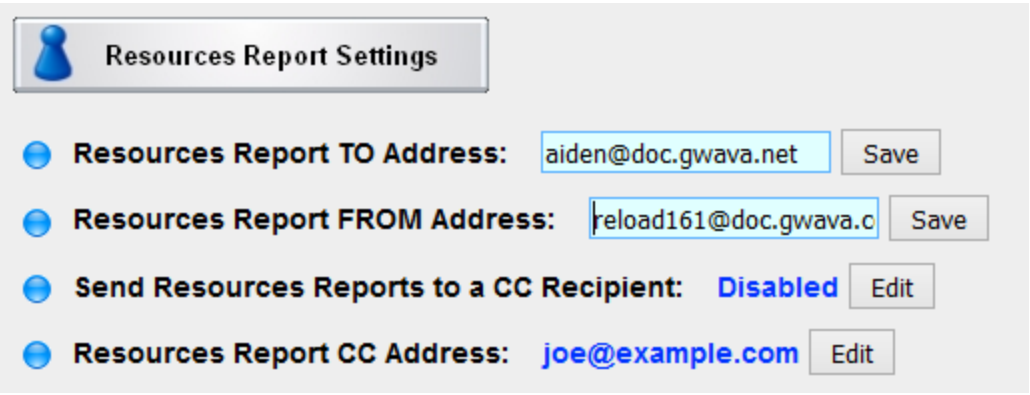
1. **Users Report TO Address** Who should receive the summary
2. **Users Report FROM Address** This is arbitrary so it can be something easy to understand where it came from
3. **Send Users Reports to a CC Recipient** This is optional

4. **Users Report CC Address** An additional user can receive a copy of the report.



Resources Report Settings

1. **Resources Report TO Address** Who should receive the summary
2. **Resources Report FROM Address** This is arbitrary so it can be something easy to understand where it came from
3. **Send Resources Reports to a CC Recipient** This is optional
4. **Resources Report CC Address** An additional user can receive a copy of the report.



Advanced Settings

Clicking on Advanced Settings button will open the Advanced Settings page

Personal Mailbox Reports

These are reports Blueprint will send to each user.

- **Send Mailbox Reports to Active Users** You may enable or disable this feature here
- **Personal Mailbox Report FROM Address** Set the email address the report is sent from

- **Send Only To Users in The Inclusion List** Limit reports to included users. The inclusion list is a simple ASCII text file saved as:

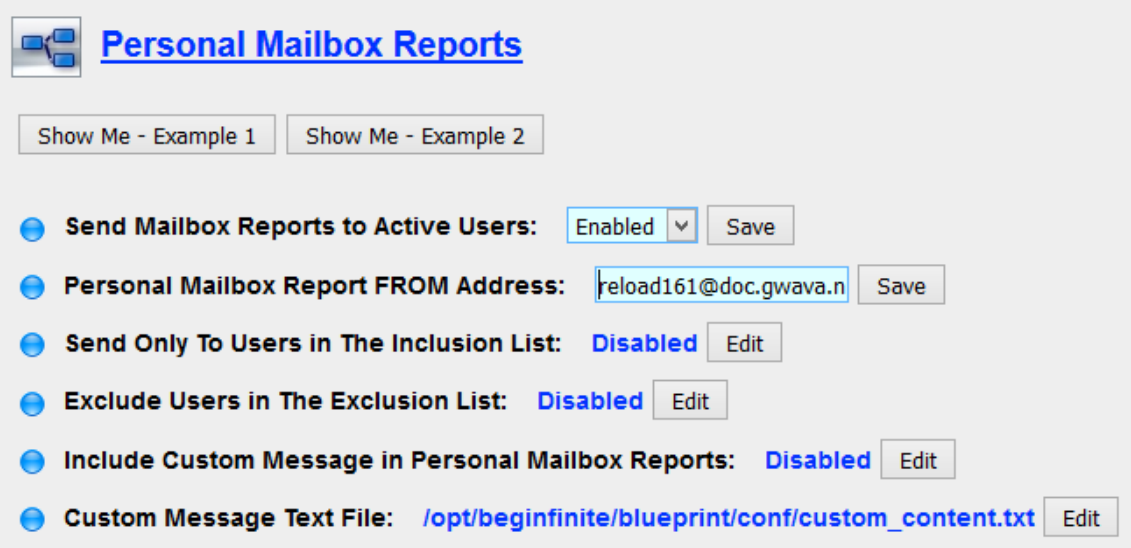
  `/opt/beginfinite/blueprint/conf/individual_report_inclusion_list.conf`

