

The Caledonia Guide to GroupWise Mobility Service 2.0

By Danita Zanrè

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About the Author

Danita Zanrè (the “GroupWise Goddess”) has been using “GroupWise” since 1989, when its precursor was known as WordPerfect Office 2.0. She has been involved closely with every version of the product since that time. Danita is widely regarded as one of the top experts in email in general, and GroupWise specifically. She has written many books and articles, and has been a frequent speaker at BrainShare, GWAVACon, and other conferences throughout the world. Her latest endeavor, [The Caledonia GroupWise Power Administrator Resource](#) gives GroupWise administrators all over the world personalized access to almost 25 years of GroupWise experience.

Danita also has great passions when it comes to healthy living and the joys of working at home. You can follow her other lives at <http://www.gethealthywithdanita.com> and <http://www.moveoutoftheoffice.com>.

Table of Contents

1	<i>Let's Get Started with GroupWise Mobility Service!</i>	7
	GroupWise Requirements	1
	Server Requirements	2
	Directory Requirements	3
	Device Requirements	3
	Basic Overview of GroupWise Mobility Service Operation	4
	Multiple GroupWise Mobility Services	4
	Directories and GroupWise Mobility Service	5
	Device Considerations	6
	What's Changed in GroupWise Mobility Service since our last book.	7
	Version 1	7
	Version 1.1	7
	Version 1.2	7
	Version 1.2.1	7
	Version 1.2.2	8
	Version 1.2.3	8
	Version 1.2.4	8
	Version 1.2.5	8
	Version 2.0	8
2	<i>Preparing the GroupWise System</i>	11
	Creating the Trusted App.	11
	Choosing a Contact Post Office Agent	12
	SSL and SOAP	13
	Enabling SOAP at the POA and Verifying SSL Settings	13
	Creating an eDirectory Group or GroupWise Distribution List for Mobility Users	15
	Converting GroupWise External Entities to eDirectory Users	16

	Preparing Users for GroupWise Mobility Service	16
<hr/>		
3	<i>Preparing the SUSE Linux Enterprise Server</i>	17
	Installing your SLES Server	17
	Turning off IPv6 and Configuring a Static IP Address	17
	Opening the Mobility Port for Use by External Users	19
	Disabling Apache and Tomcat	19
	Copy the Trusted App Key File to the Mobility Service	19
	Installing a Trusted Certificate for your Device Sync Agent	20
	Generating your CSR	20
	Preparing Your Certificate for GroupWise Mobility Service	21
<hr/>		
4	<i>Installing GroupWise Mobility Service</i>	23
	Verifying The Installation	29
	Logging into the Admin Web Console	30
	Adding Additional LDAP Contexts	31
	Changing Initial General Settings	33
	Changing Initial Device Sync Agent Settings	34
	Adding Users to GroupWise Mobility Service	35
	Verifying Synchronization and Unblocking Devices	36
<hr/>		
5	<i>Upgrading GroupWise Mobility Service</i>	39
	Update Using the Mobility Service ISO	39
<hr/>		
6	<i>Administering GroupWise Mobility Service</i>	43
	The Web Admin Console	43
	The Mobility Service Configuration Settings	45
	The GroupWise Sync Agent	46
	The GroupWise Sync Agent Settings	47
	The Device Sync Agent	48
	The User Source	50

Single Sign-On . . . . .	.52
Managing Mobility Service Users . . . . .	.52
GroupWise Users . . . . .	.52
GroupWise External Entities . . . . .	.52
GroupWise Resources . . . . .	.53
Adding Mobility Users . . . . .	.54
Viewing Mobility Users and Groups . . . . .	.55
User State . . . . .	.56
Device State . . . . .	.57
Managing Individual Users and Devices . . . . .	.57
Device Settings . . . . .	.58
GroupWise Settings . . . . .	.58
User Actions . . . . .	.59
Device Actions . . . . .	.59
Device Folders. . . . .	.60
Deleting Users . . . . .	.60
Changing SSL Settings for the Mobility Service. . . . .	.61
Replacing the Mobility Service SSL Certificate . . . . .	.61
Updating The Device Connection Certificate . . . . .	.61
Updating the Web Admin Console Certificate . . . . .	.61
Tightening Up SSL Settings. . . . .	.61
User and Device QuickStart. . . . .	.62
Editing XML Files for Other Changes. . . . .	.63
Modifying the Synchronizer Web Admin Port Number. . . . .	.63
Adding Additional LDAP Synchronizer Administrator Users. . . . .	.63
Updating the Mobility 2.0 Installation. . . . .	.64
Updating Using the Patch CD Update . . . . .	.64
Updating Using Zypper. . . . .	.66
Database Management . . . . .	.66
Postgres Maintenance . . . . .	.67

	Mcheck . . . . .	.67
	System Check . . . . .	.67
	Get Mobility Configuration . . . . .	.68
	GroupWise System Address Book Check . . . . .	.68
	User Check . . . . .	.68
	Check User . . . . .	.69
	Other Management Issues . . . . .	.71
	Logs . . . . .	.71
	Register & Update . . . . .	.71
	Certificates . . . . .	.71
	User Authentication Issues . . . . .	.71
	Admin Lockout . . . . .	.71
<hr/>		
7	<i>The GroupWise Mobility Service Dashboard</i>	73
	The Agents Monitor . . . . .	.74
	GroupWise Sync Agent Statistics . . . . .	.75
	Device Sync Agent Statistics . . . . .	.77
	System Statistics . . . . .	.77
	Alerts . . . . .	.78
	The Details Monitor . . . . .	.79
	Users . . . . .	.80
	Devices . . . . .	.81
	POAs . . . . .	.82
	LDAP Connection . . . . .	.82
	DB Connection . . . . .	.82
	Performance Indicators . . . . .	.82
<hr/>		
8	<i>General Device Setup Overview</i>	85
	Modifying User Defaults in the Web Console . . . . .	.85
	GroupWise Settings . . . . .	.86
	Device Settings . . . . .	.87

Overview of Synchronization Options . . . . .	.88
Configuring Devices for GroupWise Mobility Service . . . . .	.88
Verifying the Setup . . . . .	.92
Fetch New Data . . . . .	.93
Show To/Cc Label . . . . .	.93
Flag Style. . . . .	.93
Ask Before Deleting . . . . .	.93
Load Remote Images . . . . .	.93
Always Bcc Myself . . . . .	.93
Signature. . . . .	.94
Default Account . . . . .	.94
Contacts Setup . . . . .	.94
Calendar Settings . . . . .	.94
Account Info . . . . .	.94
Turning the Account on or Off. . . . .	.94
Mail Days to Sync . . . . .	.95

1 Let's Get Started with GroupWise Mobility Service!

The more things change

In 2010, Novell released a product with a name that didn't exactly roll off the tongue. "Novell Data Synchronizer Mobility Pack", as it was known, was part of a larger Data Synchronizer suite offered by Novell. But despite the less than intuitive name, the "Mobility Service" as we came to know it, was one of Novell's most successful products, and brought ActiveSync devices of all kinds into the GroupWise world.

As of April 30, 2013, Novell discontinued their Data Synchronizer offerings of connectors to SugarCRM, Sharepoint and Salesforce. Novell still maintains the Vibe Connector for Data Synchronizer. GroupWise Mobility Service 2.0 is the new name for the somewhat reinvented stand-alone version of Data Synchronizer. Novell's stated direction for GroupWise Mobility Service is to ultimately divorce it from the "Middle Man" synchronizer engine, and bring it more into line as a "client", much as WebAccess is now a direct client for GroupWise. But that's a story for another day!

GroupWise Mobility Service 2.0 is an Add-On ISO for SUSE Linux Enterprise Server 11 SP2 and SP3. GroupWise Mobility Service is available free of charge to all Novell GroupWise, Novell Open Workgroup Suite and Novell Open Workgroup Suite Small Business Edition customers with current maintenance coverage. This guide has instructions for GroupWise Mobility Service version 2.0. If you are using an older build for a specific reason, some options in this guide might not be available.

Many of you no doubt remember (and some might still use) the older GroupWise Mobile Server (GMS) that preceded Data Synchronizer. While it might seem a bit confusing, we will no doubt start using GMS to mean the new GroupWise Mobility Service. Unfortunately, there was even a GMS 2.0 for the older GroupWise Mobility Service, so GMS 2.0 doesn't really even clear up possible confusion. For purposes of this guide, however, there are NO further references to the older GroupWise Mobile Server, and all references from here on out, intentional or otherwise, to GMS or even Mobility Server, will indeed mean the new GroupWise Mobility Service 2.0!

This book is intended as a full Mobility Service administration book, and deals with installation of the system from start to finish. If you are upgrading from a 1.x Data Synchronizer Mobility Pack, we will cover upgrading in the "*Upgrading GroupWise Mobility Service*" chapter. It wouldn't hurt to also read "*Preparing the GroupWise System*" and "*Preparing the SUSE Linux Enterprise Server*" to ensure that nothing has changed in your environment that might encourage you to make some changes. The following new information is definitely of use to both new installations and upgrades!

GroupWise Requirements

In order to use GroupWise Mobility Service, you need to be on one of the following versions of GroupWise:

2 | Let's Get Started with the Mobility Service!

- GroupWise 2012 Support Pack 2 or later
- GroupWise 8 Support Pack 2 Hot Patch 3 or a later Hot Patch, on Linux or Windows (no NetWare)
- GroupWise 2014 (Windermere), when it ships

It is suggested that you be on the most current version of GroupWise, as many functions and features have been optimized for the newest Post Office Agents.

You will need to create a trusted application (see *“Creating the Trusted App”*) in your GroupWise system for GroupWise Mobility Service. Additionally, any Post Office Agent that services mobile users must have SOAP enabled. It is recommended that the POA also have SSL enabled for SOAP to secure data traversing the network.

Your GroupWise system must have Internet Addressing enabled.

GroupWise Mobility Service is not compatible with GroupWise 7 or older systems.

Server Requirements

The server requirements for GroupWise Mobility Service are fairly straightforward:

- SUSE® Linux Enterprise Server (SLES) 11 64-bit, plus currently SP2 and SP3 (you cannot use a 32-bit SLES server for Mobility)
- 64-bit/x86 processor
- 2.2 GHz processor; multi-processor system recommended
- 4 GB RAM (Novell says this will support 300-750 devices, depending on usage) up to 8 GB of RAM for a maximum of 750 user/1000 devices
- 45 GB system partition
- 200 GB data partition (preferably mounted as /var)
- Static IP Address
- Available Public IP Address that will listen on port 443*
- DNS host name for device synchronization. For example, have your DNS provider set a host name of gw.company.com for the Public IP Address you designate for your Mobility Service,

As a SLES Add-On, it is assumed that GroupWise Mobility Service will be installed as an “appliance” so to speak, with no other processes running on the server.

Note that in our testing for very small systems, we have run GroupWise Mobility Service in a virtual machine with only 2 GB of RAM, and a much smaller hard drive.

The hard drive space will really depend on how many users you are providing services for, and how much data they have. The bulk of the data for GroupWise Mobility Service is stored in /var/lib/pgsql. The log directory is /var/log/datasync. It can be useful to configure your SLES server with /var as a separate partition for future expansion needs. You might even partition /var/lib/datasync/syncengine/attachments as an entirely separate partition as well, due to the larger needs for attachments. GMS is very I/O intensive. Thus, for larger and extremely active systems, we even suggest to have different storage channels per partition.

We highly encourage that you create your GroupWise Mobility Service as a Virtual Machine when possible. Mobility comes out with updates more often than many other components

in your GroupWise system, and it is of great convenience to simply snapshot your system, upgrade and be off and running, knowing that if a particular build exhibits bad behavior you can simply roll back to a machine a couple of days old, and lose very little data. Since the Mobility is a “pass between”, all that rolling back would lose is individual user configuration that has happened in the meantime, such as choosing which address books to synchronize.

* Most sites these days have more than one public IP address in their IP range. While there are some convoluted workarounds, if you intend to have both GroupWise WebAccess and GroupWise Mobility Service, you really need to have two different public IP addresses that can separately listen on port 443. It is a great inconvenience to users to require a non-standard port for WebAccess SSL, and many mobile devices simply will not work if you try to use a port other than 443.

Directory Requirements

GroupWise Mobility Service needs to talk to a “GroupWise” directory. This can be eDirectory via LDAP, or the GroupWise directory itself. GroupWise Mobility Service does not actually support any LDAP directories other than eDirectory. We will discuss Directory considerations later in this chapter.

Device Requirements

In general, any device that can support Microsoft Exchange ActiveSync Protocol 2.5 through 12.1 can use GroupWise Mobility Service 2.0 to some extent. There are, of course, a myriad of such devices out there. A small listing includes:

- Android 4.1.x or later
- Apple iOS 6.2 and 7.x
- Blackberry 10
- Symbian 9.x
- Windows Phone 7.8
- Windows 8 (Phone, Tablet, and Desktop)

A number of third-party ActiveSync applications have been tested by Caledonia, including NitroDesk’s Touchdown (iOS/Android/Mac/Windows), Fixmo’s SafeZone, AstraSync for BlackBerry and NotifyLink’s ActiveSync client. Your mileage may vary!

For all other devices, while they may be supported, there is a great deal of difference in the functionality from one device to another. Novell has a Wiki that is user contributed to help with connectivity issues for various devices. You can find information at http://wiki.novell.com/index.php/GroupWise_Mobility_Devices. It is recommended that you peruse this Wiki for information on devices that your users might wish to connect to GroupWise Mobility Service. Of course, it is also very helpful for the rest of the community if you and your users update this Wiki with information from your own experience that might be useful to the community as a whole.

Basic Overview of GroupWise Mobility Service Operation

In addition to a new name, there are a few changes to names of components and processes for GroupWise Mobility Service 2.0.

With Data Synchronizer, you had “connectors”. An engine in the middle allowed disparate systems to talk to each other. So, for the earlier Mobility Pack, there was a GroupWise Connector and a Mobility Connector. These have been replaced with a GroupWise Sync Agent and a Device Sync Agent. And as an aside, you can no longer “delete” these Agents, as you could (accidentally, and with unhappy consequences) the individual Connector in the 1.x version.

Also, the system had many references to “datasync” throughout. And while Novell has changed the main scripts to start and stop the Mobility service from “datasync” and “rcdatasync” to “gms” and “rcgms” respectively, you will find that most directory structures and underlying scripts and processes will still use the “datasync” references.

GroupWise Mobility Service has five basic components that are installed:

- **Synchronization Engine:** The middle-man. This Engine still exists, but is not as active as in prior versions. The Synchronization Engine’s main function is to provide the mechanism for the sync agents to communicate with each other. With GMS 2.0, however, the agents talk directly to each other whenever possible.
- **GroupWise Sync Agent:** The GroupWise Sync Agent listens by default on port 4500, talks to the Post Office Agent via SOAP, and saves its data into a PostgreSQL database.
- **Device Sync Agent:** The Device Sync Agent listens on port 443 and talks to devices via Microsoft Exchange ActiveSync protocol. This allows GroupWise to communicate with any ActiveSync enabled device as though the device were talking to an Exchange ActiveSync server.
- **Mobility Admin Console:** Administration of the system after installation is performed through a Web Admin tool. The Mobility Admin Console runs by default on port 8120 on GroupWise Mobility Service. This port can be changed, and we will go over that in the chapter entitled “*Administering GroupWise Mobility Service*”. Novell lists Internet Explorer 10 or later, Firefox 20 or later, Safari 6 or later and Google Chrome 26 or later as supported browsers for administration. Not only is the Mobility Admin Console used by the administrator for defining and administering GroupWise Mobility Service, this Console can also be used by end users to change and refine the address books and folders synchronized by the Service.
- **Monitor Service:** The Monitor Service can alert the administrator to events and problems with GroupWise Mobility Service, including the availability of POAs and other processes.

Multiple GroupWise Mobility Services

As Novell suggests, a single server running GroupWise Mobility Service can manage up to 750 users with 1000 devices. Your mileage may vary here, and it’s possible to exceed these limits, depending on usage. If you have more than 750 users who need access to GroupWise Mobility Service, and you find your performance lacking as you exceed these numbers, you can install multiple servers running GroupWise Mobility Service. In addition to overall “load” of the system, you might choose to have multiple servers running GroupWise Mobility Service to accommodate users in remote sites without sending all of the data to one server.

Directories and GroupWise Mobility Service

Throughout the product installation and configuration you will see references to both LDAP (Lightweight Directory Access Protocol) and GroupWise when defining your “Directory” for access. There are two different considerations here when choosing your Directory:

- User Provisioning
- User Authentication

There are some historical considerations that will be useful to discuss here, and then we can decide how you will choose your Directory type for each option.

First let’s talk about GroupWise and authentication in general. As you probably know, GroupWise can use either native GroupWise authentication or LDAP authentication to validate user access to the Post Office. There are generally two reasons why a company chooses LDAP authentication over GroupWise authentication. The first is users do not need to remember two different passwords, and the second is that password restrictions can be enforced for GroupWise accounts. GroupWise can theoretically authenticate to any LDAP server, including both eDirectory and Active Directory. For GroupWise 2012 and prior, eDirectory is automatically integrated with GroupWise, and Active Directory can be used as the LDAP source by populating the LDAP field for each user manually. Beginning with GroupWise 2014 (Windermere), Active Directory will be supported as a Directory source for integration with GroupWise.

GroupWise Mobility Service started out as a module in Novell Data Synchronizer. This was a product that used eDirectory as its provisioning source. The initial version of Data Synchronizer Mobility Pack could only use eDirectory for provisioning AND authentication. This posed some problems, as sites using GroupWise authentication at the POA would find that users had different eDirectory passwords than their GroupWise passwords. The user had to use the eDirectory password for authentication from devices, and not the “email” password. This was very confusing for many users.

Version 1.1 of the Mobility Pack introduced GroupWise authentication. From that point, a site could use the GroupWise passwords for devices. Provisioning users still required the eDirectory LDAP server though. The addition of GroupWise authentication also allowed sites who used AD as their GroupWise LDAP authentication server to implement the Mobility Pack server. Essentially, with Version 1.1, the Mobility Pack could simply query the POA for authentication, and no matter which password the POA was configured to use (GroupWise or LDAP), the POA would be in charge of the authentication.

There is little doubt that the “decoupling” of GroupWise from eDirectory with GroupWise 2014 (the next version of GroupWise which will ship shortly after GroupWise Mobility Service 2.0) prompted some major changes to GroupWise Mobility Service. If sites will no longer need ANY third-party directory service to install and manage a GroupWise system, GroupWise Mobility Service has to address the needs of a “standalone” GroupWise system.

Additionally, since “External Entities”, “Unassociated Users” and “Resources” have no LDAP passwords, the only way you can use those entities in GroupWise Mobility Service is to use GroupWise authentication as your source.

Finally, if you choose to use LDAP as your provisioning type, you will define your administrators from the LDAP server, and use the LDAP passwords for logging into the Web Console. If you use GroupWise provisioning, you will use the root user of the GMS server itself.

So, what do you choose? While we’re not sure that it’s a stated direction at this point, it seems pretty likely that LDAP is only available here as a “transitional” choice. In other words, it’s quite possible that in the future LDAP will no longer be a choice for provisioning and/or authentication. It’s our opinion that the simplest setup is to use GroupWise for both

provisioning and authentication. Some sites upgrading from older versions of the Mobility Pack will no doubt choose to just “leave” things the way they are. That said, the simplicity of using GroupWise for both provisioning and authentication cannot be overlooked. Moving forward, we certainly recommend that you move away from LDAP for your provisioning and authentication.

Device Considerations

The Device Sync Agent is based on Microsoft Exchange ActiveSync Protocol Version 12.1. You can find a comparison of various ActiveSync versions here: http://en.wikipedia.org/wiki/Comparison_of_Exchange_ActiveSync_Clients. In addition to the standard two-way synchronization of mail, calendars and contacts, a few items are noteworthy:

- Calendar Notes are generally synchronized to devices as All-Day-Appointments, as they have been with most synchronization products in the past, including the older GroupWise Mobile Server, Blackberry Enterprise Server, and even desktop synchronization tools like Intellisync Desktop.
- Calendar item attachments are not synchronized with the Mobility Service. This is a GroupWise only feature by and large. Outlook, for example, does not have the ability to have attachments on calendar items. Thus, while you may have attachments on GroupWise calendar items, they will not synchronize to the devices.
- Supported attachments will be downloaded to devices, according to the size limitations set by administrators. If an attachment is too large, users receive a text attachment indicating that the real attachment was not downloaded.
- Some devices cannot view messages “forwarded as attachment”. WebAccess must be used for these devices to view an attached message that has been forwarded in this manner.
- GroupWise Mobility Service initially gathers the past 3 days of mail (from all folders) for the user to synchronize. Users can request additional (or fewer) days of mail from their devices. While GroupWise Mobility Service by default contains mail from all folders, mail is only delivered to devices when requested. Typically the “Inbox” (i.e., the GroupWise Mailbox folder) is synchronized to all devices, and mail from other folders only is synchronized when the user accesses said folder. Users can log into the Web Portal and limit the folders that are delivered to Mobility.
- GroupWise Mobility Service supports synchronization of contact photos when supported by the device.
- GroupWise Mobility Service will send calendar items from all calendars in the user’s mailbox (except for calendars to which the users are a sharee and not the owner). Depending on the device, these will be aggregated into a single calendar, or represented as individual calendars as they are in the GroupWise client.
- Shared folders and shared calendars are not supported except for the owner of the folder or calendar. For shared calendars, the GroupWise Calendar Publishing Host can be a good workaround for devices that have the ability to subscribe to “Internet Calendars.” Beginning with Version 1.2.5 of GroupWise Mobility Service, Resources can be synchronized, so moving shared calendars to Resources as owners can help with this, by allowing all users access to “log in” as the Resource on their devices as a secondary ActiveSync user configuration.

What's Changed in GroupWise Mobility Service since our last book.

Here's a rundown of how GroupWise Mobility Service has changed over the past few years. All version 1.x was known as Data Synchronizer Mobility Pack. With version 2.0, the name has changed simply to GroupWise Mobility Service.

Version 1

This was the initial release of GroupWise Mobility Service, and was the introduction of ActiveSync to GroupWise. The biggest “oddity” to this version was that LDAP authentication for the devices caused great confusion. Users had to enter their eDirectory password “to receive mail” even if their GroupWise password was different.

