

Best Practices for the Novell GroupWise Gateway for Microsoft Exchange

prepared for

Novell Inc.

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Novell, Inc.
404 Wyman Street
Waltham
Massachusetts 02451
USA

Prepared By Edward J Hanley

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1 Gateway Implementation

This document will explain the Novell best practice in implementing the Novell GroupWise (GW) Gateway for Microsoft Exchange. We will refer to this Novell GW Gateway for Microsoft Exchange as “the gateway” in this document from this point forward.

1.1 Introduction

The gateway is a Windows based solution that must run on a Microsoft Exchange server. As of August 2009, this gateway usually runs on a Microsoft Exchange 2003 server (Exchange 2007 server support has not been completed yet). The latest version of this gateway as of August 2009 is the

“Hot Patch 1 for Novell GroupWise 7 Gateway SP2 for Microsoft Exchange”
<http://download.novell.com/protected/Summary.jsp?buildid=O6S-YX-BrT8~>
July 29, 2009

which has to be applied to the

“Novell GroupWise 7 Gateway SP2 for Microsoft Exchange”
<http://download.novell.com/Download?buildid=4U9q113q6g0~>
May 7, 2007

Novell GroupWise v7 Gateway for Microsoft Exchange SP2 FTF dated July 14, 2008
then you apply one update FTF file of gwin.dll dated January 23, 2009

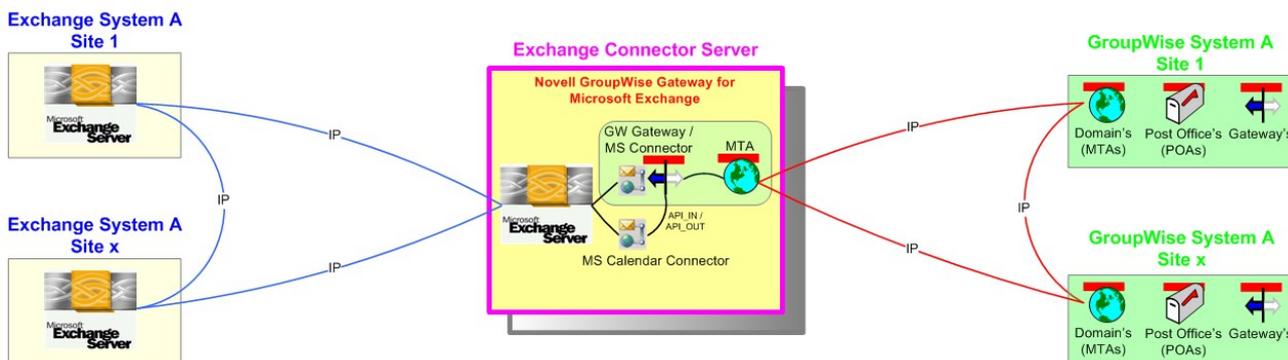
FTF = Field Test File

Note: This gateway is FREE from Novell.

Note: Hot patch 1 has new enhancements included that are used to implement this gateway in today's messaging environments. In section 2.3 is a list of enhancements that make up the July 14, 2008 gateway version along with the one updated January 23 2009 gwin.dll file.

1.2 Typical Setup

The typical setup of the Novell GroupWise Gateway for Microsoft Exchange is shown in the below diagram.



The Exchange messaging system is shown on the left side and the GroupWise messaging system is shown on the right side. A new Exchange 2003 server is installed to only run the gateway (shown in the middle).

This new Exchange server should be located closest to the Exchange messaging system as possible. The connection to the GroupWise system is 100% TCP/IP using the GroupWise MTA to MTA MTP (Message Transport Protocol, typically on IP port 7100) connection transport. Other IP Ports that are needed on this Exchange server to connect to the GroupWise messaging environment are:

| | Port | | Description |
|------------|------|---|--------------------------------------------------------------------------------------------------------|
| | 524 | - | Novell NCP (Novell Core Protocol) to Login Novell eDirectory {only needed during installation} |
| (optional) | 427 | - | Novell SLP (Service Location Protocol) to Login Novell eDirectory {only needed during installation} |
| | 7100 | - | GroupWise MTP |
| | 7180 | - | GroupWise HTTP webconsole of MTA |
| | 9855 | - | GroupWise HTTP webconsole of GW gateway for Exchange |
| (optional) | 161 | - | SNMP for MTA and Gateway |

Novell eDirectory connectivity over IP:

NCP Requests - TCP 524

TCP 524 - NCP Requests - Source port will be a high port (1024-65535)

UDP 524 - NCP for time synchronization - Source port will be a high port (1024-65535)

If you are running in Pure IP mode and are not dependent on SLP for locating your servers, all communication will happen on this port. If you create an exception to allow a destination TCP port 524 coming in to the NetWare server and a source TCP port 524 going out from the NetWare server you will be covered. The actual source port used by the client making contact to the server will be a high port (1024-65535).

SLP Requests - TCP & UDP 427

UDP 427 - SLP Requests - Source port will be the same (427)

TCP 427 - SLP Requests - Source port will be the same (427)

If you would like to locate your servers through SLP, then you will need to allow communication through TCP and UDP port 427. Both the source and destination will be port 427. The User Agent (UA) will contact the Service Agent (SA) or Directory Agent (DA) using a UDP packet. If the response is larger than one packet can hold then it will respond with as much formation as it can and set the overflow bit. The UA will then connect via TCP and will make the same request again to get the complete response.