- **Exclude Users in The Exclusion List** exclude users from the report. The exclusion list is a simple ASCII text file saved as:

  `/opt/beginfinite/blueprint/conf/individual_report_exclusion_list.conf`

- **Include Custom Message in Personal Mailbox Reports** Add a custom message text. A custom message can be added to the Personal Mailbox Report email, perhaps to warn a user they are reaching their storage limit
- **Custom Message Text File** The location of the custom message test file. Be default, the custom message is saved as:

  `/opt/beginfinite/blueprint/conf/custom_content.txt`



Threshold Highlighting

Reports can highlight when users exceed certain thresholds. The colors are set by HTML color codes (http://htmlcolorcodes.com/).

Highlight "All Mailbox & Calendar Items" Over a Certain Threshold Enables or disables this feature

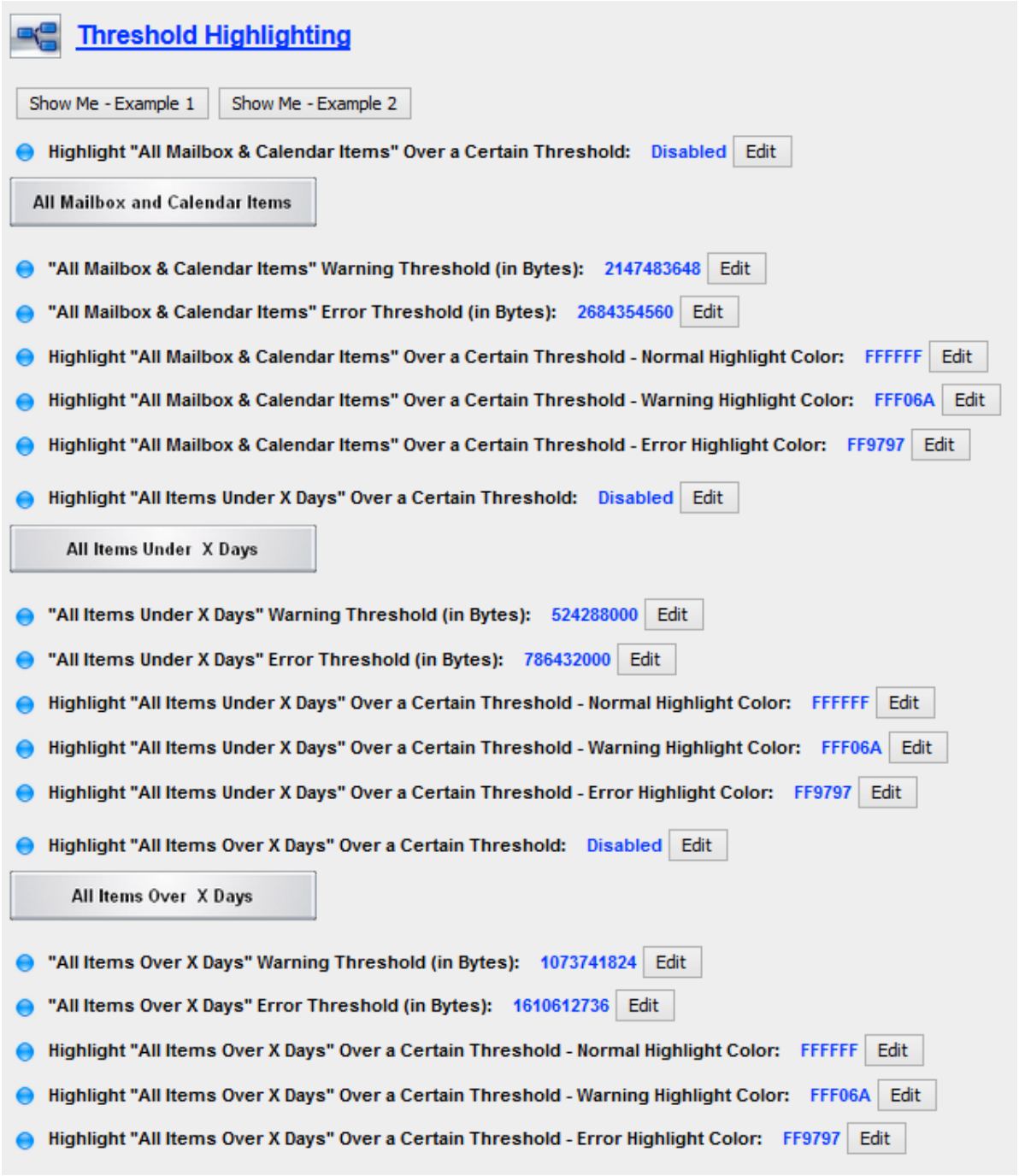
All Mailbox and Calendar Items

- "All Mailbox & Calendar Items" Warning Threshold (in Bytes)
- "All Mailbox & Calendar Items" Error Threshold (in Bytes)
- Highlight "All Mailbox & Calendar Items" Over a Certain Threshold - Normal Highlight Color