Version 1.1

- This version increased the number of supported users to 300.
- At this point, GroupWise authentication was added, allowing sites that did not use LDAP authentication (or even sites that used AD authentication) to provide the “GroupWise” password for the devices.
- Novell also added the ability to choose whether some folders were never synced to devices, thus cutting down on the “clutter” of folders on devices that would not collapse folder trees. This also cut down on the amount of data sent to GroupWise Mobility Service, but I don't think that's what excited the users the most.
- This version also enabled “discussion notes” (i.e., posted email notes) to be synchronized to devices.
- Version 1.1 also brought about security policies for device passwords.
- An “oversize” text file was replaced for attachments that were too large to send to the device, alerting users that an attachment exists for the email.

Version 1.2

- Supported users increased to 500.
- Reply/Forward icons were fixed so that the GroupWise Client would show that items were replied to or forwarded from the devices.
- HTML Mail was added for iOS devices.

Version 1.2.1

- This version added a delivery failure message that would alert the device user that a message sent could not make it to GroupWise. The most common reason for this would be your mailbox was overlimit and you have no “sending rights”.
- Archived items that use “stubbing” protocols no longer have the stubbed subject sent to the devices.
- Task synchronization was added as a “preview” option.

Version 1.2.2

- This version added a “poll now” button to the LDAP Group polling in the Global Settings.
- A disk-space monitoring tool was added to stop sync processing if the disk space taken reached 90%. This took some administrators by surprise, and I fended many support questions about this one.

Version 1.2.3

For the most part, this version was bug fixes and stability enhancements. The most notable new change was:

- The administrator can now limit the number of devices a user can connect to GroupWise Mobility Service.

Version 1.2.4

- SLES 11 SP2 gained support with this version.
- Zenworks Mobility Management Integration was added.
- Log File storage was optimized.

Version 1.2.5

The biggest changes to note in this version are:

- Users and Groups are no longer defined under each connector, but as a whole for the entire system.
- A new Global Status Monitor was in preview and has been greatly expanded on in version 2.0.
- New devices can be quarantined, so that new devices do not just pop onto GroupWise Mobility Service without warning.
- Inactive Devices can be removed from the system automatically after a specified time period.
- Resources can be synchronized.
- You can access the WebConsole as root, in case LDAP is down and your LDAP administrator is unavailable.
- There were two different 1.2.5 builds that were publicly available - 250 and 299.

Version 2.0

- GroupWise Mobility Service 2.0 has been redesigned as an “ActiveSync Only” process, which is no longer part of the modular Novell Data Synchronizer.
- New Administration Console that is streamlined for the single purpose of Mobility.
- Scaled for larger systems (750 users/1000 devices per server)
- New Monitoring Dashboard that provides single-glance status of system, devices and users.
- New troubleshooting options with “MCheck”.

- Server AutoDiscovery support
- Email Alert notifications for both service outages and device quarantine notifications.
- ActiveSync 12.1 Support was added. This allows newer devices that ONLY support ActiveSync 12.x and newer to work with GroupWise Mobility Service.
- Task sync has been taken out of “preview” mode and added to full support.
- GroupWise Phone Messages are now synchronized.
- Users can choose the address book where new contacts should be added.
- GroupWise 2014 support (when GroupWise 2014 ships)
- Removal of dependencies on LDAP through GroupWise provisioning
- Reporting capabilities
- SLES 11 SP3 is only officially supported with GroupWise Mobility Service 2.0. The 1.2.5 Mobility Pack could technically run on SP3, but there is no official support for SP3 and the 1.x version.

In the next chapter, we will begin our preparations for GroupWise Mobility Service installation.

2 Preparing the GroupWise System

In this chapter, we will go over the GroupWise preparations needed for GroupWise Mobility Service.

Creating the Trusted App

The Mobility Service acts as a GroupWise Trusted Application. This is an application that shares a “key” with the GroupWise system to bypass the need for passwords for individual users. You create the Trusted App key in ConsoleOne. You need at least GroupWise 8 SP1 HP1 snapins to perform the steps as listed here. All GroupWise 2012 snapins work for our purposes. Here are the steps:

1. Open ConsoleOne and connect to your primary domain.
2. Click on the GroupWise System to the left, and then choose Tools\GroupWise System Operations\Trusted Applications.
3. Click Create to start a new Trusted App setup. Enter the following information:
 - **Name:** The name of your Trusted Application. This must be unique to your system. We have named ours “Mobility”
 - **Description:** Enter a description so that later you will know what this application is used for.
 - **TCP/IP Address:** We have found that attempting to limit the IP address for GroupWise Mobility Service results in failure of the GroupWise Sync Agent to properly talk to the Post Office Agent. At this point we recommend that you leave this field blank.
 - **Requires SSL:** Choose here if you wish to require SSL for the application. We recommend that you leave this unchecked for now. This gives you the ability to test and work through issues as you need to.
 - Do not chose Message Retention.
 - Enter a file location for the text file that will be created. This will contain a long string of characters that will be used by GroupWise Mobility Service installation. Your file location will likely be on the local server or workstation, and you will copy it to GroupWise Mobility Service server prior to installation.
 - Enter the name of your Trusted App key file. This can be truly any file name you desire. Just don't lose the file! Otherwise, you'll have to create a new Trusted App key the next time you install GroupWise Mobility Service from scratch.

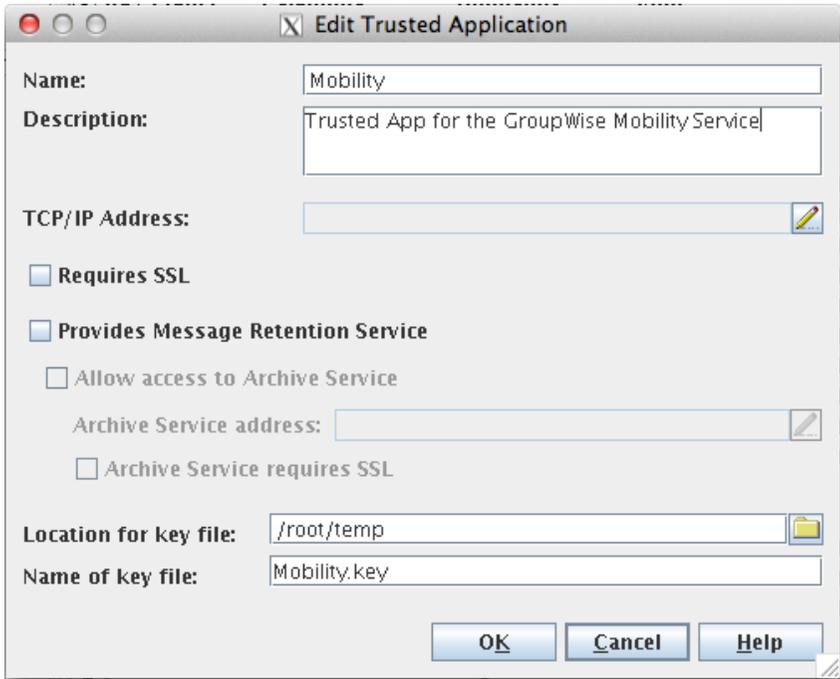


Figure 2-1: The Trusted Application creation window

Choosing a Contact Post Office Agent

GroupWise Mobility Service relies on a “Contact” Post Office Agent to authenticate users. This can be any Post Office Agent in your system. Essentially this is what happens: When a user is added to GroupWise Mobility Service, the GroupWise Sync Agent contacts the defined Post Office Agent, and asks for the Post Office for the user in question. This is then written into the database for that user.

This Contact POA can be anywhere. It uses the same type of redirection table for SOAP as POAs use for redirecting client requests on port 1677. There is only one location for a POA in the GroupWise Sync Agent setup. While any POA can be used, it is best to choose one in “close network” proximity to GroupWise Mobility Service, and also is reliably available.

Enabling SOAP for GroupWise Mobility Service

The GroupWise Mobility Service GroupWise Sync Agent uses the Post Office Agent SOAP protocol to do its synchronization.

SSL and SOAP

You can create your own SSL certificate (a self-signed certificate) or purchase a certificate for your Post Office Agent.

An SSL certificate is issued by a “Certificate Authority”. There are many recognized SSL Certificate Authorities. Just a few names to float around are Verisign, Comodo, GoDaddy, DigiCert and Thawte (and we know there are many more, but it’s way beyond the scope of this guide to list them all). When you purchase a certificate from one of these providers, you are not only purchasing an encryption certificate, but a “trust relationship”. Most web browsers and mail clients will “trust” certificates created by these authorities as being genuine, and assuming there are no other problems (name mismatches, expiration dates, and the like), the web browser or email client will not complain, and “trust” that certificate for encryption. I’m sure most of you have encountered a “questionable” certificate in surfing the web. You are presented with a window that says the certificate might not be valid, and a request that you confirm or deny whether you wish to continue.

By virtue of having a GroupWise system (at least prior to GroupWise 2014/Windermere), you have at least ONE Certificate Authority of your own – your eDirectory certificate server. You may also have a separate CA on a Windows or Linux server, even your new Mobility server. And it’s perfectly reasonable for you to use one of these if you wish.

You can choose whether you wish to purchase a certificate based on your organization’s policies, or you can generate your own certificate. If your POA is only being used for internal communications between GroupWise components, there is really no need to purchase an SSL Certificate. You can easily just create your own self-signed certificate for your POA to use in communicating via SOAP over SSL with the Mobility Service’s GroupWise Sync Agent.

Novell’s documentation on this is fairly clear, so we will not reinvent the wheel here. You can find their steps here: http://www.novell.com/documentation/groupwise2012/gw2012_guide_admin/data/ak9e3ju.html (section 83.2 of GroupWise 2012 Administration Guide).

Just for clarity, here are the basic steps that are outlined in the Novell documentation:

1. Create a Certificate Signing Request. This is really just a file that you send to the certificate authority (or then use yourself if you choose to create a self-signed certificate) in order to have your certificate generated. (See step 83.2.1 in the Novell documentation).
2. If you choose to purchase a certificate, the authority must be able to provide the certificate in Base64/PEM or PFX format.
3. If you choose to generate your own certificate, follow the instructions beginning with step 83.2.2.

Enabling SOAP at the POA and Verifying SSL Settings

Now we will ensure that SOAP is turned on. You may have other processes, such as GroupWise 2012 WebAccess or a BES that already use SOAP. If this is the case, then you will be good to go! We will go over these steps now.

1. In ConsoleOne, change the drop-down list in the GroupWise view to show Post Office Agents.
2. Edit the properties of your POA.
3. Click the triangle on the GroupWise tab, and change to Agent Settings.
4. Click the “Enable SOAP” box to turn on SOAP.

5. The default for “Max SOAP threads” is 20. This cannot be increased. It can, however, be decreased if you wish to reduce overhead on the POA. The POA will start with four SOAP threads, and add more as needed, up to the Max stated here.
6. Click on the triangle again (now where it says Agent Settings), and change to Network Address. Verify that SOAP shows port 7191 for the Internal SOAP port (or change it as necessary if you wish to use a different port). If you intend to enable SSL for this Post Office Agent, set the SSL to “required” or “enabled”.
7. To enable SSL, you also have to indicate the location of the certificate file. Copy the files that were generated in the SSL Certificates Section above to a location on the server so that they are accessible by the POA.
8. Click on the triangle again (now where it says Network Address), and go to SSL Settings. Enter the location for both the certificate and key which was received, and if necessary, enter the certificate password.
9. Click OK to save all of your changes.
10. Restart your POA.
11. You can test that the POA is now listening for SOAP connections by opening a command prompt on Windows, or a terminal window on Linux and typing the following

telnet ipaddressofpoa 7191

You should see a connection like that shown below.

```
telnet 192.168.100.238 7191  
Trying 192.168.100.238...  
Connected to 192.168.100.238.  
Escape character is '^]'.
```

Some versions will go on to show similar info:

```
HTTP/1.0 500  
Date: Sat, 20 Mar 2013 16:55:54 GMT  
Server: Linux GroupWise POA 8.0.2  
Content-Type: text/html  
Pragma: no-cache
```

You may also quickly receive a disconnect from the server, and that’s okay!

NOTE: If you are using Windows versions newer than Vista, the Telnet Client is not enabled by default. It’s a good utility for all administrators to have, and is available through Control Panel|Programs|Turn windows features on or off. Then on the list that appears simply check the box beside Telnet Client.

Creating an eDirectory Group or GroupWise Distribution List for Mobility Users

There are two ways to add users to GroupWise Mobility Service installation: individually adding users and adding a group of users. If you are using LDAP Provisioning, the group is an eDirectory group. If you are using GroupWise Provisioning, this is done via a GroupWise Distribution List. We recommend that you create a group or distribution list (perhaps just named “Mobility”) and assign users to that group who will need to have access to GroupWise Mobility Service. Once you have a group defined for your Mobility users, you can add and remove users from this group to easily control the access to GroupWise Mobility Service. If, however, your GroupWise userids and eDirectory userids are not the same and you use LDAP provisioning, we have found that using the eDirectory group is unreliable. See more information in the section entitled “*Managing Mobility Service Users*”. If you use GroupWise provisioning, make the visibility of your distribution list “invisible” if you wish to prevent it from being seen in the address book.

Understanding the Relationship between LDAP and the Mobile Server

There is one small idiosyncrasy of GroupWise Mobility Service, at least from a GroupWise perspective: While it appears that Novell assumes that all sites are using LDAP authentication for their users, and that all GroupWise users are eDirectory users (and not External Entities!), we’ve found in our travels that this is just not the case. Over half of the sites we surveyed (and a quarter of sites over 500 users) do NOT use LDAP authentication for GroupWise. Add to that the number of GroupWise External Entities that we have encountered, and some currently configured GroupWise sites will have trouble using LDAP provisioning and authentication. However, as we discussed in the prior chapter, this is no longer a requirement, and if you have no additional needs for LDAP with regards to the Mobility Service, you can use GroupWise provisioning and authentication.

Since GroupWise requires eDirectory for administration, most GroupWise sites have eDirectory as the primary LDAP server. Of course, GroupWise allows sites to use this LDAP server (i.e. eDirectory) to act as the authentication mechanism for GroupWise clients, bypassing the GroupWise password entirely. For these sites, GroupWise users created as GroupWise External Entities bypass the LDAP authentication, and are redirected to native GroupWise authentication. This allows both eDirectory users and GroupWise External Entities to coexist in a GroupWise system that relies on LDAP authentication.

If you use LDAP authentication for the Device Sync Agent, users who have separate GroupWise and eDirectory passwords will be required to enter their eDirectory password on their devices to authenticate to Mobility. If you wish to allow External Entities and Resources to use GroupWise Mobility Service, you must use GroupWise Authentication. This is okay even if you are using LDAP authentication for your GroupWise POA itself. Basically, when you turn on GroupWise authentication, the password that the POA accepts (whether the native GroupWise password or the LDAP password associated with the user) is what Mobility uses.

Converting GroupWise External Entities to eDirectory Users

As stated above, as long as you use GroupWise Authentication in the Device Sync Agent, External Entities can access their GroupWise data through GroupWise Mobility Service. If for some reason you do not wish to use GroupWise authentication, but require GroupWise External Entities have access to GroupWise Mobility Service, you will need to first convert the External Entity to an eDirectory user. Here are the steps:

1. Find the GroupWise External Entity in your eDirectory tree.
2. Right-click on the External Entity to be converted.
3. Choose GroupWise Utilities\GW/eDirectory Association.
4. Choose Convert External Entity to User.
5. You may receive an IDM driver warning at this time. If you are using the IDM driver for your GroupWise system, follow the instructions given.
6. You will be asked to verify that you wish to convert the External Entity to an eDirectory user, choose Yes.
7. Edit the properties of the new User object and assign a password for the user to use for GroupWise Mobility Service authentication.

After you have completed these steps, the GroupWise user will have access to GroupWise Mobility Service for device synchronization.

Preparing Users for GroupWise Mobility Service

Another by-product of using LDAP provisioning for GroupWise Mobility Service occurs when you have users who have an eDirectory userid that does not match the GroupWise userid. For example, my eDirectory ID is danitaz, and my GroupWise Userid is dzanre. If this is the case in your organization, you will need to write down the eDirectory and GroupWise userids for later when you are preparing GroupWise Mobility Service for use.

While we recommended the convenience of using eDirectory groups to enable Mobility users when using LDAP provisioning, there is one instance where we have found eDirectory groups to be problematic. That is when the user's eDirectory ID does not match the GroupWise Userid. While it is perfectly acceptable for your two IDs to be different, we have found that adding such users via an eDirectory group is unreliable. In fact, in recent GroupWise Mobility Service installations (using the most recent code available), each time we have attempted this, the only way to get devices to actually synchronize was to delete the user from the eDirectory group, wait until the user clears from GroupWise Mobility Service, and then add the user in again manually, making certain to set the "Application Name" at the time of user addition (this will be discussed in more detail in the chapter on *"Administering GroupWise Mobility Service"*).

3 Preparing the SUSE Linux Enterprise Server

In this chapter, we will go over the SLES preparations needed for GroupWise Mobility Service.

Installing your SLES Server

As we mentioned in the Getting Started chapter, the Novell GroupWise Mobility Service requires a 64-bit server, and cannot be installed on 32-bit SLES.

This guide does not intend to be a complete installation guide for SLES. We will just go over a few issues that are important for GroupWise Mobility Service installation.

First, we know of no “X-server” requirements for GroupWise Mobility Service, and you could simply install a very vanilla SLES 11 server with no X Window System components (i.e., GNOME or KDE). However, we also know that most GroupWise administrators feel uncomfortable not having GUI capabilities. Thus, you can choose whether you wish to install the Graphical Environment Files during your SLES server installation.

For our test server, we simply kept the default server configuration (GNOME for the Graphical Environment and Print Server with Web Based Enterprise Management selected for the Primary Function) and added the C++ Compiler and Tools.

There is no need for (thus you should not install) Apache or Tomcat. We typically also make sure that we have sources and compilers installed on all of our servers “just in case”, especially if you are installing this as a virtual machine and intend to add virtual tools to the server. There is an option during installation to install “Add-On” services to a SLES 11 server. And indeed GroupWise Mobility Service is an “Add-On” service for SLES 11. However, we do not recommend that you attempt to install GroupWise Mobility Service add-on during the initial installation of your SLES server. There are options and configuration items that are required prior to installation, and we will come back to the actual installation of GroupWise Mobility Service later in this guide.

Turning off IPv6 and Configuring a Static IP Address

During the installation, you will reach the Network Configuration screen (Figure 3-1). Click the link in the General Network Settings section to “Disable IPv6”. Earlier versions of Mobility did not work at all if IPv6 was enabled. If indeed you do need IPv6, you can leave it enabled, but our motto has always been, don’t have random protocols available that are not required.

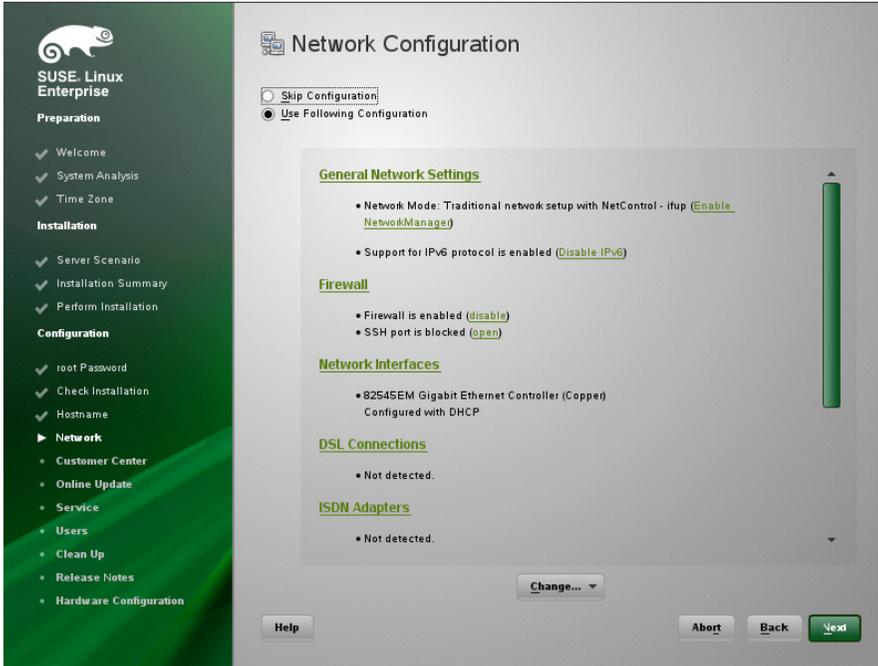


Figure 3-1: The SLES Network Configuration Screen

Now you will need to configure a static IP address for your GroupWise Mobility Service server. Click the Network Interfaces link in Figure 3-1 and with the network interface selected click Edit. Change the setting here from DHCP to Static and enter your Static IP address, Subnet Mask and Hostname. After you click Next here, also make sure to click the Routing tab to enter the default route for the server. It is also very important to make sure DNS is properly configured on this server, as the GMS installation checks for DNS resolution, and will have difficulties if DNS resolution is not working properly.

If you intend to keep the SLES firewall loaded, you must open these ports/services:

- **SSH**, port 22 - for internal use only. You can also change the default SSH port
- **GroupWise Sync Agent Listening Port**, port 4500 (default, you can change this). This is for internal use only. The GroupWise POAs in your network need to be able to talk to this port.
- **HTTPS**, port 443. Our assumption here is that you are using SSL for your device connections to your Mobility Service. This could be simply HTTP over port 80, but most devices will complain if you are not using SSL on port 443. Make your life simple and use SSL and port 443! You will need to open this for outside access so that your mobile devices can talk to the Device Sync Agent.
- **Web Console Port 8120**. This is the port that the admin console runs on. This does not need to be accessed from outside of your network, but any machine needing to administer the system will need access to port 8120. If you intend to allow your users to access the Web Console from outside of your network to modify their own sync settings, you will also need to provide access to this port from outside of your network.

- If you have enabled the proxy on your SLES server, make sure that you have an exception to the GroupWise server's SOAP port that you will use as your GroupWise contact POA. SOAP talks on https or http and will be "caught" by the proxy otherwise, and you will not be able to verify your Trusted Application during the installation. If you get stuck there, the proxy is most likely the problem.