Once the gateway is installed, a new Exchange addressing type of "GWISE" is defined within the Exchange system. Make sure the Exchange Recipient Policy has this GWISE address type enabled and has created this attribute on ALL Exchange mailboxes. If this does not occur, our gateway will not replicate any Exchange users into (DXIN) the GroupWise system. You most likely have to issue a **run** of the various Recipient Policies within the Exchange System Manager.

1.3 Installation

The installation of the gateway flows like this: You first have to do some pre-install tasks, the install itself, some post install tasks, then you run the gateway for the first time and finally some post first run configuration tasks.

1.3.1 Pre Installation Tasks

You **MUST** complete the tasks in this section **PRIOR** to running the gateway installation program on the Exchange server.

- (1) Build an Exchange Server just to run this gateway
[Assumptions about this server:](#)

Novell Client is installed
Authenticated to eDirectory as admin (only needed during installation)
ConsoleOne is installed with GW Snapin
Active Directory Users and Computers is installed
Authenticated to AD as new AD account "gwgatewayadmin" used to run this gateway
Exchange System Manager is installed
AdsiEdit is installed (possibly not needed)

- (2) Create a mailbox on this new Exchange server and test that this mailbox can send and receive email messages from all of the other Exchange Mailbox Servers in the production environment. This will test the Exchange **Routing** to make sure its setup correctly. If this basic routing is not correct, messages will start queuing up in outbound queues on this Exchange server running our gateway. We do not want our gateway blamed for not sending messages destined to Exchange users when it's an Exchange routing issue.
- (3) Open up any firewall IP Ports to allow access to the GroupWise environment
- (4) Make sure the Microsoft Search service is disabled on this server. If it is not, it WILL interfere with this gateway that we are installing where it will cause 8201 I/O errors with this gateway.

Symptom: You will see that the gateway would constantly lose connection with the Exchange Mailbox store and would give error "Unable to obtain configuration information from the MAPI" and it would restart. The gateway would also give an "I/O error 8201" in between and would restart indicating that it lost connection with the MTA or the Directory Structure.

Fix: Make sure the gateway's "IDLE time duration" is set to **30** seconds and disable the Microsoft Search service.

- (5) Install the Novell Client on the Exchange server
Change these Novell Client settings: File Caching = OFF , File Commit = ON
TID's 3611803, 3607973
- (6) Copy a GW SDD (Software Distribution Directory) to the Exchange server. We use this SDD to install the GW MTA and the GW Snapin to ConsoleOne
- (7) Install a new copy of Novell ConsoleOne on the Exchange server
and add the GW Snapin to ConsoleOne
- (8) Create a new GroupWise Domain (MTA) on the Exchange server to contain the new gateway. Make the MTA Windows Service set to 'Automatic' from 'Manual'.
Optimize the MTA by:
Enabling all High Priority Threads
Change the Link Configuration to be IP direct to all domains
- (9) (Very Important) Create a Microsoft AD account named "gwgatewayadmin" that will be used to install the gateway and run it in production mode for the life of the gateway. Usually we make one AD account (ie. gwgatewayadmin) that is used to do the install and run of the gateway. This account MUST have the following rights in AD:

Group membership to the following groups: Domain admins, Enterprise admins, Exchange Domain Servers, Schema admins (Note: no schema gets extended by our gateway install or run of it)

The developer of this gateway says this about the MS AD Schema:

Looking at the code ... for the word schema
I see a **SchemaPreload** call ...

It uses it for 3 things

- 1) To add the '**address type**'
- 2) To add the '**gateway proxy**'
- 3) To add the '**gateway bit**'

But these are all manually configurable and extendable. I don't know why these three would be referred to as MS AD Schema extensions. No MS AD Schema gets extended. They can be added manually by a person using the AD UI.

Use the hidden Security tab (right click root System object > Properties > Security Tab) in Exchange System Manager (to enable this, follow Microsoft doc **259221**) to verify that the AD account of "gwgatewayadmin" used to install the gateway and run the gateway as a Windows Service, does not have the **deny** right for the "**send as**" and "**receive as**" attributes for each AD Group that this account belongs to. Remove the **deny** right from the "send as" and "receive as" check boxes. Info: The **Send As** and **Receive As** permissions relate to Microsoft Exchange Server and let users send and receive email without revealing their identity.

Grant the 'gwgatewayadmin' AD account Full Rights to the Exchange "First Administrative Group".

Note: **Getting these AD rights working is 97% of all problems getting this gateway working.**

- (10) Get the latest build of the gateway from Novell. You might have to get it via an email request if its not posted on Novell's web site.
- (11) Print out the gateway documentation PDF file and README file and read it over. This is the master document that you should be following step by step.
- (12) Change the Data Execution Prevention (DEP) feature of Windows to only apply to essential Windows programs and services which will allow this gateway to be installed. Follow these steps:
 1. Click **Start**, click **Run**, type **sysdm.cpl** and <Enter>
 2. On the **Advanced** tab, under **Performance**, click **Settings**
 3. On the **Data Execution Prevention** tab, use one of the following procedures:
 - * Click **Turn on DEP for essential Windows programs and services only** to select the OptIn policy
 4. Click **OK** a few times
 5. Restart the server now.