- Highlight "All Mailbox & Calendar Items" Over a Certain Threshold - Warning Highlight Color
- Highlight "All Mailbox & Calendar Items" Over a Certain Threshold - Error Highlight Color
- Highlight "All Items Under X Days" Over a Certain Threshold

  All Items Under X Days
- "All Items Under X Days" Warning Threshold (in Bytes)
- "All Items Under X Days" Error Threshold (in Bytes)

- Highlight "All Items Under X Days" Over a Certain Threshold - Normal Highlight Color
- Highlight "All Items Under X Days" Over a Certain Threshold - Warning Highlight Color
- Highlight "All Items Under X Days" Over a Certain Threshold - Error Highlight Color
- Highlight "All Items Over X Days" Over a Certain Threshold

  All Items Over X Days
- "All Items Over X Days" Warning Threshold (in Bytes)
- "All Items Over X Days" Error Threshold (in Bytes)
- Highlight "All Items Over X Days" Over a Certain Threshold - Normal Highlight Color
- Highlight "All Items Over X Days" Over a Certain Threshold - Warning Highlight Color
- Highlight "All Items Over X Days" Over a Certain Threshold - Error Highlight Color



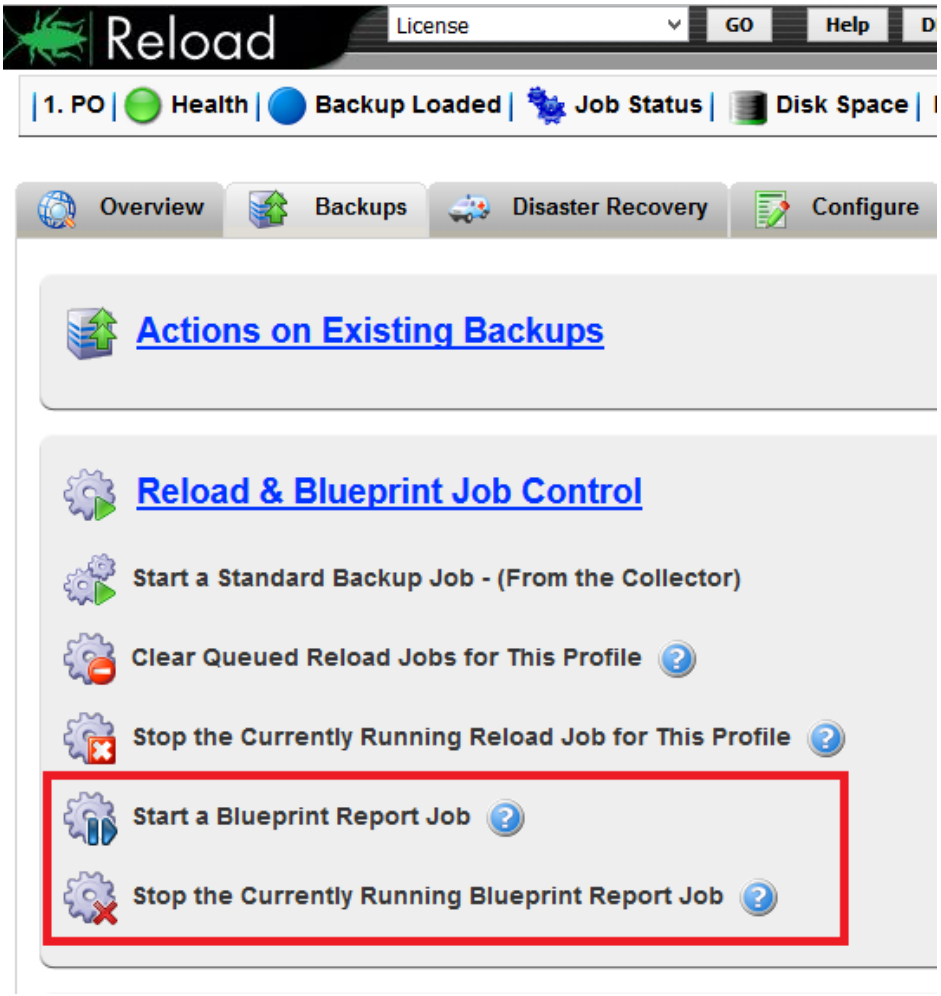
Administration

Once Blueprint is installed jobs can be run against a profile.