Opening the Mobility Port for Use by External Users

This particular function will be different at various sites, depending on your setup. Your site should have a dedicated external IP address for the server dedicated to GroupWise Mobility Service, and you will need to forward traffic on port 443 of this public IP address through to port 443 of your Mobility server. The general steps needed to make the process easy for your users are:

- Choose a DNS name that is easy to remember for your users – for example, gw.yourdomain.com
- Create a DNS record for gw.yourdomain.com to reach your network
- Enable port forwarding and create packet filters to allow HTTPS traffic to reach GroupWise Mobility Service. While the port used by the Device Sync Agent can be modified, most devices will automatically attempt to connect HTTPS to port 443 when setting up ActiveSync services, and many will fail altogether if you attempt to change the port. Thus, using port 443 makes the most sense overall.

These steps may be accomplished by the GroupWise Administrator in some cases, or handed off to the network or firewall department in other organizations. If you are unsure of how to accomplish these tasks, you will need to consult the documentation for your firewall. There are too many types of firewalls available for us to go into detail on this step.

Disabling Apache and Tomcat

If you followed our recommendation for installing the SLES server without Apache and Tomcat, then you need not worry about turning them off. If you have Apache and Tomcat installed on this server, you can disable them by running the following commands:

```
rcapache2 stop
rctomcat6 stop
chkconfig --del apache2
chkconfig --del tomcat6
```

Copy the Trusted App Key File to the Mobility Service

Make sure that the Trusted App Key File that you created in the previous chapter is copied to the GroupWise Mobility Service server. If you created the Trusted App Key in ConsoleOne on Linux, you can use scp to copy the file from the GroupWise Linux server to the Mobility server. From the GroupWise server type

```
scp nameoffile root@mobilityserverip:/root/
```

This will copy the file to the /root directory on the Mobility server. Of course, you can use any valid user on the Mobility server for the user to log in as, and you can place the file in any directory of your choosing.

If you created the Trusted App Key in ConsoleOne on Windows, you can use pscp from PuTTY <http://www.chiark.greenend.org.uk/~sgtatham/putty/> to copy the file.

Installing a Trusted Certificate for your Device Sync Agent

Since many devices will complain about an untrusted certificate if you use a self-signed certificate, you may wish to purchase a certificate for your Mobility server. We can see situations during “testing” where you are not ready to do this, but ultimately most GroupWise Mobility Service Servers will want a trusted certificate. If you plan on using a trusted certificate from the start, we will go ahead and get this ready now. If you decide to let the GroupWise Mobility Service installation create a self-signed certificate for now, and wish to change it later, you can see the instructions in the chapter on “*Administering GroupWise Mobility Service*” later in this guide. You can purchase very inexpensive certificates at godaddy.com, for example, that can be used for your Mobility Service.

Generating your CSR

These instructions are for general use, and should be sufficient for most organizations’ security needs. If your organization has stronger security requirements than these, you probably already know not only that you have higher security requirements, but also how to create the CSR.

While you can use Novell’s GWCSRGEN to create your Certificate Signing Request, you’ve just installed your SLES 11 server, and openssl is installed by default. It is a lot simpler and quicker to just run through the CSR generation right here rather than going to find a GroupWise server that has GWCSRGEN available. If you are more of a GUI type, and feel more comfortable, you can use GWCSRGEN. Just go to http://www.novell.com/documentation/documentation/groupwise2012/gw2012_guide_admin/data/ak9e3ju.html and follow the instructions there.

We will do the certificate request right from the SLES server using openssl. Go to a terminal window, change to the directory where you would like to store your files (for this purpose your home directory or even /root/ is fine) and type:

```
openssl genrsa -des3 -out mobility.key 2048
```

Because we are using the -des3 command, we are putting a passphrase on our private key, which we are naming “mobility.key” with a 2048 bit key name. We find that this is sufficient for most sites. You will be asked for a pass phrase for your key. You will need to know this pass phrase in a few minutes when we generate the CSR, and also after you receive the certificate for further use. In other words, use a pass phrase that you will not readily forget!

Once our private key has been created (we named ours mobility.key), we will create the CSR. To do so, type the following in the terminal window:

```
openssl req -new -key mobility.key -out mobility.csr
```

We are requested a new CSR be generated, using our private key of mobility.key, and naming the CSR mobility.csr.

You will be asked for the following information:

- **Pass Phrase:** This is the pass phrase that you just used for creating your private key.
- **Country Name 2 letter code:** For example, AU, US, DE
- **State or Province Name (full name):** For example, Colorado
- **Locality Name (eg, city):** Put in your city name
- **Organization Name (eg, company):** For example, Caledonia
- **Organizational Unit Name:** For example, IS
- **Common Name:** This is actually the host name, so for example, gw.company.com
- **Email Address:** This should be a domain contact person

You will then be presented some optional information, that you can simply press ENTER at those prompts if you do not wish to include the information in the request.

You will now have a CSR file (in our case mobility.csr) that can be sent to the Certificate Authority for generation. Most CAs do all of this over the Internet now, having you simply copy and paste the information from your CSR directly into a box on their website, or ask you to upload the CSR file to their servers.

Once you receive the certificate from your Certificate Authority, you will need to prepare the certificate file for use by GroupWise Mobility Service. When you go to retrieve your certificate, if asked what server you are using, you can simply choose the “Apache2” download. GroupWise Mobility Service runs on CherryPy, but we’ve found no issues with using the “Apache2” formatted certificate.

First, in order to use the private key that you created above for the GroupWise Mobility Service certificate, we will need to remove the passphrase. In a terminal window, change to the directory where you created your private key and run the following:

```
openssl rsa -in mobility.key -out mobilitynew.key
```

You will be asked for the passphrase for your private key. In our case we have taken our mobility.key and created a new key called mobilitynew.key that has no passphrase. You might ask why we bother with the passphrase in the first place. Many certificate authorities will require that you have a passphrase when you submit your request. It’s easy enough to remove after the fact, so we always just create the request with a passphrase.

Preparing Your Certificate for GroupWise Mobility Service

Now on to the certificates received from your Certificate Authority.

Typically you receive your certificate in a file that ends with .crt. You may also receive one or more files that are “intermediate” certificates. For example, [GoDaddy](#) generally sends a file called gd_bundle.crt, Comodo sends ca_bundle.crt, and so on. For use with GroupWise Mobility Service, you must create a single file that contains the private key, server certificate and intermediate certificate all in one file. It will look like this:

```

-----BEGIN RSA PRIVATE KEY-----
key text
-----END RSA PRIVATE KEY-----
-----BEGIN CERTIFICATE-----
certificate text
-----END CERTIFICATE-----
-----BEGIN INTERMEDIATE CERTIFICATE-----
intermediate certificate text
-----END INTERMEDIATE CERTIFICATE-----

```

While you could use a text editor to do this, you can also just use the Linux “cat” command to manage it all.

Since you need a safe place to put your files anyway, create a directory on your new SLES 11 server, and place your unpassworded key file (ours is called `mobilitynew.key`), and your certificate files in the same directory. If you only have two files (for example, your CA sends you only a single `cert` file), you would have perhaps:

```

mobilitynew.key
gw.company.com.crt

```

So you could run the following command in this directory to create your `mobility.pem` file:

```

cat mobilitynew.key gw.company.com.crt > mobility.pem

```

This will create a `mobility.pem` file containing both the private key and the certificate file. If your CA sends you multiple files, chain them together in the order of private key, server certificate, intermediate. So for example:

```

cat mobilitynew.key gw.company.com.crt intermediate.crt
> mobility.pem

```

Now, when we install the GroupWise Mobility Service files, we can point to this `mobility.pem` file to incorporate our official, purchased certificate into our system.

Finally, it’s important that you back all of this up to a location other than your GroupWise Mobility Service. If you ever uninstall your GroupWise Mobility Service, and need to reinstall, you will want this information. Make a copy of your original key file, your key file that has had the passphrase removed, any certificate files received from your CA, and your `mobility.pem` file to a safe location.

4 Installing GroupWise Mobility Service

Now that we have made necessary changes to GroupWise, installed our SLES server, and prepared our SSL certificate (if applicable), we are ready to install GroupWise Mobility Service.

Download the GroupWise Mobility Service ISO from your Customer Center portal. Place it somewhere on the SLES 11 server where you can access it. As mentioned earlier, you will also need access to the text file that was created when you generated your Trusted App. We also recommend that you have your SLES 11 installation DVD and SLES 11 SDK DVD handy just in case (if you installed the server with only the options we listed above, the SLES 11 installation DVD will be requested during the GroupWise Mobility Service setup). In this particular install, we did not need the SDK DVD, but it's good to be prepared! You should not need the SLES 11 installation DVD2.

As discussed in *“Preparing the SUSE Linux Enterprise Server”*, you do not require a graphical interface to install or run GroupWise Mobility Service. That said, the figures are much better for our guide if we use the graphical installation! So, if you installed your server to boot to run level 3, just load “yast” from the terminal and follow along with our steps in the text based installation after we load YaST from the GUI. In case you are using the text install, we assume you know how to tab through the fields and select them by pressing the space bar, and follow along with this installation, adjusting as necessary for the text based install.

These instructions are for the GUI based YaST utility.

1. Click on Computer, and then choose YaST from the list to the right.

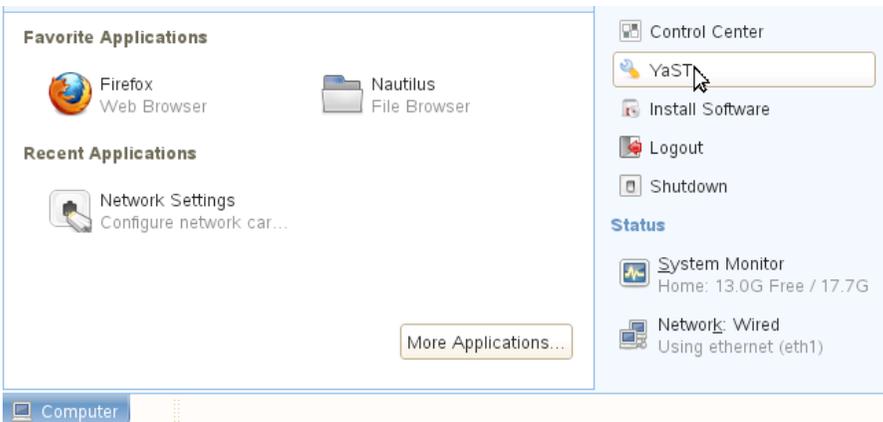


Figure 4-1: Opening YaST

2. On the left-hand side, click on Software.
3. Choose Add-On Products
4. Click Add
5. Click Local ISO Image
6. Click Next.
7. At the next screen, click the Browse button and find the ISO that you downloaded. Select that ISO. Click Next.
8. Accept the license agreement and click Next.
9. The next screen will show the YaST software patterns screen (the software search screen in the text install). Click accept.
10. You will now see the Changed Packages screen. Click Continue. If any packages required by the installation are missing, you will be prompted to install those as well. You may also be alerted to the fact that the product is either unsupported, or requires an additional customer contract for support. You can add your Mobility product to the Novell Customer Center if required after the installation.
11. The installation will install all needed files.
12. You will next be at the GroupWise Mobility Service Configuration screen. Click the Change box in the bottom middle and choose GroupWise Mobility Service Configuration.
13. At the User Server Settings, you will see an option to choose GroupWise or LDAP as the Source for Users and Groups. This is an important change from Version 1.x of this product. This change was made primarily to accommodate the new “unassociated” option of Windermere that will allow a GroupWise system to be totally standalone with no dependency or integration on a Directory. In the section on “*Directories and GroupWise Mobility Service*” we discussed the reasons for choosing one or the other. At this screen you will choose your “Provisioning” source. If you choose GroupWise as your provisioning type, this screen will be greyed out. If you choose LDAP, you will see the following settings. LDAP Settings screen, enter the information needed as follows:
 - **LDAP Server IP Address/Host Name:** For most GroupWise Mobility Service installations, this will be an eDirectory server.
 - **LDAP Port:** This defaults to 636 and will change to 389 if you uncheck the Secure box.
 - **LDAP Admin DN:** This is your eDirectory admin login (it need not be the user “admin”, but merely a user with rights to query the LDAP server)
 - **LDAP Admin password:** The eDirectory password for the chosen user

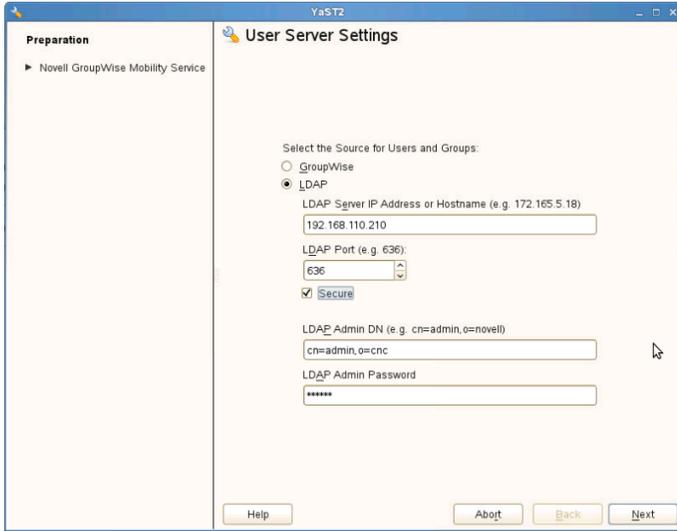


Figure 4-2: LDAP settings

14. If you have filled in LDAP information, when you click Next, the configuration will verify the settings you have entered. If everything is correct you will advance to Figure 4-3. Enter the following information (please note that if you have chosen GroupWise provisioning, only the bottom half of this screen is applicable):

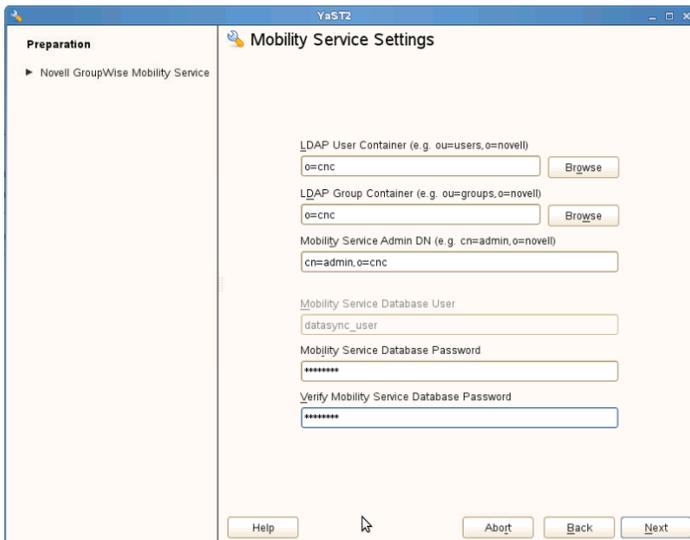


Figure 4-3: GroupWise Mobility Service Settings

- **LDAP User Container:** This is the OU where you wish to begin your user search in the directory. The search will begin in this container and search down any subcontainers it finds. If you require searching through more OUs, see *“Adding Additional LDAP Contexts”* later in this chapter.
- **LDAP Group Container:** This is the OU where you wish to begin your eDirectory groups search in the directory. Again, if you need to search additional containers, you can add them later in this chapter.
- **GroupWise Mobility Service Admin DN:** This is the user login you wish to assign to GroupWise Mobility Service administration. The user you indicate here is the user who will log in as the administrator in the GroupWise Mobility Service Web Console. If this is the same as the LDAP admin you entered in the previous screen, it will already be filled in for you. If you wish to have a different user be the GroupWise Mobility Service admin user, change it here. Additional administrators can be added. We will go over that in the chapter on *“Administering GroupWise Mobility Service”*.
- **GroupWise Mobility Service Database Password:** Choose a password for your database. This is the password for the PostgreSQL database. Use only alphanumeric characters here. In the past we recommended against special characters, umlauts or other accents. In theory these should work, except for * and : characters.
- **Verify the password:** Enter the same password here.

NOTE: Even if you know nothing about PostgreSQL, this will still be a simple installation. The installation routine assumes that PostgreSQL is not installed, and will set it up for you. There is no need to do any “pre-installation” of PostgreSQL at all. Just enter a password here, and the entire system will be configured up for you.

15. When you click next, the containers for users and groups will be verified and you will move to Figure 4-4.

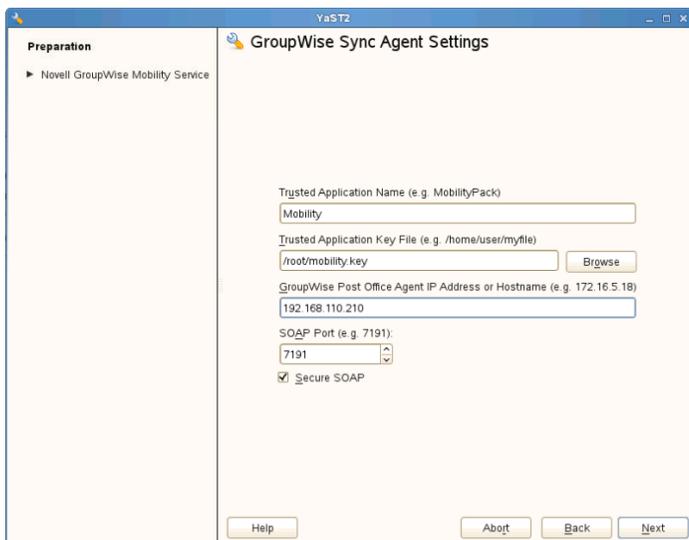


Figure 4-4: GroupWise Sync Agent Settings

- **Trusted Application Name:** This is the name of the Trusted App we created earlier in *“Creating the Trusted App”*.
- **Trusted Application Key File:** Browse for the file that you copied to the server from your Trusted App Key generation.
- **GroupWise Post Office Agent IP Address/HostName:** Enter the location of your GroupWise Post Office.
- **Soap Port:** By default this is 7191. Change it here if you have changed the port for your Post Office Agent. Also verify whether or not SSL is enabled for SOAP on your Post Office Agent.

You need only enter the IP address for one of your GroupWise Post Office Agents. SOAP uses the same redirection table as client/server access. Thus, if a user in your system is not on the Post Office that you indicate here, the Post Office Agent will redirect the request to the proper server on login

16. The Trusted App Login will be verified, and you will move to Figure 4-5.

As discussed in the chapter on setting up SLES, if you have enabled the Proxy for SLES, you must exclude your Post Office Agent from the Proxy, or the Trusted App verification will fail.

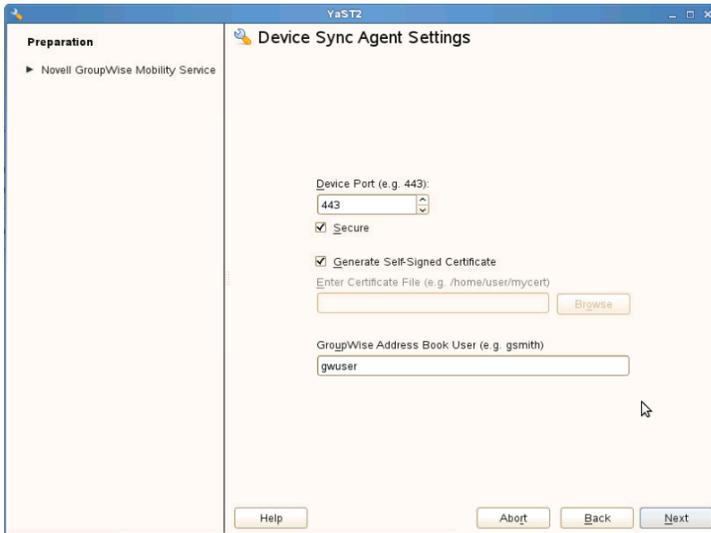


Figure 4-5: Device Sync Agent Settings

- Device Port:** This is the port that the devices use to connect to GroupWise Mobility Service. While you can technically make this any port you like, it is easiest for device setup if you run your Device Sync Agent on port 443 with SSL enabled. Most devices expect this port number, and will automatically find the server at this port with little user intervention. Some devices will not allow for this port to be changed
 - SSL Certificate:** You can choose whether you wish to generate a self-signed certificate or indicate if you have purchased a certificate for this server. Some devices are more friendly to self-signed certificates than others. The iPhone, for example, will alert the user only one time that the certificate might have a problem, and then happily work thereafter with no other issues. Some Nokia devices we have tested will ask the user at almost every turn to verify the certificate. And some Windows Mobile devices will simply refuse to connect unless you have a trusted certificate (or download the certificate to the devices prior to connection). Very small systems with only devices that are friendly to self-signed certificates might choose to simply deal with the setup issues for the users. Larger sites, and sites that have devices that will not connect with the self-signed server certificate will need a purchased certificate. If you have a purchased certificate for this particular server, you can enter the certificate location here. Please refer back to the information on *“Installing a Trusted Certificate for your Device Sync Agent”* for details on preparing your purchased certificate for GroupWise Mobility Service.
 - GroupWise Address Book User:** You should think of this user as a “proxy object”. In other words, all objects that this user can see in your address book will be visible to all users of GroupWise Mobility Service. No password is needed here. The Device Sync Agent uses the Trusted Application Key for access to the Post Office. This user must also be provisioned on the Mobility Service.
17. You may at this point be prompted with a Novell Customer Center validation. If you have never validated your Mobility license, you can do it here, and then you can update right from zypper or YaST rather than downloading update ISOs. You need your Novell Customer Center email address and the activation code for Mobility in order to complete this task. You can also choose to register later.

- Once the installation is complete, click OK at the Installed Add-On Products screen and exit YaST.

Verifying The Installation

Now we will go to a terminal window to verify that the GroupWise Mobility Service products are running.

Go to a terminal window thus:

- From the main server screen, click Computer and click More Applications
- In the Filter box, type Terminal.
- Depending on whether you are using GNOME or KDE, you will see either GNOME Terminal or Konsole. Click on the terminal icon.
- At the terminal, type **rcgms status**. You will see the following:

rcgms status

Checking for gms monitor:	running
Checking for gms config:	running
Checking for gms engine:	running
Checking for gms web admin:	running
Checking for gms agent manager service:	running

There are five scripts created in **/etc/init.d** called:

- **datasync-configengine**
- **datasync-syncengine**
- **datasync-webadmin**
- **datasync-monitorengine**
- **datasync-connectors**

These correspond to the lines in the **rcdatasync** status command above. In the **/usr/sbin** directory there are links to these four scripts

- **rcdatasync-configengine**
- **rcdatasync-syncengine**
- **rcdatasync-webadmin**
- **rcdatasync-monitorengine**
- **rcdatasync-connectors**

There is also a **/usr/sbin/rcgms** script that controls all of these scripts. You can easily stop or start all scripts by simply typing:

rcgms stop

or

rcgms start

You can also control each script individually. For example,

rcdatasync-webadmin stop

would stop just the Web Admin Server.