1.3.2 The Installation

Now the install of the gateway can occur. If not done already, unzip the gateway installation files that were emailed to you to a temporary directory on the Exchange server.

Log in AD with the account "gwgatewayadmin" that was created to install and run this gateway (very important)

Log into Novell eDirectory with an admin type account (just needed during install only)

Add the Exchange Library directory of "c:\progra~1\exchsrvr\bin" to the Path variable on the Exchange server

Now run the INSTALL.EXE program

Select [Next>] on “GW Gateway Install” screen

Select “(*) Install gateway and Addressing components” on “Gateway/Addressing” screen

More steps occur here ... follow gateway documentation

Install the GW Addressing Component on all remaining Exchange servers. Have a common MS Share for the gateway INSTALL files so you can do this quick task. This is a very quick install that does not require an Exchange server reboot or shutdown in any way. We only need to select the “Install Addressing components” option when we run the gateway install on all of the remaining Exchange servers. This gateway addressing component is dropping in the gwproxy.dll and getting it registered to service the “GWISE” address type that was added to the Exchange environment. No Novell Client is required either on these Exchange servers. Note: This install requires the Exchange System Attendant service running for the install to work.

1.3.3 Post Installation Tasks

You MUST complete the tasks in this section PRIOR to running the gateway for the first time.

- (1) Copy the updated gwin.dll file dated Jan 23, 2009 over the current gwin.dll file that was just installed. The directory is usually at D:\<gwdomain>\WPGATE\Exchange\ Make a backup of the current gwin.dll file first.
- (2) Configure the Exchange side of the gateway (see gateway PDF documentation – CH5)

Bi-Directional Busy Search setup between the GroupWise and Exchange systems. At the end of CH-5, you install the Microsoft Exchange Calendar Connector on the Exchange server running the GW gateway (see section 5.2.2 in the GW gateway install guide). At the end it will direct you to deactivate the Microsoft Connector for Novell GroupWise component, then you Configure the Calendar Connector.

Also in the Exchange System Manager you **must** add a replica of the Exchange Public Folder – Free/Busy over to the Exchange server running our GW gateway. Steps to do this are:

Go to the main Exchange mailbox server and go to the Public Folders / Free and Busy info object. Right click Properties > Replication tab – click add > point to the Exchange serve running the MS Calendar Connector.

This allows the Microsoft Calendar Connector running on this same gateway to work for Free/Busy Searches.

- (3) Configure the GroupWise side of the gateway (see gateway PDF documentation – CH6)
Define the gateways IP Address, HTTP Port to be 9855 and Logging=Verbose
Tip: Use Logging=Diagnostic when you first run the gateway
- (4) Edit the **GWEXCH.CFG** configuration file

Edit the \<domain>\WPGATE\Exchange\GWEXCH.CFG text file

Many switches will need to be configured first and one or two hidden switches (TID 7000283) will have to be added manually.

/rt-16

/st-16

/group

; Disable the /custom switch below by adding a semicolon in front of it. We want to not
; replicate these object types into GroupWise.
; **/custom**

; Set the Logging to Verbose from Normal. We need to see what is happening
; with this gateway.
;/loglevel-Verbose (Set this in C1 instead)

/blockdom- OR **/allowdom**-dom1,dom2,dom4
{do **not** use quotes, ever! – example is WRONG in the text file}

If any GW External domains exist already in GW, you must start using one of these switches to stop these GW External Domains from syncing over to Exchange. You just want the real GW Domains to sync over to Exchange. You also could define a “Import Filter” on the “Import Container” tab of this gateway on the MS Exchange side with the Exchange System Manager program. You might be able to filter at the GW PO level and even the GW MailboxID level with the “Import Filter”. *Exact Import Filter syntax will be added here once learned*

/addressrule-<username>@<domain> (default value is usually used)

Setting Up an Addressing Rule to Facilitate Busy Searches

When performing a busy search from GW to Exchange, the gateway uses LDAP to identify the users being searched, rather than the typical recipient information used when delivering messages. If the Exchange users’ e-mail address formed here does not match their Exchange mailbox name, the busy search from GW will fail. Note: Messages to this same Exchange user from the GW user will still get delivered successfully since it does not use LDAP as the delivery method.

If the default format of <username>@<domain> is not correct, you must use this switch to specify the correct email address format to allow a busy search request to work from GW to the Exchange system. You can use any of the following six tags to specify the correct address format used in the Exchange system:

| | |
|----------------|---------------------------------------------------|
| <domain> | like the GW iDomain |
| <username> | like the GW MailboxID |
| <firstname> | like the GW GivenName |
| <lastname> | like the GW Surname |
| <firstinitial> | the first initial of the Exchange users firstname |
| <lastinitial> | the first initial of the Exchange users lastname |

Each tag is replaced with the corresponding user-specific information. Additional text can be added to the address format as well.

Examples:

```
/addressrule-<firstname>_<lastname>@<domain>  
/addressrule-<firstname>.<lastname>@<domain>  
/addressrule-<username>@exchange.<domain>
```

These address rules would result in the following addresses for a user named Sophie Jones at Corporate.com:

```
Sophie_Jones@Corporate.com  
Sophie.Jones@Corporate.com  
SJones@exchange.Corporate.com
```

The default behavior, if this switch is not specified, is <username>@<domain>

/ImportSubcontainers *(usually used)*

This switch causes the gateway to synchronize users in nested export containers in Microsoft AD. By default, when you specify export containers in Exchange System Manager, the gateway synchronizes users in the specified containers but not in containers under the specified containers. When you use this switch, the gateway synchronizes users in all containers under the specified containers.