When Blueprint is installed a report job will run. Report jobs will also run after backup jobs or when you select a report job to start.

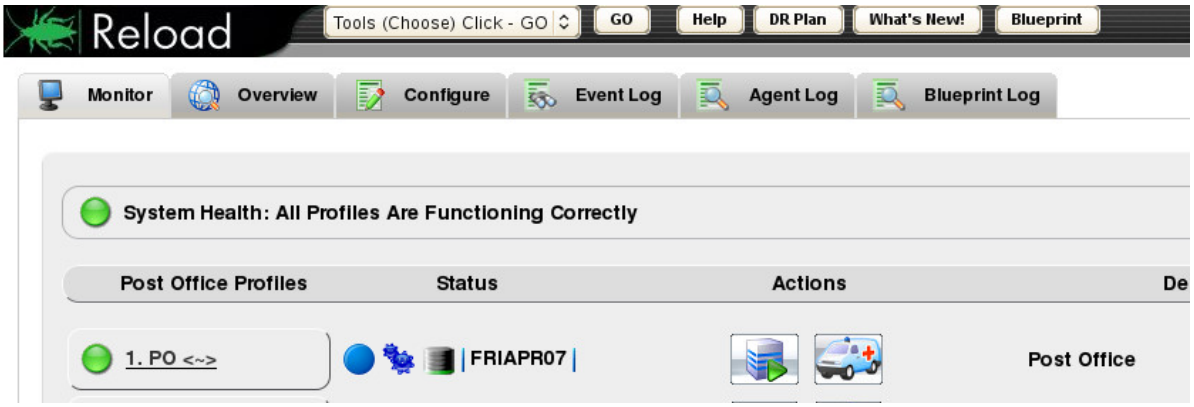
Starting a Blueprint Report Job

1. Browse to the GroupWise Disaster Recovery Web Administration page and select a Post Office profile.
2. Under the Backups tab, open the *GroupWise Disaster Recovery & Blueprint Job Control* panel
3. There will be two new options:
   a. Start a Blueprint Report Job
   b. Stop the Currently Running Blueprint Report Job



Blueprint Job

When a Blueprint Report job is running the gears will be colored blue



Summary Report

The Summary report contains an overview of the post office

Blueprint for Reload | Summary | BEG2PO

Report Summary

Statistics for GroupWise Post Office: BEG2PO
Reload Profile Name: POST1
Report Date: 1/26/2013
Report Creation Run Time: 2 Hours, 16 Minutes
Mailbox Statistis Analysis: 90 Days
Action Item Alerts: 70 (See Users Analysis Report)

User Mailbox Summary

Total Number of User Mailboxes: 111
Active Mailboxes: 41
Inactive Mailboxes: 70
All User Mailbox Items: 27.35 GB
Mailbox Items Under 90 Days: 5.09 GB (18%)
Mailbox Items Over 90 Days: 22.25 GB (82%)
Size of Inactive Mailboxes: 11.93 GB (43%)

Resource Mailbox Summary

Number of Resource Mailboxes: 1
All Resource Mailbox Items: 5 KB
Mailbox Items Under 90 Days: 0 bytes (0%)
Mailbox Items Over 90 Days: 5 KB (100%)