If you do manually stop/stop individual components, there is a recommended order.

Start: config --> engine ---> connectors

Stop: connector ---> engine ---> config

Only the WebAdmin can safely be restarted alone without affecting other components.

Logging into the Admin Web Console

Once GroupWise Mobility Service is installed, all administration is done through the Web Admin Console.

The Web Admin Console for your GroupWise Mobility Service server listens on port 8120. It is possible to change this value (see *“Editing XML Files for Other Changes”*), however, if you are running GroupWise Mobility Service as a dedicated appliance, there should never be a need to change this port.

To access your Web Admin Console, in your web browser go to:

https://MobilityServer:8120

for example

https://192.168.100.223:8120

At the login screen, enter the admin userid and password that you set in your installation above. Note that users can log in here as well and manage their address book and other sync settings. We will go over that in the Users Guide chapter for GroupWise Mobility Service.

You should see a screen like Figure 4-6. There are important settings for the first installation that should be looked at first, so let’s do that now.

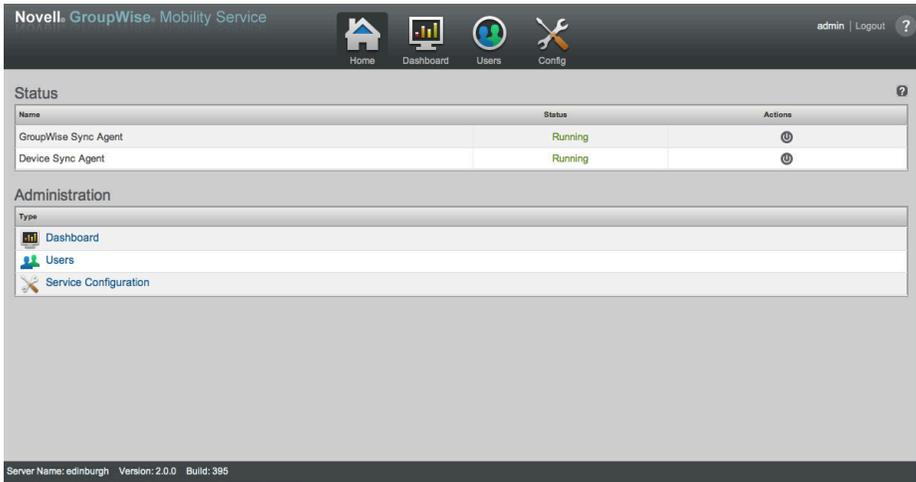


Figure 4-6: The Main GroupWise Mobility Service Window

Notice that there is an “Administration” section at the bottom of this screen that is essentially duplicated by icons at the top of the screen. You will always be able to see the icons at the top. You might wonder why these are duplicated on the home page. My best guess is that after reorganizing the entire interface, suddenly the home page was very empty. In any event, you can get to these three administrative options either from the links down the left on the home page, or up at the icons on the top.

On this screen you see both a “Groupwise” and a “Device” Sync Agent listed in the left hand column. Next to the name of the agent is a column that shows status. The only option here is to start/stop the Sync Agents with the power button to the right of the status column. Everything else is accomplished by accessing the settings under the Administrator section (or through the icons at the top).

We will go over all of the settings later in the chapter on “*Administering GroupWise Mobility Service*”. For now we will just address the issues needed to properly get the server ready for users, and then go over the details of the system when we’ve got everything up and running.

Before we set our users loose on GroupWise Mobility Service, we’ll make some setting changes and add users to the system.

If you need to get back to this screen, just click on Home icon at left of the top navigation icons.

Adding Additional LDAP Contexts

If you chose LDAP as your provisioning method earlier, you added a single LDAP context that can be used to search for users. GroupWise Mobility Service will search that context and any OUs below it. If you need to add additional contexts for searching, do the following. It is important that you do these steps before you attempt to start adding users if the users are not in the default context that you entered during installation.

Logged into the GroupWise Mobility Service Web Console, click on the Config icon, or the Service Configuration link under Administration.

You will now see the page in Figure 4-7.

The screenshot shows the 'User Source' configuration page. At the top, there are tabs for 'General', 'GroupWise', 'Device', 'User Source' (selected), and 'Single Sign-On'. The 'User Source' section includes:

- Provisioning:** Radio buttons for 'LDAP' (selected) and 'GroupWise'.
- Authentication:** Radio buttons for 'LDAP' (selected) and 'GroupWise'.
- Group Membership Poll Rate:** A text input field containing '1800' followed by 'Seconds'.
- Group Membership:** A 'Poll Now' button.

The 'LDAP' section includes:

- IP Address:** Text input field with '192.168.110.210'.
- Port:** Text input field with '389'.
- Secure:** A checkbox labeled 'Enable' which is unchecked.
- Admin Full DN:** Text input field with 'cn=admin,o=cnc'.
- Admin Password:** Text input field with masked characters '*****'.
- Base User DNs:** Text input field with 'o=cnc'. Below it is a label 'Enter Base User DN here' with '+' and '-' buttons.
- Base Group DNs:** Text input field with 'o=cnc'. Below it is a label 'Enter Base Group DN here' with '+' and '-' buttons.

A 'Save' button is located at the bottom left of the configuration area.

Figure 4-7: The Global Configuration page.

For those of you who have used the Mobility Service before, you will notice that all of the configuration has been consolidated into one simple location. We've clicked on the "User Source" tab in the figure above in order to update our LDAP contexts.

Here you can do a couple of things:

- Add additional context for LDAP lookups of users and groups.
- Change the polling rate in seconds. This defines how often the LDAP server looks at groups for additions and deletions.
- Change the LDAP server and port
- Change the user and/or password that does the LDAP bind for lookups.
- Do an immediate poll for new LDAP objects (this is useful if you are adding users to your eDirectory group, for example, and you do not wish to wait for the polling interval)

Here you can also see how to change the Authorization method if you wish to use GroupWise authentication. Please note, you can only use LDAP authentication if you wish to use

eDirectory as your LDAP source. If you are using any other LDAP directory (such as Active Directory) as your GroupWise Authentication source at your POA, you will need to use GroupWise Authentication here.

Notice that if you click on GroupWise as the Provisioning source, only the top portion of the page remains. Also, if you choose GroupWise as your Provisioning method, you must use GroupWise as your Authentication method as well.

Changing Initial General Settings

On this same screen, click on the “General” tab to open the general settings for the Server. If you have moved away from this window, just click on the Config icon again to return to this location.

Setting	Value
Log Level	Info
Sync Agent Startup	Automatic
Maximum Attachment Size (GroupWise to Device)	5000 KB
Maximum Send Mail Size (Device to GroupWise)	5000 KB
Alert Retention	14 Days
Statistic History Retention	30 Days
Notification Enabled	<input checked="" type="checkbox"/> Enable
SMTP IP Address	192.168.100.225
SMTP Port	25
Authentication User Name	gwmton
Authentication User Password	..... Optional
System Notifications	alerts@here.com
Service Notifications	alerts@here.com
MDM Server	None
Send Anonymous Feedback	<input checked="" type="checkbox"/> Enable

Figure 4-8: The General Settings

There are a few items here that you might wish to change.

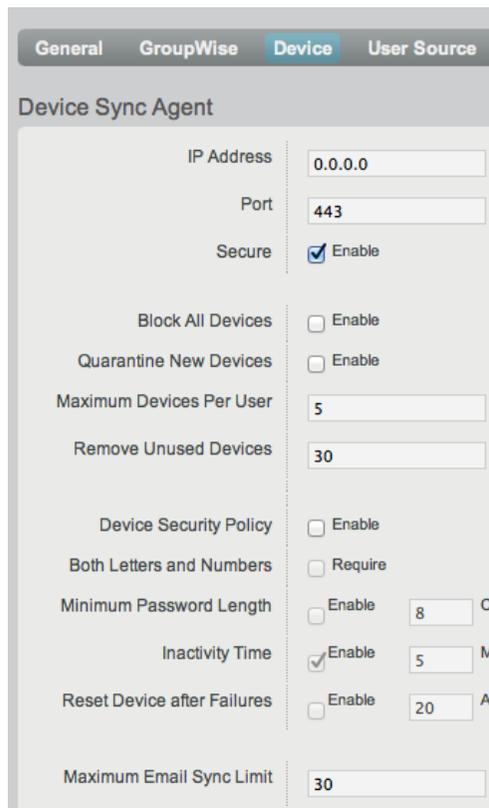
- Maximum Attachment Size:** This setting will control the largest attachment size that the GroupWise server will send to the GroupWise Mobility Service Engine. The default here is 500 kB. If you have a large number of users, the attachment size will probably dictate in large part the required storage requirements for your GroupWise Mobility Service.

- **Maximum Send Mail Size:** The converse of the first setting, this determines how large of a message can be sent from the device through the GroupWise system. For example, a user might attempt to send a large photo or other large attachment from the device. You can limit that here.
- **Logging:** You can set the logging here. In our figure we have our logging set to “debug”. Please note that this is very space and resource intensive, so you should only set your logging to greater than “Info” if you are debugging problems.

The rest of the settings on this screen will be explained in the *“Administering GroupWise Mobility Service”* chapter. If you make changes to this Sync Agent, be certain to click the Save button.

Changing Initial Device Sync Agent Settings

If necessary, log into the Mobility Service Web Console as outlined in *“Logging into the Admin Web Console”* or click on Home at the top to return to the main screen shown in Figure 4-3. Click on the “Device” Sync Agent to open the settings for the Device Sync Agent.



Setting	Value
IP Address	0.0.0.0
Port	443
Secure	<input checked="" type="checkbox"/> Enable
Block All Devices	<input type="checkbox"/> Enable
Quarantine New Devices	<input type="checkbox"/> Enable
Maximum Devices Per User	5
Remove Unused Devices	30
Device Security Policy	<input type="checkbox"/> Enable
Both Letters and Numbers	<input type="checkbox"/> Require
Minimum Password Length	<input type="checkbox"/> Enable 8
Inactivity Time	<input checked="" type="checkbox"/> Enable 5
Reset Device after Failures	<input type="checkbox"/> Enable 20
Maximum Email Sync Limit	30

Figure 4-9: The Device Sync Agent Settings

You can set a device security policy, and typically it's recommended to do this right away when you install the Mobility Service. No need to let users become accustomed to the idea of lax security initially! It is important to note though, that by enabling this setting, some devices will pop up a "security notice" even if you do not actually enable any security options. So make sure you are ready before you turn this on!

To set a security policy, you must first check the box that says "Device Security Policy". Once enabled, you can require both letters and numbers, a minimum length for the password, an inactivity time, and the ability to automatically reset a device if a password fails too many times.

Most likely the only other setting you would need to change here to get up and running is the "Block All Devices" setting. We typically recommend this when adding initial users so that your users will not attempt to log in before you are ready.

The other settings on this page will be described in the Administration chapter.

If you make changes to this sync agent, be certain to click the Save button.

Adding Users to GroupWise Mobility Service

Now that we've made the changes to attachment size and looked at our security policies, we will begin to add our users. You can add users individually, or through a group, as we discussed in "*Creating an eDirectory Group or GroupWise Distribution List for Mobility Users*".

To add users individually to GroupWise Mobility Service, do the following:

1. Back at the main GroupWise Mobility Service home screen click on the Users link.
2. Next click on the Add Users button. You will see a Search Users box where you can type in a portion of the user's name. If you are using LDAP provisioning, you can choose to do a lookup either with LDAP or with GroupWise. If you have chosen GroupWise provisioning and have not entered LDAP information, of course you will need to use the GroupWise radio button to search for your users. Once the user is found, you can click the checkbox next to the user's name to add the user.
3. If you are using LDAP provisioning, for each user you add, if the GroupWise userid does not match the LDAP username, you must click on the link for the name under the Default Name column to enter the proper GroupWise userid for the user. Please note, that in our testing, if you do not correct the Default Name right here, you will have trouble with the device not being able to synchronize data.

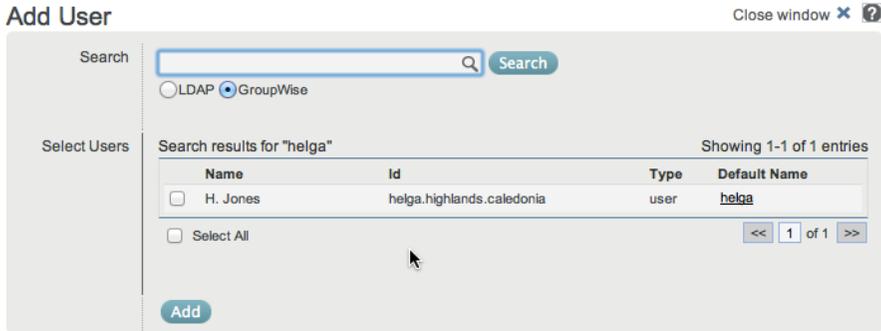


Figure 4-10: Adding users to the Mobility Service

If you will be adding the users via a group, follow these instructions:

1. Click on the Groups link at the top of the Users page and choose the Add Groups button.
2. Click the LDAP or GroupWise radio button as appropriate, and search for the Group you would like to add to the Mobility Service and click the box next to the Group and then click Add.
3. Wait for a minute or so, and then click on the Users tab. You should see the users there that are members of your group.
4. Remember, with LDAP provisioning, if a user's GroupWise and eDirectory userids do not match, you should add the users manually, and not as a member of an LDAP group.

Verifying Synchronization and Unblocking Devices

After all of your users have been added to GroupWise Mobility Service, and you have changed any settings that you feel are important, we can check that mail is syncing and unblock the devices so that users can begin to connect.

First, let's go to the Mobility Service Dashboard to verify that mail is synchronizing to the user Mobility Accounts. From any Web Console page click on Dashboard icon at the top of the screen

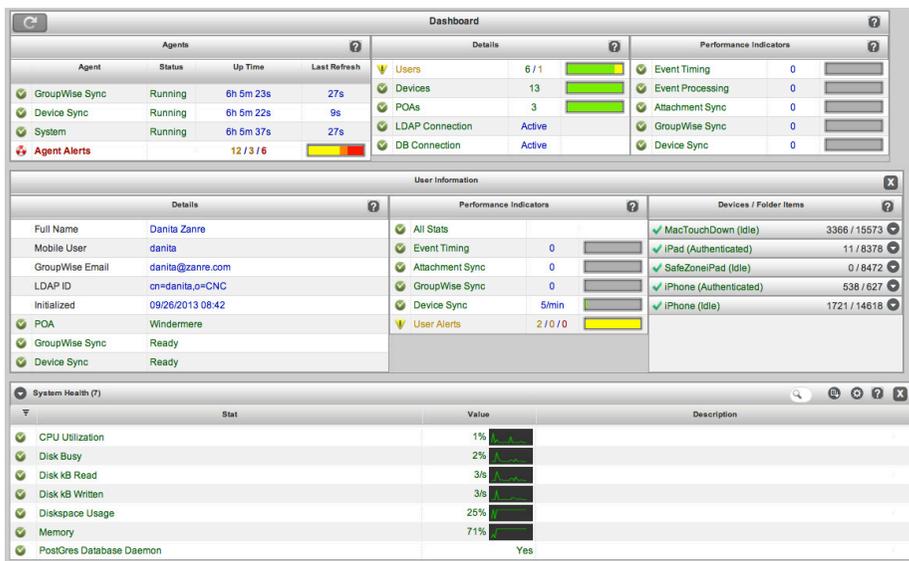


Figure 4-11: The Mobility Dashboard

We will look more closely at the dashboard later, but first we just want to verify that our new user is receiving information. Click on Users in the upper middle box. The information in the bottom box will change, and you will see user accounts below like the following figure.

Icon	Name	Status	Value	Indicator	Value	Indicator
👤	danita	Sync-Validate	0	0min	0min	Green
👤	James	Ready	1	0min	0min	Green

Figure 4-12: User Sync Status

Notice that Danita in this list shows “Sync-Validate”. This means that mail is being requested from GroupWise for Danita. James shows “Synced”. You should note that “Synced” on this page does not mean that any information has been synced to devices. It means that all information has been received from the GroupWise Sync Agent, and is ready to synchronize to devices.

Once you are ready to allow users to connect, go to the Device Sync Agent Settings (Figure 4-9) and uncheck the box for blocking devices. Make sure to click the Save button so that the devices can begin syncing.

Your users should be able to point their devices to the host name that you set up in the beginning of this book. For example, if you were setting up an iPhone, you would need the following:

In the Settings App on the iOS device, go to the Mail Settings, click on Add Account and choose the “Microsoft Exchange” option.

In the “Enter your Exchange account information” screen, enter the following:

- **Email:** Enter your email account for your GroupWise account. For example, helga@caledonia.net

- **Domain:** This field should be left blank. (Note that some devices will require the domain field, so just give your users a dummy word to place here - like Mobility)
- **Username:** This is your GroupWise userid
- **Description:** Here you can put whatever information you like. You might leave it at your email address (which is the default), or change it to GroupWise.

After you fill in the information and click Next, you will most likely receive a message that reads “Unable to Verify Certificate” indicating that the certificate for your setup cannot be verified. This is okay to accept at this point.

Since the setup was unable to find your “Exchange” server with the information you provided, you will now be presented with a new screen where you will enter your server name. You will put in the Public IP Address or Host Name that you designated (for example, gw.company.com). Click Next. After your GroupWise settings are verified, you will see a screen that has Mail, Contacts, Reminders and Calendars, all turned on. If you choose, you can turn one or more of these functions off, although most readers will want all four enabled. When these settings reflect your wishes, click Done.

If all goes according to plan, within a few minutes GroupWise items will be syncing to your device.

5 Upgrading GroupWise Mobility Service

If you are upgrading your prior Mobility Service, please make sure you have at least read the chapter entitled *“Let’s Get Started with GroupWise Mobility Service!”* That Chapter contains all of the “What’s New” information, and other details about Version 2.0 of GroupWise Mobility Service. It wouldn’t hurt to also read *“Preparing the GroupWise System”* and *“Preparing the SUSE Linux Enterprise Server”* to ensure that nothing has changed in your environment that might encourage you to make some changes.

Download the GroupWise Mobility Service ISO from your Customer Center portal. Place it somewhere on the SLES 11 server where you can access it. As discussed in *“Installing your SLES Server”*, you do not require a graphical interface to install or run GroupWise Mobility Service. That said, the figures are much better for our guide if we use the graphical installation! So, if you installed your server to boot to run level 3, just load “yast” from the terminal and follow along with our steps in the text based installation after we load YaST from the GUI. In case you are using the text install, we assume you know how to tab through the fields and select them by pressing the space bar, and follow along with this installation, adjusting as necessary for the text based install.

For updates to an existing GroupWise Mobility Service 2.0 server, please see the section entitled *“Updating the Mobility 2.0 Installation”* in the chapter entitled *“Administering GroupWise Mobility Service”*.

Update Using the Mobility Service ISO

These instructions are for the GUI based YaST utility.

1. First unload your current 1.x Mobility Service.

```
rcdatasync stop  
ps -eaf | grep datasync
```

2. Click on Computer, and then choose YaST from the list to the right.

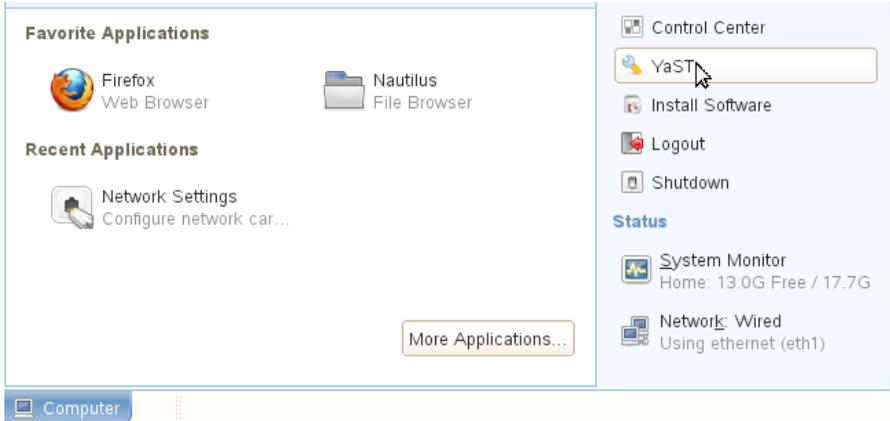


Figure 5-1: Opening YaST

3. On the left-hand side, click on Software.
4. Choose Patch CD Update (note: do not use the Add-On Products option, as this would require you to go through the setup again)
5. You may receive information about patches available from the Novell Customer Center repositories, or even warnings about needing to update your credentials for the Novell Customer Center during this process. Resolve any issues you receive here, and then click next.
6. At the Media Type window, choose Local ISO Image
7. Click Next.
8. At the next screen, click the Browse button and find the ISO that you downloaded. Select that ISO. Click Next.
9. Accept the license agreement and click Next.
10. You will then likely be presented the Migration Repositories screen showing the new Mobility Service information as an added repository. It is best at this point to uncheck all repositories except for the GroupWise Mobility Service update. There are often complications with attempting to upgrade both the OS and Mobility Service at the same time. You can always come back and update your server if necessary after the Mobility Service is properly installed.
11. The next screen will show the Distribution Upgrade Settings, indicating what products will be affected by your update.
12. When you click Next you will be prompted to confirm the update. Click Start Update.

Once the file copy has been completed, you will possibly be presented with a screen to update your Novell Customer Center information. You can choose to do this, or decline and update later.

After the YaST installation ends, go to a terminal window and run

`/opt/novell/datasync/update.sh`

You will be presented with a few questions:

- You will first be asked to verify that you wish to shut down Mobility
- You will next be asked if you wish to switch your logs to Info. If you purposefully have your logs set to higher levels for testing, say no to this prompt.
- Next you will be asked if you wish to enable sending anonymous usage information to Novell. This is transparent, and no sensitive data to Novell. You can see both the file that is sent and even the script used to create and upload data to Novell. Novell would really like to receive data from you, and we recommend that you enable this option.

The database will then be updated for GroupWise Mobility Service 2.0. GroupWise Mobility Service will then be started up.