/UseImportContainer *(usually used)*

This switch causes the gateway to synchronize GroupWise users into the Import Container specified in the gateway's Connector within Exchange System Manager. By default, GroupWise users are synchronized to a container named "GroupWise" at the root of Active Directory (usually not acceptable in large enterprises)

/DisplayNameLastFirst *(usually used)*

This switch controls the format of the GroupWise user's Display Name in the Exchange address book. With this switch, the name will be in the format "LastName, FirstName". Otherwise it defaults to "Firstname Lastname"

/NoReadReceipt *(usually used)*

This switch suppresses read receipts from being requested when GroupWise messages go to Microsoft Exchange.

/CNGuid *(usually NOT used)*

This switch makes it so that the CN in active directory is the GUID of the user. i.e. When you look in Active Directory, the name of the Contact that you see in the GroupWise container will be the GUID. Since the GUID does not change, the CN will not be deleted and recreated when a user is renamed.

/IncludeGuid *(usually NOT used)*

This switch causes the gateway to include the GUID as a custom attribute. You will see this attribute when you click on the Contact, Click the "Exchange Advanced" tab, and click on "Custom Attributes". It will be extensionAttribute12.

/SyncGWSMTPAddress *(usually used)*

This causes the SMTP address of the GW user to sync over to the Exchange side. You will see this attribute when you click on the Contact, and click on the email addresses.

Note: There is something that you need to be aware of with this switch. Let's say that Novell.com, who is GroupWise, bought Cambridge.com, who is Exchange, and we link the two through the gateway. By default, when jdoe from Novell.com synchronizes to Cambridge, the gateway provides no SMTP address, so the default policy on the Exchange side creates one, so I become JohnDoe@Cambridge.com. When using the /SyncGWSMTPAddress switch, when I synchronize over, my SMTP address on the Exchange side, now becomes jdoe@novell.com, which is what people expect.

Make sure you add Cambridge.com (your exchange systems domain name) to your list of GroupWise IDomains configured in ConsoleOne, otherwise reply messages may go through GWIA instead of through the Exchange gateway, since the GroupWise system won't know that Camebridge.com is a part of the system. Once I added Cambridge.com to the list of known IDomains, then the message went through the Exchange gateway as expected.

In ConsoleOne, highlight your GroupWise domain, Select Tools, GroupWise System

Operations, Internet Addressing, under Idomains, add your Exchange systems internet domain name.

/ContactNameDisplayName (*usually NEVER used*)

This switch is undocumented. It is usually used when swapping out the Microsoft Connector for GroupWise with this gateway. We try to avoid this switch if we can.

; This switch controls the contact name of the GroupWise users in Active Directory.
; By default, the contact name is the MailboxID of the GroupWise user. With this switch
; enabled, the contact name will be the display_name of the GroupWise user.

; This switch will create the Contact object in Active Directory on
; the Exchange side with the display name of the GroupWise user instead
; of the default GroupWise MailboxID value. This is used when
; you are swapping out the Microsoft Exchange Connector for GroupWise
; with our Novell GroupWise gateway for Microsoft Exchange since the
; Microsoft Connector for GW created the GW users in AD as a Contact
; object named with the GW users display name.

; Warning: You have to make sure that every GroupWise user has a unique
; displayname value. If not, the last written displayname value will overwrite
; the previously created displayname entry. This will cause a "last one wins"
; effect and the first user created in the MS AD Exchange Contact list would
; get overwritten with the values from the second. Note: The old MS Connector
; for GW had a collision algorithm where it appended a "-1", "-2" and so on when
; a Display Name collision occurred. Our gateway does not do this since it just
; does Update transactions to MS AD Contact objects.

- (5) Setup GW Monitor to poll the GW MTA and Gateway running on the Exchange server
- (6) Make the gateway service set to 'Automatic' from 'Manual' **OR** wait until you debug the first run of the gateway in the next section.

1.3.4 Running the gateway for the first time

You MUST **Restart** the Exchange server that is hosting the gateway prior to running the gateway for the first time

Start the gateway up with the Windows Services program. Set it to be "Automatic" if it is not already

OR

Run the gateway as a Windows Application first (preferred) where you see its GUI. This way you can debug it, if there are any startup issues. Plus the GUI's real time log activity is very helpful to see what its doing. And the gateways GUI offers the **Actions** menu with the **Synchronize Directories** command which does not exist when our gateway run as a Windows Services This will come in very handy.

To do this, run **EXGATE.EXE** from D:\<gwdomain>\WPGATE\Exchange\ subdirectory

Make sure the gateway starts up fine and has No errors in the Log file. Note: No Directory Sync will occur at this time since that setting has not been enabled until the next section 1.3.5 (section 8.1).

Note: The gateway will auto restart itself when it encounters an error condition. The log file will show that this event has occurred. This is normal behavior.

1.3.5 More Configuration after the gateway has run for the first time

Follow chapter 8 in the gateways PDF documentation titled "Configuring the Exchange Gateway".