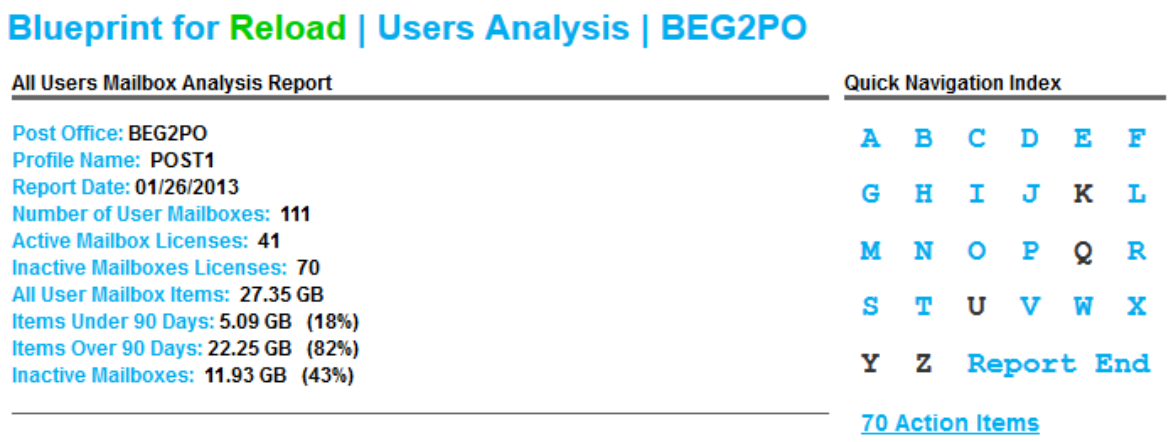
Blueprint Server Information

License Lease Information: Feb 4 04:59:59 2013 GMT
Blueprint for Reload Version: 5.1
GWAVA Reload Version: Reload 4.0 Build (400800)
GWAVA Reload Server Name: RELOADDEMO

Users Report

The Users report contains and analysis of each user in the post office.

At the top of the report is a quick summary, and links to users by name and action item sections



Blueprint for Reload | Users Analysis | BEG2PO

All Users Mailbox Analysis Report

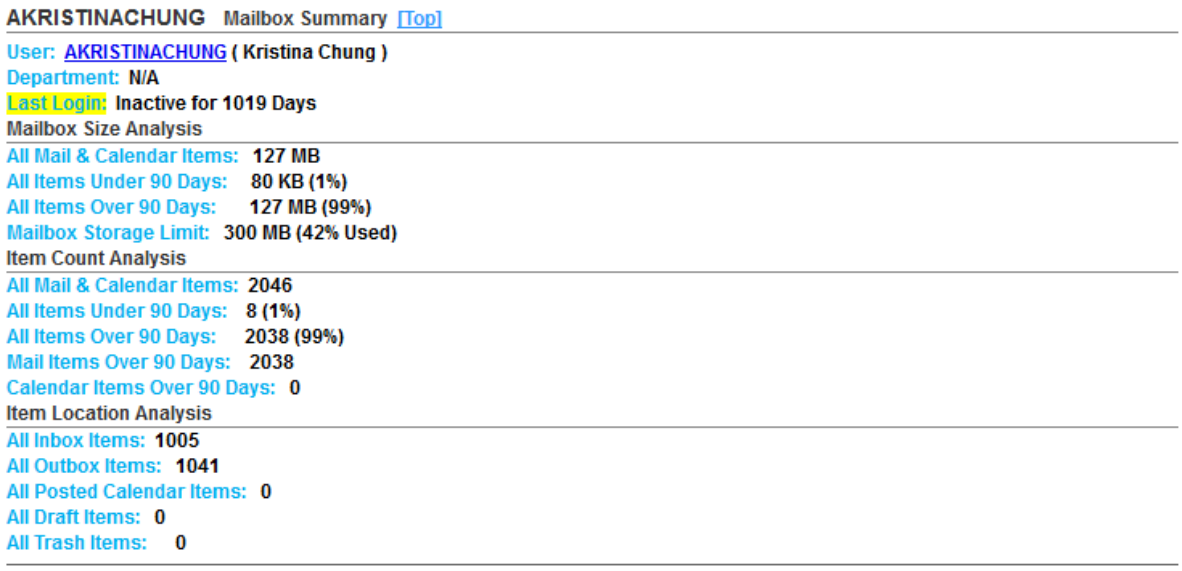
Post Office: BEG2PO
Profile Name: POST1
Report Date: 01/26/2013
Number of User Mailboxes: 111
Active Mailbox Licenses: 41
Inactive Mailboxes Licenses: 70
All User Mailbox Items: 27.35 GB
Items Under 90 Days: 5.09 GB (18%)
Items Over 90 Days: 22.25 GB (82%)
Inactive Mailboxes: 11.93 GB (43%)

Quick Navigation Index

A B C D E F
G H I J K L
M N O P Q R
S T U V W X
Y Z Report End

70 Action Items

Each user gets a section



AKRISTINACHUNG Mailbox Summary [Top]

User: AKRISTINACHUNG (Kristina Chung)
Department: N/A
Last Login: Inactive for 1019 Days