It is important to note that the old “datasync” and “rcdatasync” scripts have been replaced with “gms” and “rcgms” scripts.

From here, you can go to the *“Administering GroupWise Mobility Service”* to see what changes have been made with administration.

6 Administering GroupWise Mobility Service

Once the Mobility Service is installed, all administration is done through the Web Admin Console. There is a lot going on that's new with GroupWise Mobility Service 2.0. So much that we're going to dedicate a separate chapter to the new

The Web Admin Console

The Web Admin Console for your Mobility Service server listens by default on port 8120. To access your Web Admin Console, in your web browser go to:

https://MobilityServer:8120

for example

https://192.168.100.223:8120



Figure 6-1: GMS Login Screen

At the login screen, if you are using LDAP provisioning, enter the admin userid and password that you set in your installation above. If you are using GroupWise provisioning, use the root

user and password for the server. Note that users can log in here as well and manage their address book and other sync settings. Right here at the login screen, you can see the version of GroupWise Mobility Service. This is a fantastically simple way to see if you are actually on the version you believe without having to both with logging in.

You should see a screen like Figure 6-2. If you added users during the installation and did not block devices, your users would be able to configure their devices and start syncing with no further ado! But now we'll go over the settings in the admin portal.

Please note - if you are updating your system from a prior version of the Mobility Service, there are many new options. I suggest you read this entire chapter as though you didn't know anything about Mobility!

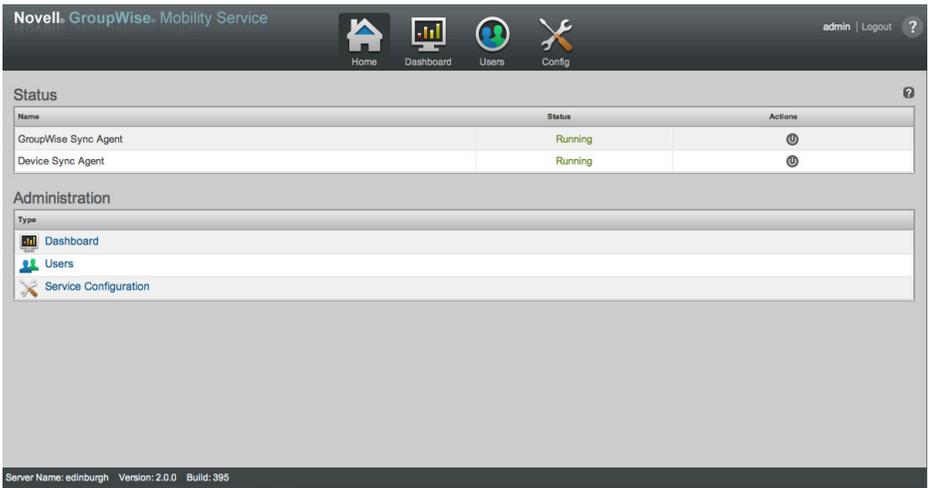


Figure 6-2: The Main Mobility Service Window

We are now at the new “Home Page” for GroupWise Mobility Service. As you will see, the look and feel of the new Admin Console is much more streamlined. Essentially, the only action you can perform on the home screen is to start and stop your Sync Agents. See the power button to the right of the word “running”. If you click that box you stop the agent. Then you will have a play arrow to allow you to start it again.

The basic navigation for the Mobility Service has been reduced to three options:

- Dashboard
- Users
- Service Configuration

All of these options have text links here on the home page, and can all be accessed via icons at the top at location in the Admin Console

We will look at the various options in the Server Configuration settings now.

The Mobility Service Configuration Settings

When you first click on the Service Configuration link (Config icon), you will see the following screen:

The screenshot displays the 'General' configuration tab for the Mobility Service. The settings are as follows:

- Log Level:** Info (dropdown menu)
- Sync Agent Startup:** Automatic (radio button selected), Manual (radio button)
- Maximum Attachment Size (GroupWise to Device):** 5000 KB
- Maximum Send Mail Size (Device to GroupWise):** 5000 KB
- Alert Retention:** 14 Days
- Statistic History Retention:** 30 Days
- Notification Enabled:** Enable
- SMTP IP Address:** 192.168.100.225
- SMTP Port:** 25
- Authentication User Name:** gwmon
- Authentication User Password:** [masked] Optional
- System Notifications:** alerts@here.com
- Service Notifications:** alerts@here.com
- MDM Server:** None
- Send Anonymous Feedback:** Enable

A 'Save' button is located at the bottom right of the configuration area.

The General Tab in the Server Configuration allows you to modify the following settings:

- **Log Level:** Your options here are Info, Debug, Warning, Error. It seems that most of the time I set this at either Info or Debug, and rarely to Warning! I run most of the time in Info, and then switch to Debug when I'm troubleshooting. Debug can put a heavy load on busy servers.
- **Sync Agent Startup:** Most sites keep this at Automatic
- **Maximum Attachment Size (GroupWise to Device):** Attachments are obviously the biggest space consumers on the Mobility Service. Choose the largest attachment you wish to send to devices. Remember that devices have quite a bit of space these days, but users need to be practical about the size of attachments that are reasonable to receive to a mobile device.
- **Maximum Send Mail Size (Device to GroupWise):** This setting dictates how large of an attachment a device can send back through the GroupWise system. This prevents users from sending very large photos, for example, through the GroupWise system.

- **Alert Retention:** The Dashboard will retain alerts for a period of time. 14 days is the default. Generally speaking, 14 days seems adequate. If you haven't looked at the alerts by then, you probably don't need the information.
- **Statistic History Retention:** A number of different graphs are generated at the dashboard. The default is to retain this information for 30 days. You can change the range here.
- **Notification Enabled:** The Mobility Service has its own notification system, separate from GroupWise Monitor. If you choose to turn on notifications, you must indicate an SMTP server to send through. This could be your GWIA, or if you have an independent SMTP server that is not associated with your GroupWise system, you could also put that here:
 - SMTP IP Address
 - SMTP Port
 - Authentication User Name if required
 - Authentication User Password if required
- **System Notifications:** Critical (red) alerts are considered system notifications. You can define one or more addresses to be alerted in a comma delimited string here for system notifications. These need to be email addresses, but can be device email addresses that arrive as text messages if desired.
- **Service Notifications:** As you will see in the Device settings below, you can choose to quarantine new devices rather than just allowing users to connect new devices without notification. When a new device is ready to be released from the quarantine, the list of recipients (comma delimited) on this line will be notified.
- **MDM Server:** There are a few Mobile Device Management servers that will interface with GroupWise, including Zenworks and BlackBerry 10 servers. If you are using an MDM, the IP address of that server goes here. It is very important to add your MDM IP address here if you are indeed using an MDM solution. Otherwise you may experience issues with duplicate user creation attempts.
- **Send Anonymous Feedback:** If you choose, you can send anonymous feedback to Novell regarding statistical usage. As mentioned above, this is a very useful item for Novell, and all of the data gathered is available to you to peruse. This is a very transparent and open gathering of data!

The GroupWise Sync Agent

When you click on the “Config” icon at the top of the screen, you then click “GroupWise” to see the settings applicable to the GroupWise Sync Agent. As long as you entered everything correctly in the setup, these settings should not need to be changed.

Let's take some time to go through all of the settings here for the GroupWise Sync Agent.

The screenshot shows the 'GroupWise Sync Agent' configuration interface. At the top, there are navigation tabs: 'General', 'GroupWise' (selected), 'Device', 'User Source', and 'Single Sign-On'. Below the tabs, the title 'GroupWise Sync Agent' is displayed. The main area contains several configuration fields and options:

- IP Address:** 192.168.110.223
- Port:** 4500
- POA SOAP URL:** https://192.168.110.210:7191/s
- Trusted Application Name:** Mobility
- Trusted Application Key:** A field containing a series of dots, indicating a masked key.
- GroupWise Items to Sync:** A list of items with checkboxes:
 - Appointment
 - Contact
 - Folder
 - Mail
 - Reminder Note
 - Task
 - Discussion Note
 - Phone Message
- Clear Old Events:** Enable
- Ignore Events After:** 30 Days
- Poll POA for Events:** 3600 Seconds
- Save:** A blue button at the bottom left.

Figure 6-3: The GroupWise Sync Agent Settings

The GroupWise Sync Agent Settings

The GroupWise Sync Agent Settings mostly comprises information that you entered during the installation of your system. We'll look at each of the items in Figure 6-3 at this time.

- **IP Address:** This should be the “local” IP address for the Mobility Service. Do not use localhost here.
- **Port:** This defaults to 4500. It is rare that you would feel a need to alter this. In general, unless you have an overriding reason to do so, we recommend that sites keep the default ports used by the product. This allows both Novell and the volunteers at <http://forums.novell.com> to assist with problems more easily.
- **POA SOAP URL:** This is the location of the POA that is the “routing agent” so to speak for the GroupWise Sync Agent. If you have multiple Post Offices, the GroupWise Sync Agent will first contact the POA listed here, and then be redirected to the proper POA for the user in question. The default URL for SOAP with SSL is https://yourpoaddress:7191/soap. If you are not using SSL, then it is merely http://yourpoaddress:7191/soap. Remember that we can only supply the location for one POA here. If this POA becomes inaccessible, then your Mobility Service will not be able to process requests to the GroupWise system.
- **Trusted Application Name:** This was entered from the installation. If you ever need to recreate the Trusted Application and give it a new name, you would enter

that new name here. The Trusted Application Name and the Trusted Application Key below must both match what is in the GroupWise system, or synchronization will fail.

- **Trusted Application Key:** This is a long string of characters, as represented by a string of asterisks. When you create the Trusted Application Key, you are asked to save the key to a text file. So long as you have this text file, you can reconfigure the Mobility Service as needed. If you lose this text file, you would need to create a new Trusted App for the Mobility Service. We have seen issues where this setting can become corrupted if you change items on this page. If that were to happen, just copy the text string from the Trusted App text file, and paste it back into this line. It will be saved, converted to asterisks, and the system should work again.
- **GroupWise Items to Sync:** By default all items are listed to sync.
 - Appointment
 - Contact
 - Folder
 - Mail
 - Reminder Note
 - Task
 - Discussion Note
 - Phone Message

Any time you change items here, click Save.

The Device Sync Agent

Click on the “Device” tab on the Server Configuration page. Here you see the basic settings for your Device Sync Agent.

The screenshot shows the 'Device Sync Agent' configuration page. It features a navigation bar with tabs: 'General', 'GroupWise', 'Device' (active), 'User Source', and 'Single Sign-On'. Below the title 'Device Sync Agent', there are several configuration sections:

- IP Address:** 0.0.0.0
- Port:** 443
- Secure:** Enable
- Block All Devices:** Enable
- Quarantine New Devices:** Enable
- Maximum Devices Per User:** 5
- Remove Unused Devices:** 30 Days
- Device Security Policy:** Enable
- Both Letters and Numbers:** Require
- Minimum Password Length:** Enable, 8 Characters
- Inactivity Time:** Enable, 5 Minutes
- Reset Device after Failures:** Enable, 20 Attempts
- Maximum Email Sync Limit:** 30 Days
- Maximum Calendar Sync Limit:** 180 Days
- Address Book User:** gwuser

A 'Save' button is located at the bottom right of the configuration area.

The settings on this page are fairly self-explanatory, but we will quickly go through them here.

- **IP Address:** This has 0.0.0.0 set by default, and as such all IP addresses on the server will listen on the device sync port. You can change this address here if you wish to bind only a particular address to the agent port. This is rarely required or desired.
- **Port:** If you have the next setting (Secure) checked, then port 443 is the default port for the Device Sync Agent. This is very practical, because most devices assume that they should connect on port 443 if SSL is selected. If you are not using SSL (although we assume that most sites WILL use SSL), port 80 would be the default port. You can change this port to any port your choose. However if you do, then all devices will need to be configured to connect on the port that you list here. Not all devices will be happy about such a change. Save yourself some grief and leave it as it is.
- **Secure:** This setting indicates whether the Device Sync Agent will use SSL for connections. We assume that most sites will use SSL..
- **Block All Devices:** As we saw during our setup of the Mobility Service, this setting is useful for preventing devices from connecting to the system when you are making changes, or wish to lock them out for other reasons. It is typical to have this setting checked during initial setup, especially if you have disseminated information to users ahead of time about how to connect to the server.
- **Quarantine New Devices:** The Mobility Service allows for users to access their GroupWise information from any ActiveSync enabled device. If you wish to monitor or control the number of devices, you can check this box. If you quarantine

devices, you can be notified when new devices are attempting access by setting up the “Service Notifications” described in *“The Mobility Service Configuration Settings”* above.

- **Maximum Devices per User:** If you wish to limit the number of devices that an individual user can synchronize, enter that number here. If a user attempts to exceed this number, an error similar to “You are not authorized to use this service” will appear on the device. This can be confusing for users, and even administrators if you do not remember limiting the number of devices!
- **Remove Unused Devices:** Here you can set the number of days after which an unused device will be deleted from the Mobility Service. This prevents unnecessary space being taken up by devices that are no longer active, and can also prevent problems with the Maximum Devices per User setting above if a particular user is prone to “testing”.
- **Device Security Policy:** Determines whether you will force device security on all users. When you turn this on, the settings below are activated. It is important to note though, that by enabling this setting, some devices will pop up a “security notice” even if you do not actually enable any security options. So make sure you (and the help desk) are ready before you turn this on!
 - **Require Both Letters and Numbers:** This is for the device password policy. Despite the naming of this setting, this also requires that not only one letter and one number be a part of the password, **but also that a special character** be included.
 - **Minimum Password Length:** The minimum password allowed is 1 character, and the maximum 18 characters.
 - **Inactivity Time:** You can set an inactivity time for the devices to force a password lock after a certain amount of idle time.
 - **Reset Device after failures:** If password attempts occur repeatedly, the device can be reset.
- **Maximum Email Sync Limit:** Users can actually attempt to synchronize their entire GroupWise mailbox with a device, and this is rarely desirable. The number you place here (in days) will be the number of days of email returned when a user chooses “All” for their email setting.
- **Maximum Calendar Sync Limit:** Like email above, this dictates the number of days a calendar can synchronize.
- **Address Book User:** The Mobility Service does not synchronize the GroupWise System Address Book. As long as the device supports it, users can do a lookup for the GroupWise System Address Book on the fly, and see the email address and phone number that is defined in the directory. Put a user here who can see all of the users in the GroupWise system that you wish to have visible in this lookup. You should think of this user as a “proxy object”. In other words, all objects that this user can see in your address book will be visible to all users of GroupWise Mobility Service. No password is needed here. The Device Sync Agent uses the Trusted Application Key for access to the Post Office. This user must also be provisioned as a Mobility Service user.

The User Source

We discussed the User Source in *“Let’s Get Started with GroupWise Mobility Service!”*. Please go back and review the *“Directories and GroupWise Mobility Service”* section of that chapter to get a better understanding of the User Source. Here’s an overview of what you can configure on this screen.

From the “Config” icon, choose the User Source tab.

The screenshot shows the 'User Source' configuration page. At the top, there are tabs for 'General', 'GroupWise', 'Device', 'User Source' (which is active), and 'Single Sign-On'. The 'User Source' section has two radio buttons for 'Provisioning' and 'Authentication', both set to 'LDAP'. The 'Group Membership Poll Rate' is set to '1800' seconds, with a 'Poll Now' button. The 'LDAP' section contains several input fields: 'IP Address' (192.168.110.210), 'Port' (389), 'Secure' (unchecked), 'Admin Full DN' (cn=admin,o=cnc), 'Admin Password' (masked with dots), 'Base User DNs' (o=cnc), and 'Base Group DNs' (o=cnc). There are also buttons to add or remove entries for Base User DNs and Base Group DNs. A 'Save' button is at the bottom left.

Figure 6-4: The User Source Tab

On this page we choose our Provisioning and Authentication settings.

- Provisioning:** The provisioning of users means the directory where you find your users to add to the system. Originally, there was only one choice for provisioning users. You were required to use LDAP, and that actually meant eDirectory. You can now choose to provision your users directly from the GroupWise directory. Of particular import here, if you choose the provisioning to “GroupWise”, you have no choice other than GroupWise for authentication. This makes perfect sense, and quite honestly, we recommend that you bite the bullet and move away from LDAP provisioning AND authentication. Note, this does not mean that you cannot use LDAP as an authentication source for GroupWise itself. It simply means that whatever authentication method the POA users will be available to the Mobility Service when users attempt to log in.
- Group Membership Poll Rate:** If you are using groups (or distribution lists) to provision users, this value will determine how often these groups are refreshed by the Mobility Service in the background. There is a “Poll Now” button here where you can force a poll.

If you use LDAP for your provisioning or authentication, you will see the LDAP section above.

- IP Address:** Enter the IP address of your LDAP server

- **Port:** Enter the port for your LDAP server. If you are using Secure (SSL) the default port is 636. If you are not using SSL, the default is 389.
- **Secure:** If you check this, you will be initiating your LDAP connection via SSL, so make sure that your port above is the proper SSL port.
- **Admin Full DN:** Note that even though this says “Admin” this is not the admin user for the Admin Console. This is a user who has rights to access your LDAP server, and really is not an administrator to THIS system. Enter the full DN of the user who will contact your LDAP server.
- **Admin Password:** the password for your LDAP user.
- **Base User DNs:** The system will search for users from these DNs (think OUs for eDirectory) and down.
- **Base Group DNs:** The system will search for groups from these DNs (think OUs for eDirectory) and down.

Obviously, if you change anything here, click Save.

Single Sign-On

The Mobility Service can specifically use NetIQ Access Manager or KeyShield SSO for single-signon for the Mobility Admin Console. NetIQ Access Manager is transparent, and you will be logged in automatically. For KeyShield, you must fill out the sections on this tab to activate.

Managing Mobility Service Users

User management is accomplished from the Users window of the Mobility Service admin console. Before we start looking at the management tools here, let’s have a little discussion about “users”.

In GroupWise 2012 and prior (this will change with GroupWise 2014), there are really three types of “users” that we can deal with:

- GroupWise Users
- GroupWise External Entities
- Resources

Let’s take a look at each of these

GroupWise Users

A GroupWise user (with a red shirt in ConsoleOne) is a standard GroupWise account that has an associated eDirectory user. I.e., I log into eDirectory to access services such as file and print, and I also have a GroupWise ID. This is the most common type of GroupWise user. The eDirectory userid may or may not be the same as my GroupWise ID. For example, a site might have eDirectory logins like dz1234 and GroupWise ids like dzanre.

GroupWise External Entities

An External Entity is a GroupWise mailbox holder that does not have rights to log into eDirectory. These users are often remote users, users in Active Directory who do not access eDirectory services, and the like. A GroupWise External Entity can only access the Mobility

Service if the User Provisioning is set to use GroupWise authentication, because no password is associated with the External Entity's eDirectory object. The only password an External Entity can have is a GroupWise password.

GroupWise Resources

A GroupWise Resource looks like a GroupWise user from the perspective of the mailbox associated with it, but a GroupWise Resource is special. A Resource is intended to represent a role, object or location. For example, a resource might be "receptionist" or "projector" or "conference room".

One of the limitations of GroupWise Mobility Service is that shared items (folders, calendars, address books) cannot be synchronized to any user except for the owner of the item. One way to work-around that is to have all shared items be owned by a resource that you allow multiple users to access from mobile devices. For example, let's say that you have a project called "Office Relocation". This project has folders where email messages are stored for everyone in the project to see. This project also has a project calendar. And there is an address book for the project with names of outside vendors, contacts, etc. that are needed for the project to run smoothly. Rather than having the project head create all of these items in his own GroupWise account, you could create a resource called "Relocation". That Resource could then share all of these items to users so that when they are using the GroupWise client the items are all accessible right in their own GroupWise account. You could then give all of the shares the password for the Relocation resource, and they can connect to it via their mobile devices.

There are a few complications to this as follows:

- A Resource must have a password, and this is set by the owner of the resource proxying to the resource and setting the password there. If the owner forgets the password, it can only be reset through a GWCHECK with "reset client options/clear password". There is no way for an administrator to set a password for the resource. After the password is cleared, the owner can then proxy to the resource and set a new password. This would then need to be communicated to all affected parties.
- Shared items already exist in many GroupWise systems that are not owned by resources. In order to use resources to facilitate shared items you would need to move those items to a resource. There is no way to do that with GroupWise itself. However, you can use the Shared Folder Administration tool found at <http://www.caledonia.net/shariff.html> to assist with that. For address books, you can export the address books to NAB files and import them into the resource address books. For calendars, you can export the calendar to an ics file and import that for the resource. In order for this to be effective, multiple resources would need to exist for each group of people who need access. For example, you probably could not have one big resource that owns all address books, because that would then allow any user who has access to the resource to access all address books rather than just the books you intend.
- It is best if resources are named with a single word and no spaces in the name to facilitate compatibility with all portions of Mobility and devices.

From the main home screen, all of the users which were added during the installation, either individually, or by virtue of belonging to groups that were added, can be accessed by clicking on the Users link.

Adding Mobility Users

From the Home screen of your admin portal, click on the Users link in the bottom third of the window. You can manually add new users here.

To add users individually to the Mobility Service, do the following:

1. Click on the Add Users check box at the top of the screen. You will see a Search Users box where you can type in a portion of the user's name. A couple of notes here:
 - There is both an LDAP and a GroupWise radio button here.
 - If this is an updated Mobility Service, your LDAP settings are still configured in your setup, even if you have switched to GroupWise provisioning. Thus, you could use either use an LDAP OR a GroupWise lookup here.
 - If this is a new Mobility server, and you choose GroupWise provisioning, you will still see this LDAP option, but it will return zero results.

Once the user is found, you can click the checkbox next to the user's name to add the user. This can be a user, external entity or resource.

2. If you are using LDAP authentication, for each user you add, if the GroupWise userid does not match the LDAP username, you must click on the name link under the Default Name to enter the proper GroupWise userid for the user. Please note, that in our testing, if you do not correct the Default Name right here, you will have trouble with the device not being able to synchronize data.

Add User Close window ✕ ?