Section 8.1 is very important. [Follow it very closely.](#)

When the change is made for the **Directory Sync setting** – and the gateway is running – it will start the Directory Sync process right then on the gateway. If this does not happen – restart the gateway.

Watch the gateway's Log Files and watch it do Directory Sync. A Full Directory Exchange will occur as its first task.

(First DXIN = Exchange → GW, Then DXOUT = GW → Exchange)

Directory Sync will take some time (from 5 minutes for small messaging systems on each end) (to many hours for large messaging systems at each end)

Make sure the Exchange **Recipient Policy** defined within the Exchange system has the **GWISE** address type Enabled and is creating GWISE address values behind all Exchange mailboxes.

Here is the logic on what name is used to create the GroupWise External Domain, GW External PO and GW External user objects with the GW system:

Exchange user addresses are generated automatically within the GW system when you start the Exchange Gateway for the first time and it has Exchange user objects to DXIN into the GW system: (Dir Sync is enabled)

| | | |
|-------------------------------------------|--------------------------------|-------------|
| Exchange Organization name | → GroupWise External Domain | {one only} |
| Exchange Site (Administrative Group) name | → GroupWise External PO | {multiples} |
| Exchange mailbox name | → GroupWise External MailboxID | {multiples} |

You can start sending messages while the directory sync is occurring

Skip section 8.2 – use addressing instead of dir sync

except, follow section 8.2.5 – setting up an addressing rule to facilitate Busy Searches

Section 8.3 is optional – link protocol. You can set the message size limit in here.

Section 8.4 is optional – gateway access

Section 8.5 is optional - accounting

Follow section 8.6 – gateway admin

Follow section 8.7 – message status for Sent Items

Skip section 8.8 – bind exclusive IP address

1.4 Enhancements added

There are a few differences between the official tested build dated May 7, 2007 that is posted on Novell's web site at

<http://download.novell.com/protected/Summary.jsp?buildid=4U9q113q6g0~>

and the FTF build dated July 14th, 2008 (+ the updated gwin.dll dated Jan 23rd, 2009) that you have to request from Novell Support. Here are a list of added enhancements of this FTF build over the shipping build:

- ◆ There is a separate processor thread allocated for the directory synchronization process. This allows for message processing and busy searching to occur between the messaging systems while the gateway is doing directory exchange / synchronization.

- ◆ Fixes were applied (see TIDs 3940684, 7002961, 7002962, and 7002964)
 - Bugzilla # 291323 – Gateway cannot start and is looking for the connector in Active directory in the wrong location under the Child domain / configuration container rather than the parent domain / configuration container.
 - Bugzilla # 396860 – Exchange users receive Internet email with very large fonts
 - Bugzilla # 403443 – RTF conversion issue
 - Bugzilla # 407746 – HTML text disappears in forwarded email originating in Exchange
- ◆ Updated gwin.dll fixes these Novell Bugzilla issues:
 - #396286 – buffer overflow in the ExtractHTML routine on Exchange to GW emails
 - #444551 – long web URLs issue in message body from Exchange to GW emails
- ◆ Gateway now installs in Microsoft AD when the Exchange system is NOT in the Parent Container
- ◆ The following startup switches were added:
 - /SyncGWSMTPAddress
 - /CNGuid
 - /IncludeGuid
 - /ContactNameDisplayName (use with care)

1.5 How Calendar Busy Searching Works

1.5.1 End Users

There are a few differences between how Exchange does its calendar Free/Busy within its messaging system and how GroupWise does its calendar Busy Search within its messaging systems.

Exchange has a Public Folder system with a folder named Free/Busy that contains all Exchange users calendar information that is replicated among Exchange servers on a schedule (usually every 15 minutes). As you can imagine, this 15 minute interval will not have all Exchange users up to the minute calendar information. But having all Exchange users calendar information replicated to all Exchange Servers allows for fast response times when a Free/Busy action is initiated by an end user.

GroupWise on the other hand does its calendar Busy Search in real time to all GroupWise end users mailboxes on each post office within the messaging system. This guarantees the most up to date information when doing scheduling. The calendar response time for a GW user varies from seconds for users on the same PO to a minute for users on remote POs over slow WAN links. If a PO is not reachable at the time, the busy search results will never return. The GW end users sees when each participants results return from the busy search where the entry becomes bold from a gray color.

Now with this gateway as the link between the two messaging systems in doing this calendar Free/Busy searching, there will be a delay in obtaining results for Exchange users busy searching GW users. You have to inform the Exchange users of this new fact. They have to be patient. The gateway has set a 60 second timeout if it does not get the GW users results back. So you can see that there could a minute or two to wait for the results.

GW users are already accustomed to the delay in getting busy search results back from the participants of their appointment request, so they will not see any difference. But there is one added delay, for each Exchange user that the GW users selects, the busy searches are done sequentially and not in parallel. The GW participants are done in parallel. It averages around 30 seconds for each Exchange user request. So you can see that it can take a very long time if you have many Exchange users on your GW participant list for a single appointment. You have to inform the GW users of this new fact.

Tuning the busy search:

Make sure the GW MTA that hosts the gateway is linked direct IP to all GW domains in the system. Have the gateways "idle" time set to 3 or 5 seconds. Make all GW MTAs have their high priority threads enabled.