Mailbox Size Analysis

All Mail & Calendar Items: 127 MB
All Items Under 90 Days: 80 KB (1%)
All Items Over 90 Days: 127 MB (99%)
Mailbox Storage Limit: 300 MB (42% Used)

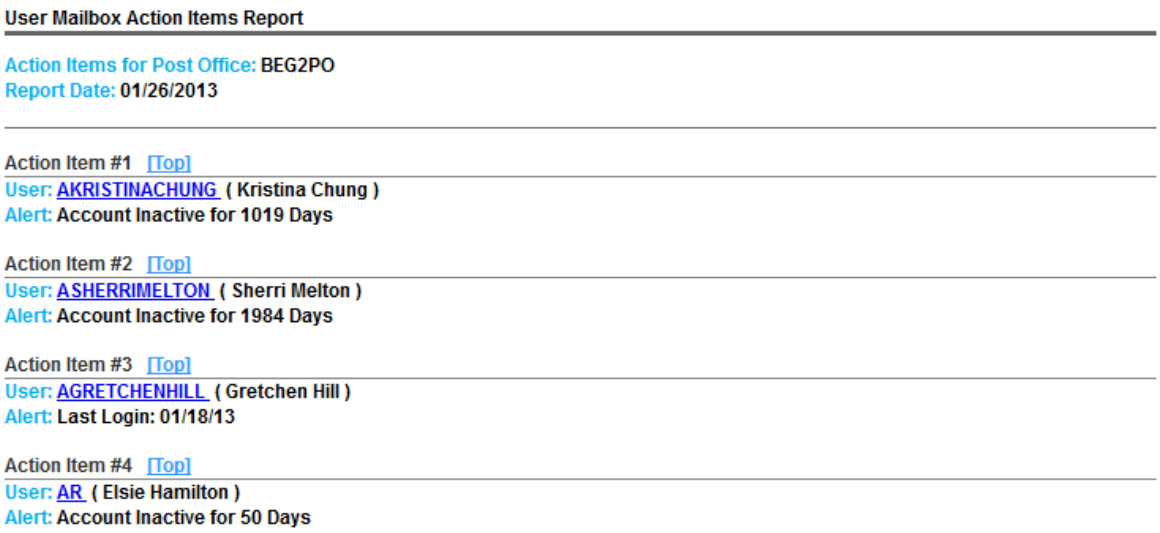
Item Count Analysis

All Mail & Calendar Items: 2046
All Items Under 90 Days: 8 (1%)
All Items Over 90 Days: 2038 (99%)
Mail Items Over 90 Days: 2038
Calendar Items Over 90 Days: 0

Item Location Analysis

All Inbox Items: 1005
All Outbox Items: 1041
All Posted Calendar Items: 0
All Draft Items: 0
All Trash Items: 0

At the end of the report is a list of recommended action items



User Mailbox Action Items Report

Action Items for Post Office: BEG2PO
Report Date: 01/26/2013

Action Item #1 [Top]
User: AKRISTINACHUNG (Kristina Chung)
Alert: Account Inactive for 1019 Days

Action Item #2 [Top]
User: ASHERRIMELTON (Sherri Melton)
Alert: Account Inactive for 1984 Days

Action Item #3 [Top]
User: AGRETCHENHILL (Gretchen Hill)
Alert: Last Login: 01/18/13

Action Item #4 [Top]
User: AR (Elsie Hamilton)
Alert: Account Inactive for 50 Days

Blueprint Command Line Options

Blueprint can be controlled from the command line.

For a list of options, type:

```
blueprint
```

View Blueprint Agent Log - Syntax:

```
blueprint log
```

Run Job Syntax:

```
blueprint job start <GWAVA GroupWise Disaster Recovery profile name>
```

Stop Job Syntax:

```
blueprint job stop
```

Stop One Profile's Current Running Job:

```
blueprint job stop <GWAVA GroupWise Disaster Recovery profile name>
```

Remove "Stop All Jobs" Syntax:

```
blueprint job stop
```

Single User Syntax:

```
blueprint job start post1 "tkratzer"
```

Single User - Live P.O. Syntax:

```
blueprint live job start post1 "tkratzer"
```

Report Job Status:

```
blueprint status
```

Configure Post Office Syntax:

```
blueprint -r <GroupWise Disaster Recovery profile name> -c <GroupWise post office
name>
```

- **Upgrade Blueprint** (Check status before using this command, do not use when a blueprint job is running!)

blueprint upgrade

Report Version:

```
blueprint -v
```