Search:

LDAP GroupWise

Select Users: Search results for "helga" Showing 1-1 of 1 entries

Name	Id	Type	Default Name
<input type="checkbox"/> H. Jones	helga.highlands.caledonia	user	helga
<input type="checkbox"/> Select All			<< 1 of 1 >>

Figure 6-5: Adding users to Mobility

If you will be adding the users via a group, follow these instructions:

1. Click on the Groups link and choose the Add Groups button.
2. Search for the Group you would like to add to Mobility Service and click the box next to the Group and then click Add. As with the users, you will have both LDAP and GroupWise options here.
3. Wait for a minute or so, and then click on the Users tab. You should see the users there that are members of your group.
4. As mentioned above, we do not recommend adding users via an LDAP group if the user's GroupWise and LDAP userids do not match.

Any users added via group membership must be removed from the group in order to delete them from the Mobility server.

Viewing Mobility Users and Groups

In the Users section of the Mobility Service you can manage information regarding the GroupWise account. Let's take a look at the Users window.

Userid	Name	User State	Device State
confrum3		Synced	Never Connected
danita	Danita Zanre	Synced	Normal
helga	H. Jones	Synced	Normal
James	James Zanre	Synced	Normal
jane	Jane Matlock	Synced	Never Connected
Joe	Joe Zanre	Synced	Normal
john	John Smith	Synced	Never Connected
mary	Mary Stewart	Synced	Never Connected

Figure 6-6: Users List

Here we have an assortment of users. There are a number of icons visible in the above figure, as well as some that you might see in your travels. You can click on the column names to sort this list via any of the four columns. You can also search for a user in the search field in the upper left. You can even filter on the various types of devices, as seen in the next figure.

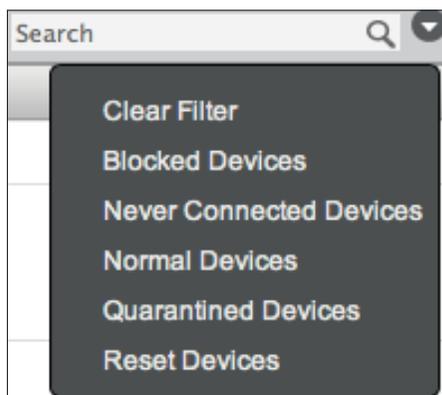


Figure 6-7: Device Filter

This is a scrolling list, rather than a static list with “next” buttons.

Following is information on what you see above.

In the far left column, you will see icons that represent the type of entity, and whether or not the entity was added by group. For example, “confrum3” is a resource as indicated by the

resource icon. This resource, as well as some of the users like “Mary” was added via a group. Here are the relevant icons:



To the right of the userid is a “delete” icon. You will only see this icon if the user is eligible to be deleted from the Mobility Service.

User State

To the right of the User Name column is the User State. Here is where you can see at a glance what is going on with the users on your Mobility Service.

 	jane	Jane Matlock	Syncing-Validate
	Joe	Joe Zarre	Synced

- **Queued:** To be honest, I’ve never seen this state! It seems to happen too quickly for me to get a look at it. Essentially, this one means that the user has been added to the Server, but the initial synchronization process hasn’t kicked off yet. As you will see in the next bulleted section though, if you add more than 4 users at a time, it’s likely you will see this state.
- **Syncing-Init:** Once GroupWise gets the message that a user has been added to the Mobility Service, the synchronization begins. As many as four users can be synchronizing simultaneously.
- **Syncing-Days:** The initial synchronization of email is for three days. Users can change this at the device. When a user asks for 7 days, 2 weeks, 1 month, etc., the Mobility Service must ask the POA for the older message.
- **Synced:** This is by far the most common state you will see. When the user is in a synced state, this does NOT mean that the devices that the user has connected are up to date. In fact, a user can show a synced state, and the Device State can show “Never Connected”. a “synced” user state means that the Mobility Service and GroupWise are synchronized.
- **Blocked:** If you have blocked users from connecting their devices, the user state will change to blocked.
- **Failed:** If the Mobility Service cannot synchronize with GroupWise, you will see a failed state. Back when we were adding users with LDAP groups, it was mentioned that having a different LDAP ID from the GroupWise ID would cause problems. Almost every time we’ve seen a “failed” state, it has to do with a mismatch of GroupWise and LDAP IDs.
- **Deleting:** The user is in the process of being deleted (See Figure 6-10 below).
- **Re-Init:** The user is being reinitialized. The reinitialization process removes all of the user’s data from the Mobility Service, and then requests new data from GroupWise. This is useful when synchronization stops for no apparent reason.

If you see a Failed or Blocked state, click on the user name to be taken to the user details screen where you can perform other options, as described later in this chapter.

Device State

Whereas the User State signifies the progress of the GroupWise Sync Agent in performing its synchronization tasks, the Device State is an indicator of what is happening with the Device Sync Agent.

-  Never Connected: No device has ever connected to the system for this user.
-  Normal: Everything is copacetic!
-  Blocked: Devices for this user (or perhaps all users) are being blocked by the admin.
-  Quarantined: If you are quarantining new devices, you will see this icon when a new device has connected, and needs to be approved.
-  Resetting: A Reset command has been sent to the device to wipe it.
-  Reset: Verification that the device has been reset.

Unless you have limited the number of devices for all users to a single device (see “*The Device Sync Agent*” above), you may see multiple lines here for each user. Each device can be managed separately.

Managing Individual Users and Devices

Now that you’ve seen how to add users, and view their general status, we’ll get down to more granular administration. From the Mobility Service Web Console, click on the Users icon. We’ll be back to the screen shown in Figure 6-6. Each user’s name is a clickable link that will drill down to settings specific to that user. We’ll look at those settings now.

The screenshot displays the 'User Details' page for user H. Jones. At the top, the user's name 'H. Jones' is shown with a help icon. Below this is a summary row with columns for 'Userid' (helga), 'State' (Synced), 'Settings' (device icons), and 'Actions' (refresh and help icons). The 'Devices' section contains a table with columns: DeviceId, State, Type, OS, Protocol, Last Sync, and Actions. The 'Folder List' section shows a table with columns: Folder, Pending Items, and Synced Items.

DeviceId	State	Type	OS	Protocol	Last Sync	Actions
1B499E81327040B288A7420F3B27DB45	✓ Normal	SafeZoneIPad	unknown	12.1	11/05 17:13PM	⌂ ⌂ ⌂
android:175327666	✓ Normal	Android	4.1.2	12.1	10/21 08:17AM	⌂ ⌂ ⌂
SEC15527B23E318E	✓ Normal	Android	4.1.2	12.1	10/21 19:22PM	⌂ ⌂ ⌂
ApplC39KF23XFH1D	✓ Normal	iPhone	7.0.3	12.1	11/14 11:26AM	⌂ ⌂ ⌂

Folder	Pending Items	Synced Items
/Filed	0	0
/Cabinet/Test Sharff (from Danita Zanre)	0	0
/Junk Mail	0	0
/Drafts	1	0
/Tasks	4	0
/Calendar/Work	0	0
/Deleted	0	0
/Calendar	0	378
/Cabinet/Amazon	0	0
/Contacts	0	0
/Contacts/H. Jones	0	0
/Cabinet/Search Engines	0	0
/Notes	0	0

Figure 6-8: User Details

The top line of the User Details page shows the user's name, state, settings and available actions. If there is a problem with the user's state (for example, blocked or failed), you can take corrective action here. This top line has a few icons of note.

Device Settings

 **Device Configuration:** When you click this device configuration icon, you can choose which email folders are synchronized to the devices. By default all folders are synchronized. By limiting folders here, items that would never be useful on a device (perhaps logs, or certain email lists that a user does not read on the device), you can limit the amount of data that is stored on the Mobility Service. Even when all folders are synchronized to the Mobility Service, the email is only synchronized to the device's Inbox (or other folders if the device allows you to specify multiple push folders) unless the user clicks on a specific folder in the email client. Once a user clicks a folder other than the Inbox, those messages are downloaded to the device. So, many sites do not limit folders here, but rely on the user to only choose to download items that make sense to have on the device.

GroupWise Settings

 **GroupWise Configuration:** When you click on this GroupWise configuration icon, you see which address books are set to synchronize, and what items the user has chosen to sync. Note that upon creation of a user, all address books except the Frequent Contacts Book are chosen to synchronize. This default cannot be changed, but users can choose which books they wish to have on their devices after the initial sync by logging into the admin portal. Here users can also choose which of their address books will receive contacts that are created on the devices, which often do not have the ability to save a

contact to a specific address book. Some administrators choose to manage all of this for the users rather than allowing users to log into the portal.

User Actions

-  **Re-Initialize User:** There are times when a user needs to be reinitialized. If a user shows a state of “Failed”, then this is often the first step prior to deleting a user. Re-initializing will allow the user settings to remain, but refresh the data for the system. This will effectively re-initialize all data for all devices as well.
-  **Block User:** This will stop synchronization with all devices for the user. This is useful if you are performing maintenance (such as re-initializing the user), or need to prevent the user from downloading new data without deleting devices or the user itself.
-  **Unblock User:** If you have blocked the user, this icon will appear. Clicking it will give you the opportunity to unblock the user.

Managing Devices

Looking again at Figure 6-8 above, you will see the section entitled Devices. Here is where you can see all of the devices that are in use for each user. Here is another device list. We will reference both of these figures in our discussion of devices.

Deviceid	State	Type	OS	Protocol	Last Sync	Actions
1B499E81327040B288A7420F3B27DB45	✔ Normal	SafeZoneiPad	unknown	12.1	11/05 17:13PM	   
androidic175327866	✔ Normal	Android	4.1.2	12.1	10/21 08:17AM	   
SEC15527B23E318E	✔ Normal	Android	4.1.2	12.1	10/21 19:22PM	   
AppIC39KF23XFH1D	✔ Normal	iPhone	7.0.3	12.1	11/14 11:26AM	   

Figure 6-9: More Device examples

In these two figures we have iOS devices, Android devices, even “Application” generated devices such as the MacTouchDown and SafeZoneiPad devices. The following information is available for each device:

- **Device ID:** Each device has a specific ID. Typically this will be the device serial numbers, sometimes the IMEI number, or even an application generated ID.
- **Type:** Here you will see things like iPad, iPhone, Android, or an application
- **OS:** What OS is the device running. This can be useful for troubleshooting.
- **Protocol:** You may see 2.5 or 12.1 here.
- **Last Sync:** Pretty self-explanatory. When did this device last sync with the server.

Device Actions

The next column is “Actions”. A couple of these settings were listed above under User Actions. Performed there, these actions affect all devices. To be more granular, you can perform some actions per device.

-  **Resync Device:** This function removes all existing data from the device, and resynchronizes. This is effectively the same thing as removing the account from the device and re-adding it. This might be necessary if the synchronization to the device stops working, or the data on the device no longer matches what is in GroupWise. If the

user has more than one device and all are exhibiting problems, re-initializing the user as described in “*User Actions*” above is a better choice.



Block Device: This will stop synchronization with a specific device for the user.



Unblock Device: If you have blocked the device, this icon will appear. Clicking it will give you the opportunity to unblock the device.



Reset device to factory standards: If the device will allow it, you can reset the device to factory standards. If no reset icon is available for a device, this means that the device does not support resetting from the Mobility Service. Additionally, some Application devices will allow for a reset of the applications data only. For example, Nitrodesk TouchDown products and Fixmo’s SafeZone product allow you to save Groupwise data into a specific application on your device or computer. Resetting such “devices” to factory standards will simply delete the data in that application, and not from the entire device that houses the application. This particular function is of course a destructive function. It should be used with care, typically with the permission of the device owner.

Device Folders

Back at Figure 6-8, you will see a section called Folder List. In the figure, we have expanded the folder list by clicking the plus sign next to the section heading.

Each device has its own Set of folders listed here. You can scroll through the list, and see folders for the user in question. Here you can see the number of items pending for a specific device, and how many items have synchronized to the devices. This is a very useful place to look when a user complains that all email is not being received, or a particular address book has not synchronized.

Deleting Users

Looking at Figure 6-6, you will notice that some users have an  next to them. This is the “delete” button. In order to remove a user from the Mobility Service, you simply click on that  and then verify that you wish to delete the user.

As mentioned earlier though, users added to Mobility via a group cannot be deleted from Mobility directly, but rather must be removed from the group. You will notice that all of the users above that have a group icon do not have a delete button. In order to remove these users from the Mobility Service, you must remove the user from the LDAP group or GroupWise Distribution List that assigns the user rights to the Mobility server.

When you delete a user object, you will notice a change in the name of the user and status as seen in Figure 6-10.



Figure 6-10: Deleting a user

If you are watching, you will see this “deleting” state regardless of whether you manually delete a user or remove the user from an associated group.

Changing SSL Settings for the Mobility Service.

In this section we will look at a couple of SSL administration tasks that you might be called upon to perform.

Replacing the Mobility Service SSL Certificate

During installation of the Mobility Service you could have added a trusted certificate to your installation, or you might have let the installation generate a self-signed certificate for you. Of course, there will be times in the future as well, when your certificate expires and needs to be replaced. If you need instructions on how to generate a CSR for a trusted certificate, see *“Installing a Trusted Certificate for your Device Sync Agent”*. If you have your new certificate ready, here are the instructions for adding it to your Mobility Service!

The Mobility Service uses SSL certificates in two locations. One for the “device connection” server, and one for the Web Admin Console. You can use the same certificate for both.

Updating The Device Connection Certificate

First let’s update the device sync agent certificate!

1. Change to `/var/lib/datasync/device` on your Mobility Service.
2. Backup the existing `mobility.pem` file just for good measure (i.e. **`cp mobility.pem mobility.bak`**)
3. Copy the `mobility.pem` file that we created back in *“Installing a Trusted Certificate for your Device Sync Agent”* into `/var/lib/datasync/device`.
4. Restart the Device Sync Agent either by clicking on the Stop/Start buttons in the Web Admin Console, or just run **`rcgms restart`**.

Updating the Web Admin Console Certificate

You can also use the same `mobility.pem` file that you created earlier for securing the Web Admin Console. To do so, do the following:

1. Change to `/var/lib/datasync/webadmin` on the Mobility Service.
2. Backup the existing `server.pem` file (**`cp server.pem server.bak`**)
3. Copy the `mobility.pem` file that you created earlier into `/var/lib/datasync/webadmin`, and name it `server.pem`.
4. Restart the Web Admin (**`rcdatasync-webadmin restart`**).

Tightening Up SSL Settings

Many sites have stringent security settings that require that only specific versions of SSL be used, or only specific cipher types be accepted. Due to backwards compatibility issues, many web servers (CherryPy which is the basis for Mobility Service) included, allow for SSL transport of many cipher types. If your organization has requirements, for example, that you only accept SSLv3 connections, or that you only accept certain types of ciphers, you can modify the settings of your Mobility Service to accommodate these requirements.

There are two spots in the Mobility Connector where you can change these settings. To access them, first log into the Web Admin Console for the Synchronizer. Then do the following:

1. Click on the Mobility Connector in your connectors list (just named “mobility”).
2. Click the Edit XML Source in the upper right portion of the page.
3. Add the following tag just below the tag for <SSL>. The tag we add can technically be anywhere in the <custom> settings, but adding it below <SSL> keeps all of the SSL related information together and easier to read.

<sslMethod> value </sslMethod>

The valid options for the sslMethod are 1, 2, 3 or 4 as defined below:

- SSLv2 = 1
- SSLv3 = 2
- TLSv1 = 4
- All of the above = 3

4. If you wish to limit the ciphers that can be accepted by your server, also add a tag for
<sslCiphers> list </sslCiphers>

You can find the list of ciphers that your server accepts by typing **openssl ciphers -ssl3** in a terminal window. Replace the word “list” with the ciphers that you wish to allow.

5. Click Save XML to save your changes
6. Next click Home to return to the main Web Admin Page.
7. Restart the Device Sync Agent by clicking the stop button (red box), and then click the start button (green arrow).

User and Device QuickStart

Users can also access the Web Admin Console. By entering the URL of your Mobility Pack server in their web browser, the user can log in and change the address books to sync, and choose which, if any, types of items they wish to limit from syncing to the device. For example, If you set yourself up as the Synchronizer administrator user, you can access your personal User

Options page with the following URL:

https://yourserver.com:8120

If you set your own login as an LDAP administrator for the system, you can log into the Web Console as a “typical user” by going to:

https://yourserver.com:8120 /admin/user/username

Here a user can set options for synchronizing address books and other items to devices. If users have address books and/or folders that they do not want to synchronize to the device, it can be useful to have them log in before setting up the device to avoid downloading a lot of information and then changing it later to exclude these items.

In order for your users to set up their devices in the ActiveSync or “Exchange” client for the device, typically they will only need the following information:

- DNS name of your Mobility Service (for example, gw.yourdomain.com)
- Whether or not you are using SSL (i.e., port 80 or port 443, or even a custom port if you need to do that)
- Their own eDirectory or GroupWise userid and password (depending on whether you are using LDAP or GroupWise authentication)
- Some devices might insist that the user enter a “domain”. Mobility doesn’t care, so typically I suggest that sites just use a variation of their company name here. For example, we use “Caledonia” as the domain designation for devices that want something.

Information on setting up some specific devices is at http://wiki.novell.com/index.php/Data_Synchronizer_Mobility_Connector. Caledonia also has a comprehensive iOS Users Guide, which includes information on the Mobility Pack settings and operation for the iPhone/iPod Touch/iPad. In addition to basic setup instructions for the iOS devices, the Caledonia iOS Users Guide has detailed information on the operation of the Mail, Calendar and Contacts apps on the iOS devices as used with the GroupWise solution.

Editing XML Files for Other Changes

There are a number of changes that you can make to your system that cannot be accomplished in the Web Admin Console. For these, you must edit some XML files and then restart the Mobility Service (**rcgms restart**). We’ll go over a few of these now.

Modifying the Synchronizer Web Admin Port Number

If you wish to change the access port for the Web Admin Console from 8120 to something else, you can do this by editing the **/etc/datasync/webadmin/server.xml** file. You will need root access to do this (su or sudo). Find 8120 in this file and change it to the port of your choice. Save the file and restart the Web Admin server (**rcdatasync-webadmin restart**).

Adding Additional LDAP Synchronizer Administrator Users

During installation you can only add one user who has access to the GroupWise Mobility Service Web Admin Console. If you wish to add additional users for access, edit **/etc/datasync/configengine/configengine.xml** file in a text editor. You will need root access to do this (su or sudo). Find the following section:

```
<admins>
  <dn>cn=username,ou=organizational_
unit,o=organization</dn>
</admins>
```

Duplicate the <dn> line and place it before the </admins> line to configure the administrators you desire. After saving the file you must restart the Synchronizer (**rcdatasync-syncengine restart**).

Updating the Mobility 2.0 Installation

Now that you have your Mobility server up and running, you can be sure that you will need to update it within a few months! Novell has committed to rolling out updates to the Mobility Service on a regular basis, bringing new features and bug fixes very quickly. If you are looking to upgrade from the 1.2.x Data Synchronizer, please see *“Upgrading GroupWise Mobility Service”*.

There are two ways you can update your Mobility Service:

- Download the Mobility ISO from downloads.novell.com and apply the update via YaST via the Patch CD Update option.
- Use zypper to update Mobility directly from the online repository for Mobility.

While you can always use the Patch CD Update to do your update, you can only use the zypper method if you are on the same “dot” release. What this means is, if you are running version 2.0, and Novell releases 2.0.1, you can use zypper to update. However, if you are running version 2.0 and Novell releases 2.1, you will need to use the Patch CD Update to update your server.

Updating Using the Patch CD Update

If you are happier using YaST for your updates, you can always download the ISO from download.novell.com and do your update.

1. Download the Update CD from download.novell.com to a location on your Mobility server.
2. First unload your current 2.x Mobility Service.


```
rcgms stop
ps -eaf | grep gms
```
3. Open YaST

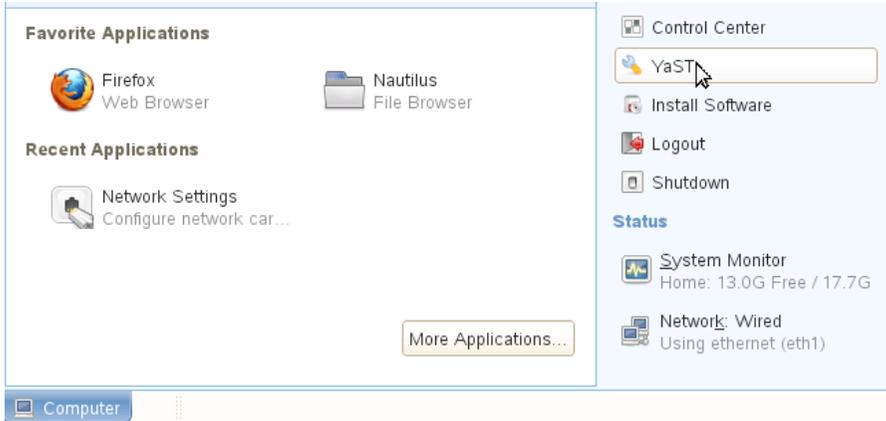


Figure 6-11: Opening YaST

4. Choose Software
5. Choose Patch CD Update (note: do not use the Add-On Products option, as this would require you to go through the setup again).
6. You may be asked to update your Novell Customer Center options when you load Patch CD Update. Follow the prompts to update, and you may need to load the Patch CD Update option again.
7. When you reach the screen where you point to the Patch CD, choose Local ISO image.
8. Browse for your file, choose it and then click Next.
9. Accept the license agreement.
10. You will see the list of files that will be updated. I have found that it is best at the point to uncheck all items other than the Mobility Service version you are attempting to upgrade to. You can do any other updates that the system suggests later. Choose Next.
11. Click Start Update when you are prompted.
12. After the update has finished, exit YaST and change to **/opt/novell/datasync**
13. Run the **update.sh** script and follow the prompts*
14. After the script has finished, then run **rcgms restart**.

Note that in step 13 above, this is the current routine for updating your server. Make sure to read the readmes on any update to see if these options change. If you get login or other odd errors when running **update.sh**, type

```
cat /etc/hosts
```

Make sure that your server's host name is there. If not, edit the file add the host name and rerun **update.sh**.

To check that everything updated properly, log into your WebAdmin and look to see that the version number and build number look correct.

Updating Using Zypper

Using zypper will allow you to update online from the online repository without downloading the ISO. This requires that your Novell Customer Center information is up-to-date, and that your account is active.