1.5.2 Back End

The below diagram shows the flow of the busy search request when it originates from GroupWise:

<diagram goes here>

The below diagram shows the flow of the Free/Busy request when it originates from Exchange:

<diagram goes here>

1.6 Test Lab

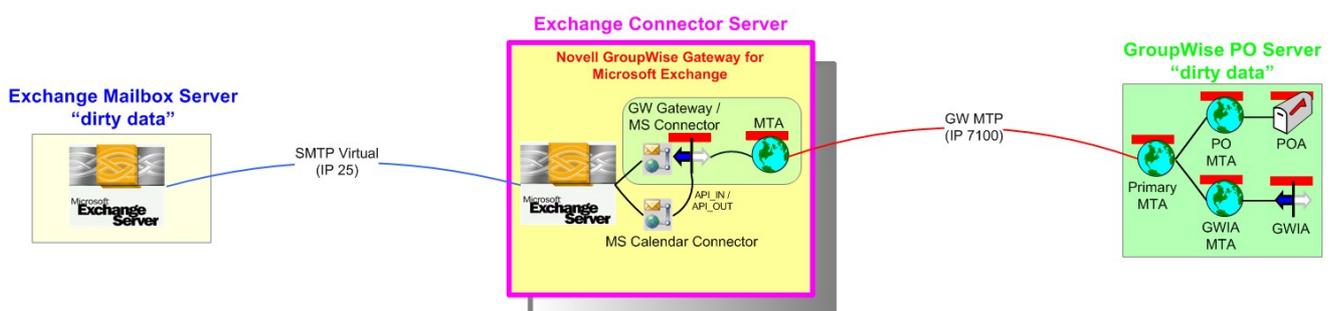
You should never just install this gateway between the two messaging systems (Exchange and GroupWise) without first testing it in a test lab. This test lab is where you figure out these settings:

- GroupWise Domain and Gateway name to use (“EXCHDOM”, “Exchange”) on GW side
- eDirectory object placement of the gateway and its owning GW domain (MTA)
- What GroupWise Domains will be synced over to the Exchange system
- Exchange Organization and Site (administrative group) names
- Microsoft AD login account to use to install and run the gateway for life (“gwgatewayadmin”)
- Exchange Connector Name for this gateway (default-“Exchange”) or (“GW2Exchange”)
- Microsoft AD Container Name to use to represent the GroupWise system users
- What Exchange Containers (Exchange users) will be Exported into the GroupWise system

The GroupWise External Domain, Post Office(s) and MailboxIDs are auto created by the gateway, which is derived as follows:

| | | |
|-------------------------------------------|--------------------------------|-------------|
| Exchange Organization name | → GroupWise External Domain | {one only} |
| Exchange Site (Administrative Group) name | → GroupWise External PO | {multiples} |
| Exchange mailbox name | → GroupWise External MailboxID | {multiples} |

The test lab must have a subset of the production messaging environment from both the GroupWise and Exchange messaging systems. You must get a copy of one real production post office (mailbox server) from both messaging systems in the test lab. The post office that you select from each messaging system should host some system address book (GAL) system distribution lists (public groups) so you can test those out between the two messaging systems. You also want to get a copy of the production Novell eDirectory tree and production Microsoft AD tree in the test lab. AD is most important for Exchange, eDirectory is not as important since GW is loosely coupled to eDir. You might have to use some 3rd party tools to get such a copy (like Quest tools for AD, and LDIF tools for eDirectory). We want “**dirty data**” in the test lab, so we get a very good representation of the production environment. The diagram below represents the minimum test lab setup:



With this in place, we will find out what will happen when we go to roll this gateway out in the production environment. We want no surprises or delays when implementing this in the production environment.

You must have a Microsoft AD and Exchange expert involved with this test lab to handle the Exchange messaging side of this gateway. And you must have a Novell eDirectory and GroupWise expert for the GroupWise messaging side of the gateway.

1.7 Test Plan

Following is a suggest test plan checklist

Directory Sync objects created in Exchange from GroupWise

Directory Sync objects created in GroupWise from Exchange

If swapping out the Microsoft Connector for GroupWise, make sure existing objects still maintain their GUIDs.

Check the gateways log files to see when the initial directory sync has completed
Look for DXIN and DXOUT entries

Email message - Exchange → GroupWise

Email message - GroupWise → Exchange

Reply to message that originated in Exchange to a GroupWise user

Reply to a message that originated from GroupWise to a Exchange user

Now add to the above emails, users out on the Internet to see that all still works

Message Status Tracking

Email to system distribution list in Exchange that contains member in GroupWise system

Email to system distribution list in GroupWise that contains member in Exchange system

Email to personal distribution list in Exchange that contains member in GroupWise system

Email to personal distribution list in GroupWise that contains member in Exchange system

Directory – Modify in Exchange replicates into GroupWise

Directory – Modify in GroupWise replicates into Exchange

Directory – Add in Exchange replicates into GroupWise

Directory – Add in GroupWise replicates into Exchange

Directory – Delete in Exchange replicates into GroupWise

Directory – Delete in GroupWise replicates into Exchange

Busy Search – Exchange → GroupWise

Busy Search – GroupWise → Exchange

Accept t some appointments

Delcine some appointments

2 Novell TIDs and more

Here are the Novell TID numbers that are related to this gateway.