You can check to see if you have a Mobility repository set by running the following at the terminal prompt:

```
zypper ca
```

You should see something like the following:

```
# | Alias | Name | Enabled | Refresh
+-----+-----+-----+-----+
1 | GroupWise-Mobility-Service_2.0 | GroupWise-Mobility-Service_2.0 | Yes | No
2 | SUSE-Linux-Enterprise-Server-11 11-0 | SUSE-Linux-Enterprise-Server-11 11-0
| Yes | No
3 | nu_novell_com:Mobility-2.0-Updates | Mobility-2.0-Updates
| Yes | Yes
4 | nu_novell_com:SLES11-Updates | SLES11-Updates
| Yes | Yes
```

If you do not show a Mobility repository, you can run the following, all on one line:

```
SUSE_register -a regcode-mobility=registration_code
-a email=email_address -L /root/.SUSE_register.log
```

Of course, you need to enter your own registration code and email address here. This will register you with the Mobility repository. After you complete this, you can run the following:

```
zypper up -r nu_novell_com:Mobility-2.0-Updates
```

This will prompt you through the update. After the update is complete, change to **/opt/novell/datasync** and run **update.sh**. Note that this is the current procedure. You should be certain to check the readme to see if the update script name changes.

Database Management

The Mobility Service database occasionally needs maintenance. Here are some options for you:

Postgres Maintenance

- Vacuum & Reindex ([TID 7009453](#))
- Backup & Restore ([TID 7008163](#))
- Remove user references ([TID 7008852](#))

Mcheck

Mcheck is a new utility that ships with GMS 2.0. It provides diagnostic tools that can assist with rooting out and fixing GMS problems.

Mcheck is a python script found in the /opt/novell/datasync/tools/mcheck folder. The script MUST be run as root.

To run mcheck, change to the /opt/novell/datasync/tools/mcheck folder and run **python mcheck.pyc**

This will invoke a menu described as follows:

```
MCheck (Version: 1.0) - Running as root
Please use only when directed by Novell Support.
```

- ```

1 System
2 Users
0 Exit
```

```
Select Option:
```

## System Check

If you choose 1 for System, the following menu appears:

```
MCheck (Version: 1.0) - Running as root
Please use only when directed by Novell Support.
```

```

System Menu
```

- ```
1 Get Mobility Configuration
2 GroupWise System Address Book Check
0 Main Menu
```

```
Select Option:
```

Under the MCheck directory, there is a 'logs' directory. A separate log file is created for each action selected from the menu. Each log file has a date and time stamp to provide uniqueness. At present, there is no process to clean-up MCheck log files.

The following section describes the purpose of each MCheck option, how to access it via the menu, logs file locations, and a recommendation description. The output for each entry will also detail the log name and location so that you can see the details for the process.

Get Mobility Configuration

When you choose this from the menu, you get an output similar to the following:

Completed getting GroupWise Mobility Service Configuration.

Log file location: logs/mobConfiguration_2013-11-19T11:51:50.log

Enter to continue

The information gathered here includes defined log levels, attachment size limits, LDAP poll rates, server locations, and Postgres database settings.

GroupWise System Address Book Check

This check ensures that the GroupWise System Address Book and the Mobility Address Book are in sync. If errors are detected, you will be prompted to fix them during the check.

User Check

If you choose 2 at the main menu, you will see the following menu:

MCheck (Version: 1.0) - Running as root

Please use only when directed by Novell Support.

User Menu

1 Check User

0 Main Menu

Select Option:

Check User

The only option here is to do a user check.

This option will verify that all GroupWise entries are successfully being synced to Mobility. All items (inbox, calendars and contacts are checked for synchronization issues. Just enter the userid you wish to check.

Here's an entry from my check!

Completed analysis for user: cn=danita,o=CNC

Summary:

Device count: 4

No GroupWise configuration problem detected.

Mobility Folder structure problem detected

Email Summary (Inbox only)

GroupWise Inbox count: 5430

Mobility Inbox count (success): 5344

Mobility Inbox count (failure): 86

Calendar Summary

GroupWise Calendar count: 123

Mobility Calendar count (success): 123

Mobility Calendar count (failure): 0

Contacts Summary

GroupWise Contacts count in synced books: 0

Mobility Contacts count (success): 0

Mobility Contacts count (failure): 0

Log file location: logs/danita_2013-11-20T10:07:57.log

User problem detected. Do you want to correct the problem by re-initializing the user? (yes/no)

So, time to re-initialize poor Danita! When I indicate “yes” to re-initialize, the process is kicked of. In the Web Admin, if I click on users, I now see that Danita is indeed in a Re-Init state.

 danita		Danita Zanre	Re-Init
--	---	--------------	---------

The end of the run will indicate where the log exists. This can be a fairly large log depending on the errors. While we've deleted chunks of this log, here are some the things you will have access to:

GroupWise Check

Test 1: Does the Mobility Event Configuration exist for this server?

Test 2: Is the user in the GroupWise POA notification list?

Test 3: Is the user configured on other Mobility Systems?

Test 4: Are all GroupWise address book in the GroupWise folder list?

Folder Structure Check

Test 1: In the SE, validate each folder has a parent folder.

GroupWise folder structure

All folders have valid parents.

Mobility folder structure

All folders have valid parents.

Test 2: In the SE, validate the GroupWise and Mobility folder structures.

GroupWise is missing these mobility folders:

Folder Name: TouchDown; Id:

Folder Name: Deleted Stuff; Id:

Mobility is missing these GroupWise folders:

Folder Name: TouchDown; Id:

Parent Name: Cabinet; Type: Cabinet; Id:

Test 3: In the Mobility Sync Agent, validate that each system folder exists.

No Mobility Sync Agent system folders problems.

Mobility Check

Mobility User Current Sync State: Synced

Mobile Devices:

Here a list of all devices will occur with last connection time.

Test 1: Folder Compare - Have all GroupWise events successfully synced to Mobility?

Note: Only comparing Inbox, personal calendars, and selected personal books (contacts).

Evaluating GroupWise folder: Mailbox (Email).

This will now check all devices for errors. In my case, only one device had issues

DeviceType=MacTouchDown. DeviceId=5462479440465B8A960235275E9865A8.

Device Last Connection: 11/18/2013 02:00:54 PM.
Events newer than: 2013-05-24T00:00:00Z.

Mobility. **Failure. GroupWise Event does not exist in**
Mailbox **Event in this GroupWise Folder =**
Windermere.100.1313931.1.63C.1; itemtype: Mail **GroupWise: id=52154337.Beta.**
07:34:45 **GroupWise subject = re: mlc order**
GroupWise created = 2013-06-22

Other Management Issues

Here are a few TIDs that can be helpful in keeping your system up-to-date

Logs

- Remove log archives to free up space ([TID 7010533](#))

Register & Update

- Register DataSync ([TID 3030847](#))
- Update with Novell Update Channel ([TID 7007012](#))
- Update with local ISO ([TID 7007012](#))

Certificates

- Generate CSR and Key ([TID 7007674](#))
- Generate self-signed certificate ([TID 7007674](#))
- Configure certificate from 3rd party ([TID 7006904](#))

User Authentication Issues

- Finds authentication issues for specific user, suggests steps to resolve ([TID 7012048](#))

Admin Lockout

If you give the wrong password three times, you will be locked out of the Admin Console. This can be fixed simply by restarting the webadmin:

rcdatasync-webadmin restart

Our next chapter will deal with Monitoring your Mobility Service through the new dashboard!

7 The GroupWise Mobility Service Dashboard

In this chapter, we'll go over the new GroupWise Mobility Service Dashboard, and various monitoring functions. It's important to note that we listed the Administrative functions of GroupWise Mobility Service in the previous chapter. While there is a plethora of information contained in the GMS Dashboard, this is not a location where you can "fix" things. This information is read-only, and you will need to either revisit the Users or Service Configuration options from the Navigation bar at the top in order to make any changes that might be necessitated by viewing the Dashboard information.

To get to the new Monitoring Dashboard, simply click the "Dashboard" icon from any location in the Web Console.



Figure 7-1: The Navigation Bar showing the Dashboard Icon

You will see a screen like in Figure 7-2.

Agents				Details		Performance Indicators	
Agent	Status	Up Time	Last Refresh				
GroupWise Sync	Running	3m 34s	29s	Users	6 / 2	Event Timing	1s
Device Sync	Running	3m 33s	0s	Devices	11	Event Processing	2
System	Running	3m 50s	26s	POAs	2	Attachment Sync	0
Agent Alerts		15 / 2 / 6		LDAP Connection	Active	GroupWise Sync	2/min
				DB Connection	Active	Device Sync	0

Figure 7-2: The GroupWise Mobility Service Dashboard

This is really your "system at a glance" section, and can provide you with useful information on the health of your system overall. Green is great; yellow is cautionary; and red means you need to go do some immediate checking!

This screen is broken down into three sections. We will go through them all in detail. For now, let's just look at the general use of these three sections.

- **Agents:** In the left section of the Dashboard, you can see information on the Sync Agents (GroupWise and Device), the System Monitor and Alerts
- **Details:** The Details section in the middle of the Dashboard has information on users, devices, POAs, and your LDAP and database connections for GroupWise Mobility Service.
- **Performance Information:** The right-hand side of the Dashboard gives you information on the overall performance of your GroupWise Mobility Service.

As you start clicking on items in the dashboard, you will eventually open up to three different sections of information. See Figure 7-3 below.

The screenshot shows the GroupWise Mobility Service Dashboard for user Danita Zanne. The dashboard is organized into several sections:

- Agents:** A table showing the status of various agents.

Agent	Status	Up Time	Last Refresh
GroupWise Sync	Running	1d 59m 32s	6s
Device Sync	Running	1d 59m 31s	15s
System	Running	1d 59m 48s	8s
Agent Alerts		15 / 3 / 6	
- Details:** A table showing system details.

Item	Value
Users	5 / 3
Devices	9
POAs	2
LDAP Connection	Active
DB Connection	Active
- Performance Indicators:** A table showing various performance metrics.

Metric	Value
Event Timing	0
Event Processing	20
Attachment Sync	16763/min
GroupWise Sync	0
Device Sync	3/min
- User Information:** A section providing details about the user.

Item	Value
Full Name	Danita Zanne
Mobile User	danita
GroupWise Email	danita@caledonia.net
LDAP ID	cn=danita,o=CNC
Initialized	11/20/2013 10:18
POA	Windermere
GroupWise Sync	Ready
Device Sync	Syncing-Days+
- Alerts:** A list of alerts for the user.

Last Received	Message	Location	Count
11/20 10:43	Invalid None folder encountered. Recommend that this user remove and re-add the account on device: AppIDN6H61R1DJBV	danita	5
11/16 11:22	Event Rate From GroupWise: There is a large number of requests coming from GroupWise	danita	25
11/20 18:31	Device Requests Per Minute: There is a high number of device requests from this user	danita	4
11/20 18:31	Device Requests Per Minute: There is a high number of device requests from this device	danita	4
11/21 11:04	Attachments Received from GroupWise: There are a large number of attachments being retrieved from GroupWise	danita	11
11/21 11:05	Attachment KBs Received from GroupWise: There is a large amount of attachment data being retrieved from GroupWise	danita	8

Figure 7-3: The Full GroupWise Mobility Service Dashboard

The middle and bottom sections both have an  in the upper right of the section, allowing you to close these sections and return to the image in Figure 7-2 when you choose.

While we will attempt to move through the Dashboard with some logical path in mind, as you will see, almost every entry in the Dashboard is clickable. This is fantastic in practice, as it allows you to move through the system quickly to find a particular bit of information, or ferret out a problem. As a systematic view of the Dashboard though, you will see that it becomes rather easy to get sidetracked, like starting on one article in Wikipedia™, and after clicking a few links suddenly wondering how you ended up on the specific article you are reading a few minutes later! In other words, forgive us if we start jumping around a bit!

The Agents Monitor

Prior to GroupWise Mobility Service 2.0, we talked about connectors and engines a lot. GMS 2.0 has changed much of the terminology, and we are now concerned with Agents. This mirrors the terminology of the GroupWise system itself (Post Office Agent and Internet Agent, for example). In the left-hand third of the Dashboard, you will see the section called Agents.

Agents ?			
Agent	Status	Up Time	Last Refresh
✔ GroupWise Sync	Running	3h 4m 30s	24s
✔ Device Sync	Running	3h 4m 29s	2s
✔ System	Running	3h 4m 47s	22s
✘ Agent Alerts		15 / 3 / 6	

Figure 7-4: The Agents Overview

In this section we get an overview of the status, uptime and last refresh of our two agents, as well as a section for alerts.

GroupWise Sync Agent Statistics

Clicking on the words “GroupWise Sync” will open a new window below that has information on various sync statistics.

GroupWise Sync Health (18)		
	Stat	Value
✔	Attachment KBs Received from GroupWise	0/min
✔	Attachments Blocked Due to Size Restrictions	0/min
✔	Attachments Failed to be Received from GroupWise	0/min
✔	Attachments Received from GroupWise	0/min
✔	Event Rate From GroupWise	0/min
✔	Events From Devices Failed Sending to GroupWise	28
✔	Events From Devices Pending Processing to GroupWise	0
✔	Events From Devices Ready For GroupWise	0
✔	GroupWise Interface Usage	0%
✔	GroupWise Sync DB Connection	Yes
✔	Highlands: Connection to POA	Yes
✔	Highlands: Event Rate From GroupWise	0/min

Figure 7-5: GroupWise Sync Agent statistics

The first thing to point out here is that is more than meets the eye on this screen. The size of this screen is not long enough to show all of the entries (even on a single Post Office system), and on some browsers you do not see a scroll bar here. But indeed, if you “scroll” through this window you will see more information, and if you have multiple Post Offices that your system contacts you will see connection information for each POA that has been contacted for user information.

There is a lot of information for this screen in the contextual help for the page, so we will not just reiterate it all here. It is important to note though that each of these mini graphs to the right is clickable, and will bring up a window like that shown in

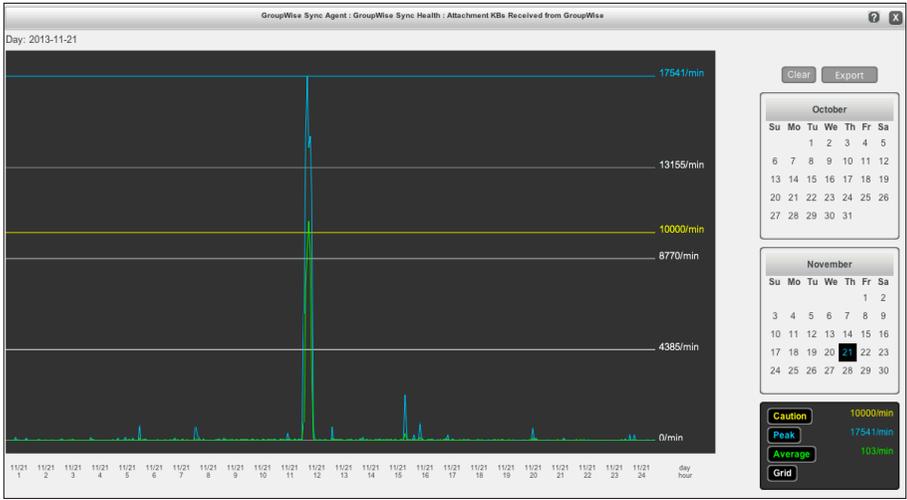


Figure 7-6: An Expanded Item Graph

The important elements of this window are the graph itself of course, as well as a date picker calendar, a legend that explains the graph, and a clear and export button. The date picker is especially useful in generating views that can be enlightening.

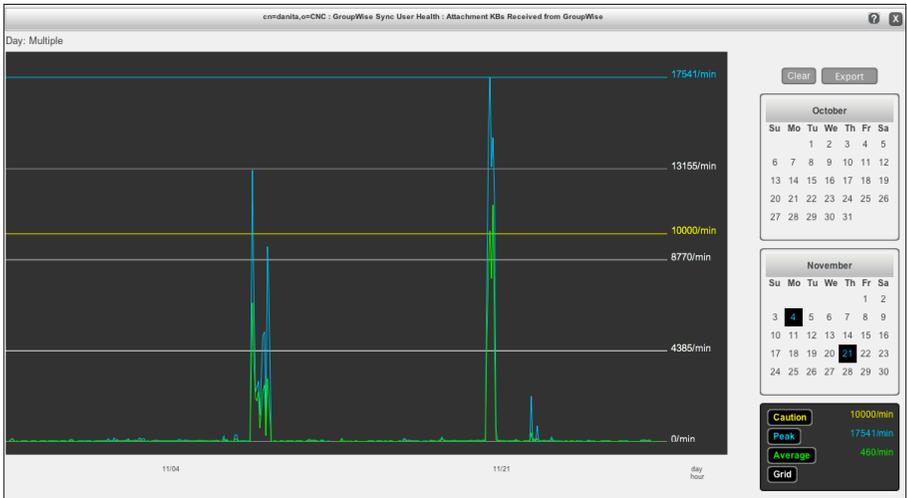


Figure 7-7: Comparing days

Notice that in Figure 7-7 we have chosen two specific dates in the date picker to the right. This allows us to compare activity from a range of dates or two distant dates for activity. Click on dates to add them to the graph, or click again to remove them. In our testing, there did not seem to be a way to do something like a Shift-Click, for example, to select a large range. Rather we had to click each date to add a range of dates to the graph. That said, clicking the month name will select the entire month for inclusion in the graph.

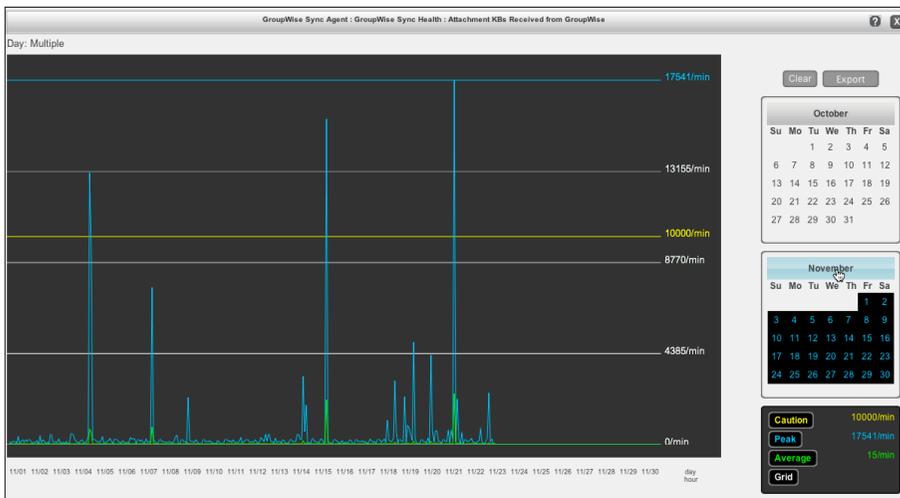


Figure 7-8: A month at a glance.

The Event Rate in particular shows a combined event rate for all users. You can also get individual stats for the Event Rate in the *“Performance Indicators”* later in the chapter.

Device Sync Agent Statistics

This screen is very similar to the GroupWise Sync Agent Statistics screen. Here you can see information on various device sync functions, such as failed attachments, oversized attachment statistics, and connection information to the database.

System Statistics

System Health (7)	
Stat	Value
✓ CPU Utilization	2%
✓ Disk Busy	0%
✓ Disk kB Read	0/s
✓ Disk kB Written	0/s
✓ Diskspace Usage	25%
✓ Memory	67%
✓ PostGres Database Daemon	Yes

Figure 7-9: System Statistics

In the System Statistics you can get some very useful server stats. A nice place to see whether you are running low on disk space, or how CPU utilization is doing. As with all other sections of the Dashboard, clicking any of these mini graphs will open a large view for your inspection.

Alerts

Perhaps one of the most important sections of the Dashboard for most administrators is the Alerts section. Here is where we can see what critical errors might be occurring, what possible actions can be performed to remedy a problem, and where additional resources might be needed in the future, as some of the Caution alerts below can be used to forewarn of pending issues. Figure 7-10 shows the Alerts screen.

Last Received	Message	Location	Count
11/16 00:13	Connection to the LDAP is down	Device Sync Agent	2
11/16 00:14	LDAP Server Connection: Unable to connect to LDAP Server	Device Sync Agent	2
11/16 00:14	Device Sync Agent Reporting Critical Levels	Device Sync Agent	2
11/16 00:40	System agent has stopped responding.	System	3
11/16 00:55	Device Sync Agent agent has stopped responding.	Device Sync Agent	10
11/18 15:24	GroupWise Sync Agent agent has stopped responding.	GroupWise Sync Agent	9
11/18 07:12	Average Device Request Time: Device requests are taking a long time to complete	Device Sync Agent	44
11/20 10:19	Events From Engine Per Minute: There is a large number of events coming from the sync engine	Device Sync Agent	44
11/20 10:43	Invalid None folder encountered. Recommend that this user remove and re-add the account on device: ApplDN6H61R1D,J5V	danita	5
11/15 14:42	Attachments Received from GroupWise: There are a large number of attachments being retrieved from GroupWise	GroupWise Sync Agent	18
11/15 14:42	Attachments Received from GroupWise: There are a large number of attachments being retrieved from GroupWise	danita	9

Figure 7-10: System Alerts

Back on Figure 7-4, you see the “Agent Alerts section in red at the bottom. There are three sets of numbers there. These represent yellow-caution/orange-warning/red-critical. This order is reversed in the expanded list, showing critical alerts at the top by default. You can click the little arrow to the left of the “Last Received” column to reverse the order of display.



Critical: These alerts typically involve a down agent, either in GroupWise Mobility Service itself, or the POA or LDAP server.



Warning: These alerts are typically related to slow downs or device/mailbox issues. Generally they require some kind of administrator intervention.



Caution: These are typically “watch out” types of entries that can alert you to potential issues before they become big problems.

After you have read an alert, click the to delete it.

Most of these alerts link back to another screen that can give more detail. This is accomplished by clicking the entry in the “Location” column for the alert.

For example, Figure 7-10 shows that “danita” is a problem user (okay, no snide comments please!). If you click on the user name in this alerts section, you see the information in Figure 7-11 for the user in question.

Details			Performance Indicators		Devices / Folder Items	
Full Name	Danita Zanre		All Stats		MacTouchDown (Authenticated)	0 / 2808
Mobile User	danita		Event Timing	0	iPad (Authenticated)	16 / 2808
GroupWise Email	danita@caledonia.net		Attachment Sync	378min	SafeZoneiPad (Idle)	
LDAP ID	cn=danita.o=CNC		GroupWise Sync	1min	iPhone (Authenticated)	123 / 1781
Initialized	11/20/2013 10:18		Device Sync	32min		
POA	Windermere		User Alerts	5 / 1 / 0		
GroupWise Sync	Ready					
Device Sync	Syncing-Days+					

Figure 7-11: User Data

Further clicking on the User Alerts in the bottom middle of this screen will show you specific alert information for that user, as shown in Figure 7-12.