2.1 Install Tips

7001367 - How to Install the GroupWise gateway for Microsoft Exchange (very important TID, must follow every detail) This is reprinted at the end of this document.

7002872 - How to add additional GroupWise fields into Exchange address book

7003164 - Q:Can the GroupWise 7 Gateway for Exchange be used with GroupWise 8? A:Yes

3644821 - Cannot start GroupWise Gateway for Microsoft Exchange as a Service

2.2 Known Issues

read the ReadMe PDF that comes with the gateway

3812077 - GroupWise user Alias incorrect in Exchange address book

7003288 - No FreeBusy information returned for Exchange user (bugzilla 50448)

7002960 - GroupWise users appear in UPD format in messages routed through the GroupWise 7 Gateway for Microsoft Exchange (this is just cosmetic, gateway works just fine, bugzilla 360826)

2.3 Issues Fixed

7002961 - Exchange users receive Internet email with very large fonts (fixed in July 2008 build, bugzilla 396860)

7002962 - Exchange Gateway RTF conversion issues (fixed in 7/14/08 build, bugzilla 403443)

7002964 - HTML text disappears in forwarded email originating in Exchange (fixed in 7/14/08 build, bugzilla 407746)

3940684 – Parent / Child issue in AD when starting the gateway (Bugzilla 291323)

Gateway crashes if the body contains a very long URL and if the message goes from Exchange to GW (fixed in 1/23/2009 GWIN.DLL build, Bugzilla 444551)

2.4 Troubleshooting

3940684 – Error (E01) Unable to bind to Gateway Object when starting the GW gateway for Exchange

3644821 - Cannot start GroupWise Gateway for Microsoft Exchange as a Service

3411379 - Exchange users do not appear in the GroupWise External Post Office

7000543 - Unable to busy search from Exchange to GroupWise thru GroupWise 7 Exchange gateway

KB271743 - Exchange Server Users Not Receiving Free and Busy Results from GroupWise users
<http://support.microsoft.com/kb/271743>

Tip: Turn up the Microsoft Logging for the MS Calendar Connector component from

'None' to 'Diagnostics' level and look at the Event Viewer entries on the MS server running the MS Calendar Connector.

2.5 Undocumented Switches for GWEXCH.CFG

Some of these undocumented switches can now be found in Novell TID 7000283. The switches covered in this 7000283 TID were covered in section 1.3.3 under step #4.

According to the code, the following switches (and their abbreviations) are recognized:

"custom" ("cr"),
"noshared" ("ns"),
"waittime" ("wt"),
"blockdom" ("bd"),
"allowdom" ("ad"),
"Initials" ("mi"),
"nohtml",
"noreadreceipt",
"importsubcontainers",
"DisplayNameLastFirst",
"UseImportContainer",
"ContactNameDisplayName",
"CNGuid",
"ContactNameGuid",
"IncludeGuid",
"SyncGWSMTPAddress",
"UseGWFreeBusyTime",
"NoAdminThread",

There are also three switches that are conditionally compiled:

"passds",
"noindent",
"wrap",

Looking at the code there is a switch statement for setting the AD object common name. The default is to set AD common name to the GroupWise common name (my guess would be the userID). But if CNGuid is set then the AD common name is set to the GroupWise GUID and if ContactNameDisplayName is set then the AD common name is set to the GroupWise first and last name, in conjunction with the DisplayNameLastFirst switch to determine the order.

2.6 Novell SR # of an Install Issue

Novell SR # 10371100951

03/3/2008 CRT DEFECT

Problem:

GW gateway for Exchange tries to read the wrong Windows Registry branch on startup if the default GroupWise gateway name is not kept as "Exchange", Gateway errors out and then crashes with an application error.

Enter in the Gateway Name to be "Exchange_Gateway" during the gateway install and it creates a GroupWise Connector with a name of "Exchange" rather than "Exchange_Gateway" and because of that it reads the wrong registry key information.

Errors on Gateway on startup are:

```
12-17-07 15:16:37 0 ***** Gateway Started *****
```

```
12-17-07 15:16:37 0 ***** 2007-12-17 15:16:37 *****
```

```
12-17-07 15:16:37 0 ERROR (E01) 010001: Unable to get configuration information from Registry
```

```
12-17-07 15:16:37 0 ERROR (E01) 010001: Failed to open registry key  
HKEY_LOCAL_MACHINE\SOFTWARE\Novell\GroupWise  
Gateways\Exchange\domainX\Exchange\Parameters
```

```
12-17-07 15:16:38 0 ERROR (E01) 010001: Return value 00000002
```

```
-----
```

Note: Registry Key path is incorrect, it should be

```
HKEY_LOCAL_MACHINE\SOFTWARE\Novell\GroupWise Gateways\Exchange_Gateway\domainX\Exchange\Parameters
```

not

```
HKEY_LOCAL_MACHINE\SOFTWARE\Novell\GroupWise Gateways\Exchange\domainX\Exchange\Parameters
```

Seems to be hard coded to create a registry key of "Exchange" not what you type in as the Gateway Object Name during the install.

3 Novell TID 7001367

How to Install the GroupWise Gateway for Microsoft Exchange

This document (7001367) is provided subject to the [disclaimer](#) at the end of this document.

Environment

Novell GroupWise Gateway - 7.x Gateway for MS Exchange
Novell GroupWise 7

Situation

GroupWise Gateway for Microsoft Exchange Install fails to result in working Gateway
GroupWise Gateway for Microsoft Exchange Service will not start
ERROR: "1503: The Service did not respond or the start or control request in a timely fashion."
ERROR: "ERROR (E01) 010012: Unable to get configuration information from the MAPI Session"
ERROR: "ERROR (E01) 010012 MAPI code: 11D"
ERROR: "ERROR (E01) 0323004 - Unable to bind to the Gateway Object"

Resolution

This document is designed to aid in a successful install of the GroupWise Gateway for Microsoft Exchange in regards to "How to Set Rights for Windows users to install and run the Gateway."

The install and configure documentation should be followed in addition to this TID. GroupWise GateWay Documentation
<http://www.novell.com/documentation/gwgateways/index.html>

The document does not include installation of the Free busy search components. At the time of writing the GroupWise Gateway for Microsoft Exchange is not intended to be used with Exchange 2007. Installing the Gateway on a Exchange 2003 server in an Exchange 2007 environment appears to be a valid work-around for using the gateway in an Exchange 2007 environment.

Install the latest version of the Gateway software. The latest version can be obtained by calling support. The files can be obtained by opening a service request with support. If no additional support is required the service request may be closed at no additional charge.

Assumptions about the server where the Gateway will be installed:

Novell Client is installed
Authenticated to Edirectory as Admin
ConsoleOne is installed
Active directory Users and Computers is installed
Exchange system manager is installed
AdsiEdit is installed (possibly not needed)

The install / running of the GroupWise gateway for Microsoft Exchange has been complicated, and usually requires additional attention to rights as a result of change made in Exchange

More information about this change can be noted at

<http://support.microsoft.com/kb/895949> "Send As" permission behavior change in Exchange 2003.

Preliminary Step to take to insure success before installing the Gateway:

1. Check for the existence of Gwise address space on current policy and remove. Find Policy in Exchange system manager | go to properties | remove any old Gwise address space and apply the policy to remove address space from individual users. Check individual users that the Gwise address space was removed.
2. Find and remove all Gwproxy.dll on all Exchange servers. Delete gwproxy.dll from Program Files\Exchsrvr\address\gwise\i386 directory on ALL Exchange servers. If the file will not delete you may have to stop Exchange services.
3. Enable the hidden security tab at the top of the Exchange Org to assist in checking for proper rights needed to run the gateway. The following document will assist in enabling the security tab:
<http://support.microsoft.com/?id=259221>
4. Create a user to run the Gateway service and remove his membership to groups not needed. IE: remove membership to "users group" as well as any other groups that are not needed. To remove and add membership to a user go to Active directory Users and Computers | properties of the user | membership tab.
5. **(VERY IMPORTANT)** Add group membership for user used to install the gateway as well as the user used to run the gateway rights to the following groups: Domain admins, Schema admins, Enterprise admins, Exchange Domain Servers
6. **(VERY IMPORTANT)** Use the hidden security tab to verify that the Installer user and the Service Runner user do not have deny rights set to the "send as" and "receive as" attributes. Go to Exchange system manager at the top of the Org | right click and see the new security tab we enabled in Step 3. Check each group the installer and runner are a members of and remove deny attributes from the "send as and receive as" check boxes. If the groups are not visible in the Top portion of the

properties page use the ADD button to add the group | highlight the user and check the "send as" and "receive as" rights.

7. Follow the Install and configure documentation for the GateWay
<http://www.novell.com/documentation/gwgateways/index.html>
8. Run the Install for the Gateway.
9. If the gateway fails to start, it is usually an issue with "send as" and "receive as" set to deny. **(VERY TRUE)** Use ADSIedit.mcs to find a possible deny that is not visible in Step 6. To launch ADSIedit go to Start | run | type ADSIedit.msc (If needed you can install ADSEedit using the following URL suggestions <http://technet.microsoft.com/en-us/library/cc773354.aspx>)

NOTE: Use ADSIedit carefully. The goal is to check and set a deny / allow right for the above groups and users. Contact Microsoft support for information regarding the use of this tool.

Using ADSIedit to find Denys to the Mail Store that are not allowing the user to run the gateway:

Set all "Send as and Receive as" rights for the above users and groups to allow. There cannot be any deny on the "Send as and Receive as" for the above groups or users. Not even if the deny is inherited (greyed out.)

1. Go into ADSIedit by going to Start | run | type ADSIedit.msc
2. Expand the Configuration Container
3. Drill down to Configuration/Services/Microsoft Exchange/First Organization/Administrative Groups/First Administrative Group/Servers/Exchange/information Store/First Storage Group/ and not the mail store.
4. Right click the mail store object in the right hand window of ADSIedit and go to security tab.
5. Check "Send as and Receive as" and change any Deny to an allow right for the above users and groups.
6. A Grey check mark set to Deny indicates the right is inherited from above the current container.
7. Walk up the Tree of containers checking at each section to insure the "Send as and Recieve as" is set to allow for the users and groups noted above.
NOTE: The most common hidden deny that needs to be removed is found for the Exchange Domains Servers Group and at the Servers Container.

8. Once all Denys for "Send As and Receive As" have been removed **allow some time for replication**. [Server Restart](#) have also shown to be helpful when rights are set correctly but service still behaves as if it is lacking the "Send As and Receive As" allow rights.