Last Received	Message	Location	Count
11/20 10:43	Invalid None folder encountered. Recommend that this user remove and re-add the account on device: AppIDNBH61R1DJBV	danita	5
11/16 11:22	Event Rate From GroupWise: There is a large number of requests coming from GroupWise	danita	25
11/20 18:31	Device Requests Per Minute: There is a high number of device requests from this user	danita	4
11/20 18:31	Device Requests Per Minute: There is a high number of device requests from this device	danita	4
11/21 11:04	Attachments Received from GroupWise: There are a large number of attachments being retrieved from GroupWise	danita	11
11/21 11:05	Attachment KBs Received from GroupWise: There is a large amount of attachment data being retrieved from GroupWise	danita	8

Figure 7-12: Problem User Alerts

You will typically also see a possible solution for the error if there is a maintenance procedure that can be done to deal with the problem. It's important to understand though that the Dashboard is a "view only" section of GroupWise Mobility Service. If you need to re-initialize a user, for example, you will need to click on the Users navigation icon at the top (leaving the Dashboard), and perform the maintenance as described in "*Administering GroupWise Mobility Service*".

The Details Monitor

It seems a bit odd to call this section the "Details Monitor", but "Details" is indeed how the middle section of the Dashboard is labeled.

Details			
! Users	6 / 2		
✓ Devices	9		
✓ POAs	2		
✓ LDAP Connection	Active		
✓ DB Connection	Active		

Figure 7-13: The Details section of the Dashboard

In a perfect world, all of the objects in this section of the Dashboard would be green, and connections would all show Active. Of course, that is not always the case, as even exhibited in our own screenshot in Figure 7-13. If anything is not green in any part of your Dashboard, there is a possible issue to be resolved. Here in the Details we have access to the following objects:

- Users
- Devices
- POAs

- LDAP Connection
- DB Connection

We'll look at the information you can find in each of these sections below.

Users

Clicking on Users in Figure 7-13 will show you a scrolling list of users in you system.

User	Status	Devices	GW Events	Device Reqs
-	Disabled	0	0/min	-
-	Disabled	0	0/min	-
James	Ready	1	0/min	0/min
Joe	Ready	2	0/min	0/min
confroom3	Ready	0	0/min	0/min
danita	Ready	4	0/min	0/min
helga	Ready	2	0/min	0/min
jane	Ready	0	0/min	0/min

Figure 7-14: Users in the Dashboard

Here we see the users in our system, and their status. We should point out that if you have “Disabled” users, you will most likely actually see a user name! This figure came from an issue we had during beta, and while it should not happen to you, it is a nice figure to point out that “things sometimes go wrong”. Note that in this figure we see the users and how many devices are configured for each user. There are also mini graphs here as well that can be expanded.

Clicking on a user here will bring up a window with user details. This is usually the ‘middle’ block of data (see Figure 7-3), and if that window is already open, you might not readily see that it has changed. You will see information that is listed below.

User Information		
Details	Performance Indicators	Devices / Folder Items
Full Name: Danita Zanre	All Stats	MacTouchDown (Authenticated) 0 / 2808
Mobile User: danita	Event Timing 0	iPad (Authenticated) 16 / 2808
GroupWise Email: danita@caledonia.net	Attachment Sync 378/min	SafeZoneiPad (Idle)
LDAP ID: cn=danita,o=CNC	GroupWise Sync 1/min	iPhone (Authenticated) 123 / 1781
Initialized: 11/20/2013 10:18	Device Sync 32/min	
POA: Windermere	User Alerts 5 / 1 / 0	
GroupWise Sync: Ready		
Device Sync: Syncing-Days+		

Figure 7-15: User Overview

Here you get information on the user’s Post Office, general sync status, alerts and devices. Again, green is good. You can click on any of the headings to see more detail. This screen has a lot of “context help” by clicking the question marks. We’ll only go over a few specific items here.

In the right-hand block you will see the devices that are configured for the user in question. There is a triangle at the far right of each device, which will show you more detail at a glance.

Devices / Folder Items			
✓ MacTouchDown (Authenticated)		5050 / 7445	
Folder	Resets	Pending	Synced
/Inbox	0	161	3031
/Drafts	0	0	4
/Deleted	0	2	289
/Sent Items	0	0	1709
/Outbox	0	0	0
/Tasks	0	0	2

Figure 7-16: Mailbox Stats

Here we see the stats for one of Danita's devices. This device is mostly up to date (Danita gets a lot of mail!), and you can scroll through this list to see more folders.

Devices / Folder Items			
✓ iPhone (Authenticated)		123 / 7308	
Folder	Resets	Pending	Synced
/Inbox	0	2999	90
/Drafts	0	4	0
/Deleted	0	289	0
/Sent Items	0	1652	33
/Outbox	0	0	0
/Tasks	0	3	0

Figure 7-17: Large Pending Items

In Figure 7-17 there are a large number of pending items. This shows the possible consequence of allowing users to synchronize a greater date range of information. In this particular image, a user with a large amount of data was re-initialized. This caused what can only be considered an expected result: big backlog of data to synchronize!

Devices

If you click on the Devices link under "Details" you will see a scrolling list of the configured devices on your system.

	User	Type	Status	Last Sync	Req/min
✓	James	iPhone	✓ Idle	11/14 07:02AM	0/min
✓	Joe	iPhone	✓ Authenticated	11/23 11:46AM	0/min
✓	Joe	iPad	✓ Authenticated	11/23 12:08PM	0/min
✓	danita	MacTouchDown	✓ Authenticated	11/21 07:56PM	0/min
✓	danita	iPad	✓ Authenticated	11/23 11:30AM	0/min
✓	danita	SafeZoneiPad	✓ Idle	11/06 03:02PM	0/min
✓	danita	iPhone	✓ Authenticated	11/23 09:23AM	0/min
✓	helga	SafeZoneiPad	✓ Idle	11/05 05:13PM	0/min
✓	helga	iPhone	✓ Authenticated	11/23 09:23AM	0/min

Figure 7-18: List of Devices

You can see the status, last synced time and type of device here. Notice near the top right there is a magnifying glass icon. If you click in that box, you can search for names of users, or device types. This magnifying glass appears on various windows in the Dashboard, and can be used to limit the number of users or items you are looking at on any given window.

POAs

Clicking the POAs link in the Details will show you all of your contacted Post Office Agents, and the status of each.

	POA	Domain	Users	Connection	Latency	Events
✓	Highlands	Caledonia	4	Active	0s	0/min
✓	Windermere	Beta	2	Active	0s	0/min

Figure 7-19: List of Post Office Agents

Clicking on the Users column for the POA will show you a list of users on that Post Office. Clicking on the mini graphs will expand the graphs for further scrutiny.

LDAP Connection

While this is labeled LDAP Connection, it really represents the “Directory” connection, whether that be LDAP or GroupWise. The LDAP Connection information is not clickable. This is for information only.

DB Connection

The DB Connection verifies that Postgres is running and that GroupWise Mobility Service can access the database.

Performance Indicators

The final portion of the Dashboard is the Performance Indicators, to the top right of the Dashboard screen (See Figure 7-2).

You will find information on:

- **Event Timing:** Are there slowdowns in events from the GroupWise Sync Agent or Device Agent? Here you see a snapshot of information. Clicking on Event Timing will open a new window of more detailed statistics.
- **Event Processing:** Event Processing means actual items that are sent/received/discarded, etc. Clicking the Event Processing link will show you more details on events that have been sent, are waiting, failed, etc.
- **Attachment Sync:** Clicking this link will show you not only general statistics for the attachments moving through the entire system, but you can also drill down to individual users to see the stats on attachments to and from their devices.
- **GroupWise Sync:** The important items in this section are:
 - **Event Rate:** Back in the *“The Agents Monitor”* section, we were looking at the overall Event Rate stats. Here we can also see the event rate broken down for each user in the system.
 - **GroupWise Interface Usage:** This graph shows the overall percentage used of available connections to GroupWise. If this is topping out, it could indicate that you are running low on SOAP ports for the POA in question.
 - **Pending POA Requests:** When the POA receives new information for a user, it sends a notification to the Mobility Service that items are waiting. This stat shows the number of pending POA requests that are yet to be serviced by the Mobility Service.
- **Device Sync:** Just as with the GroupWise Sync, here in the Performance Monitor you have the opportunity to see all of the users at a glance and scrutinize the activity of individual users’ devices.

As you can see, on paper it is very difficult to sufficiently describe the wealth of information that is available in the new Dashboard. So happy clicking!



General Device Setup Overview

As we discussed in *“Let’s Get Started with GroupWise Mobility Service!”*, there are many types of devices that are compatible with GroupWise Mobility Service. In this chapter we will use iOS as our example, primarily because there is only ever one “current” version of iOS (although some older devices cannot upgrade, and some users will not have upgraded). With other devices, such as Android, there are so many different possibilities with not only the OS version, but also manufacturer settings, that it is difficult to use Android as an example. We will attempt to point out some variations for Android and other devices like Blackberry 10 and Windows Phone, but our main examples will be for iOS. The concepts in this chapter should also hold true with other ActiveSync devices and even ActiveSync apps such as TouchDown and SafeZone. Your mileage may vary, but hopefully you can get a good sense for how users can set up their devices for GroupWise Mobility Service.

Modifying User Defaults in the Web Console

After accounts are set up for GroupWise your users can login at the Web Console to make decisions on their accounts. Some sites will prefer to have the administrator do that for the users. However, larger sites may wish to allow individual users to deal with these issues. Users can choose which address books to sync, which address book should receive new contacts created on the device, and which folders, if any, they do not need to have access to from devices. For example, let’s say that a user always moves logs or certain types of attachments to a particular folder. If that folder will never need to be accessed from a device, the system can simply avoid synchronizing unused data through GMS. Remember that typically only the “inbox” is synchronized directly to devices, but users can access information in any folder by accessing the folder on the device.

Here is where GroupWise provisioning versus LDAP provisioning can get interesting. If for some reason you are using LDAP provisioning with GroupWise authentication, your users could have two very different logins and/or passwords. For example, my LDAP login is dzanre. My GroupWise userid is danitaz. If GroupWise authentication is being used, I put danitaz in the userid for my device (as would seem to make sense, because that’s my email userid). However, if the system is using LDAP provisioning, I would need to use dzanre as the login for the web console! This can be highly confusing for users. Something to keep in mind as you decide whether users should be able to access the Web Console.

Send users to your GroupWise Mobility Service server URL:

`https://MobilityServer:8120`

for example

`https://moblity.mysite.com:8120`

The user will see the following screen:



Figure 8-1: The User Web Portal

GroupWise Settings

As you can see, the settings are very minimal. Click on GroupWise Settings.

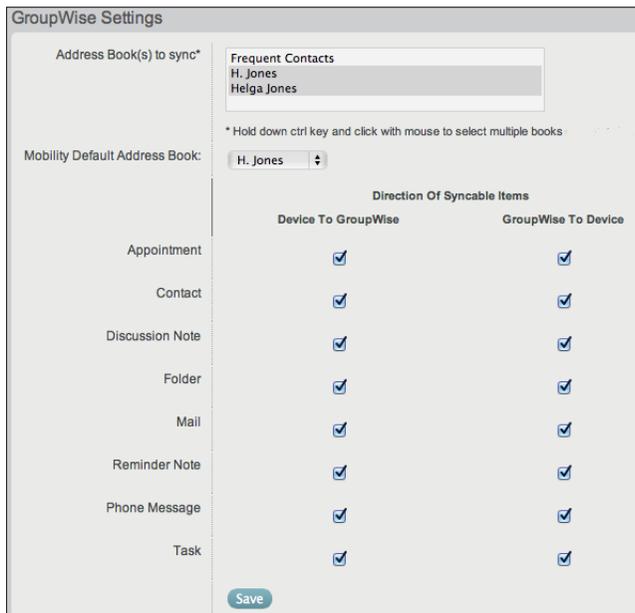


Figure 8-2: GroupWise User Settings

Here the user can choose which address books to sync, and also which address book should receive contacts that are created on the device if the device does not allow users to specify the address book for new contacts. By default the Frequent Contacts Book is not synchronized. If the user wishes to synchronize the FCB, it must be added here.

Depending on the device, each address book that a user chooses to synchronize will show up in the Contacts/People app as what most devices term a “Group”. In GroupWise terminology, this represents the GroupWise Address Book that you have selected to synchronize. This is not a distribution list or mailing group. There is no mechanism on most devices to choose a “group” of addressees at the same time to send mail to. You must build a recipient list from individual email addresses when sending email on most devices.

It is rare that users would want to uncheck any of the settings in this list. However, if individual users have no interest in having their Reminder Notes, for example, synchronized to the device, the option is here to allow for that.

Device Settings

Click on the Device Settings to see the available options for a user to choose. Here the user can download a client certificate (generally required for Windows Phone users), and disable folders from synchronizing.

The screenshot shows the 'Device Settings' window. At the top, there is a 'Mobility Certificate File' section with a circular icon. Below that, a heading reads 'Select the e-mail folders you want synchronized to your device.' Underneath is a 'Folder Selection:' section containing a table with two columns: 'Sync' and 'Device Folder'. The table lists several folders, each with a checked checkbox in the 'Sync' column. At the bottom of the table is a 'Save' button.

Sync	Device Folder
<input checked="" type="checkbox"/>	/Drafts
<input checked="" type="checkbox"/>	/Sent Items
<input checked="" type="checkbox"/>	/Cabinet
<input checked="" type="checkbox"/>	/Cabinet/Amazon
<input checked="" type="checkbox"/>	/Cabinet/LinkExchange
<input checked="" type="checkbox"/>	/Cabinet/Publisher
<input checked="" type="checkbox"/>	/Cabinet/Search Engines
<input checked="" type="checkbox"/>	/Cabinet/Test Sharff [from Danta Zanre]
<input checked="" type="checkbox"/>	/Customers
<input checked="" type="checkbox"/>	/Filed
<input checked="" type="checkbox"/>	/Junk Mail

Figure 8-3: Device User Settings

If a device requires a client certificate, have the user log into the Web Console from the device browser, and download the certificate file. The user will then be asked whether to accept the certificate into their chain of trust.

As a note, you will see that there is a GroupWise Shared Folder in this list. Even though this shows up as a folder in the list, since the folder is not owned by the user in question, the folder will not actual synchronize to the device!

Also, while users can uncheck folders here, be aware that this is almost certain to cause help desk issues down the road when the user has forgotten that a particular folder was not selected for synchronization to the device!

Overview of Synchronization Options

GroupWise Mobility Service synchronizes data into a device's Calendar, Contacts (People), Mail and Reminder apps. The options you have when using GroupWise Mobility Service are as follows:

- **Calendar:** GroupWise Mobility Service synchronizes your main calendar and all subcalendars from your GroupWise database into a single calendar on the device. Appointments and Reminder Notes are synchronized.
- **Tasks:** On devices that support it, GroupWise Tasks are synchronized into the device To-Do or Reminders app.
- **Meeting Invitations:** GroupWise Mobility Service also sends appointment requests that are received in your GroupWise mailbox to the device. These can be accepted or declined directly from the device calendar application.
- **Contacts:** You can choose which GroupWise address books you wish to synchronize to your device. Each address book that you synchronize will appear in the Contacts application as a "Group". This should not be confused with a GroupWise distribution list or "mailing group". On most devices, the "Group" is really just another name for the individual address books. By default, all personal address books EXCEPT the Frequent Contacts Book are synchronized to the devices. Users can log into the Web Console for GroupWise Mobility Service and add the Frequent Contacts Book if desired.
- **Mail:** All folders are synchronized by default with GroupWise Mobility Service. It is possible to prevent certain folders from synchronizing by unchecking these folders in the Web Console. However, for those subfolders that are synchronized to the devices, contents are only downloaded if the user opens the folder on the device. Thus, users can move items into any folder desired from the device, but it is not required that all mail from all folders be downloaded unless the user chooses. By default, only the Groupwise mailbox folder is pushed to the device. By this we mean that only the mailbox mail appears automatically on the device. This is called the "Inbox" by GroupWise Mobility Service, and on most devices. In the iOS Mail app, folders are referred to as "Mailboxes". While this can be a little confusing for GroupWise customers at first, on your device think of the "Inbox" as being the main GroupWise "Mailbox" folder, and all will be well. On the initial sync on a device, all mail for the past 3 days will be synchronized. Users can choose to synchronize more in the settings, as we will discuss further.
- **Phone Messages:** GroupWise Mobility Service 2.0 has added the ability to synchronize Phone Messages from GroupWise to the device. These will appear in the Inbox as an email message, with all of the details from the GroupWise Phone Message included.

Configuring Devices for GroupWise Mobility Service

The first thing we will do is look at the setup for GroupWise on iOS. While this is similar for other types of devices, it can vary greatly from one device to another.

On the iPhone, if no mail account has been set up, you can access the setup wizard simply by clicking on the Mail icon. If you have already set up an email account on your phone (for example, a Gmail account or the like), you will need to go to the Settings app to access the wizard. In the Settings app, scroll down to the Mail, Contacts, Calendars setting (Figure 8-5). On some non iOS devices, this will be the "Accounts" setting.

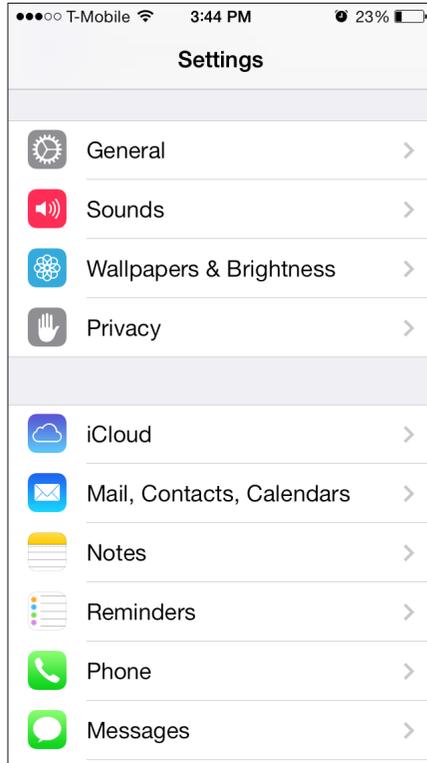


Figure 8-4: The iOS Settings Screen showing Mail, Contacts, Calendars

This will show any configured accounts on the iOS device. Now you will see the Add Account option, as well as many other options that we will revisit after setting up our GroupWise Mobility Service account.

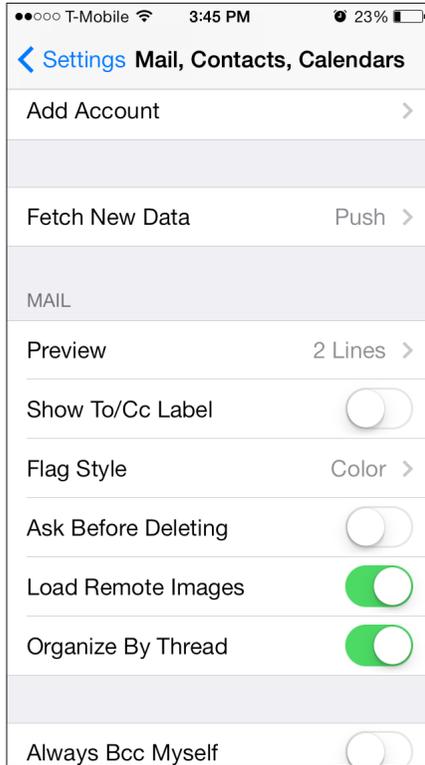


Figure 8-5: The Mail, Contacts, Calendars Settings Screen

Click on Add Account.

The new mail account wizard will then appear (this also appears when you click on the Mail app if no mail accounts have been defined)

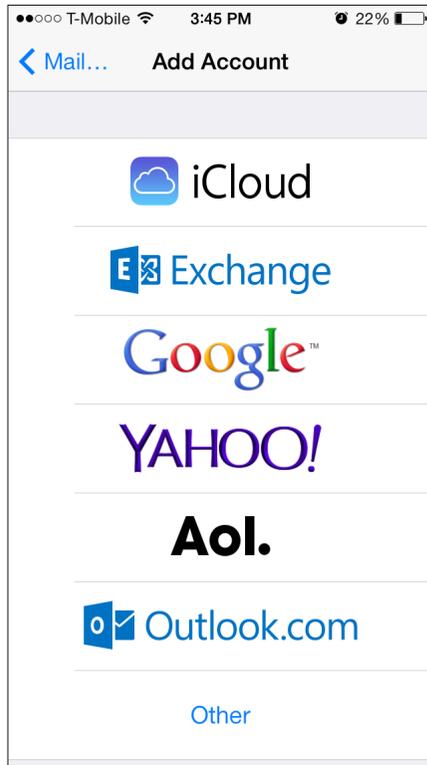


Figure 8-6: The Add Account Menu

In order to set up a GroupWise Mobility Service account to access GroupWise, click on the “Exchange” option. Some devices will call this “Exchange ActiveSync”, “ActiveSync” or simply “Corporate”. The following settings are valid for iOS. While you will need the same information for all devices, where you are asked to enter the information will vary greatly from one device to another.

In the “Enter your Exchange account information” screen, enter the following:

- **Email Address:** Enter your email address for your GroupWise account. For example, helga@caledonia.net
- **Password:** For the most part, this will be the GroupWise password. However, if your GMS server is set for LDAP authentication AND your GroupWise and LDAP passwords are not the same, this can be the LDAP password instead of the GroupWise password.
- **Description:** Here you can put whatever information you like. The default description is “Exchange” so users will likely want to change this to their email address, or simply change it to GroupWise.

On iOS, you will now click “Next” at the top. Some devices will have spots for some or all of the information below before moving on to the next screen

On iOS, the next screen will need the following information:

-

- **Server:** This is the host name or your GroupWise Mobility Service. For example, mobility.yourserver.com
- **Domain:** This field should be left blank on iOS. Some devices will require this, and you can typically put anything here you like! If a device requires it, we usually put GroupWise.
- **Username:** This is your GroupWise userid

Click Next. If all goes well, and your server certificate is accepted, on iOS you will see the following “Success” page.

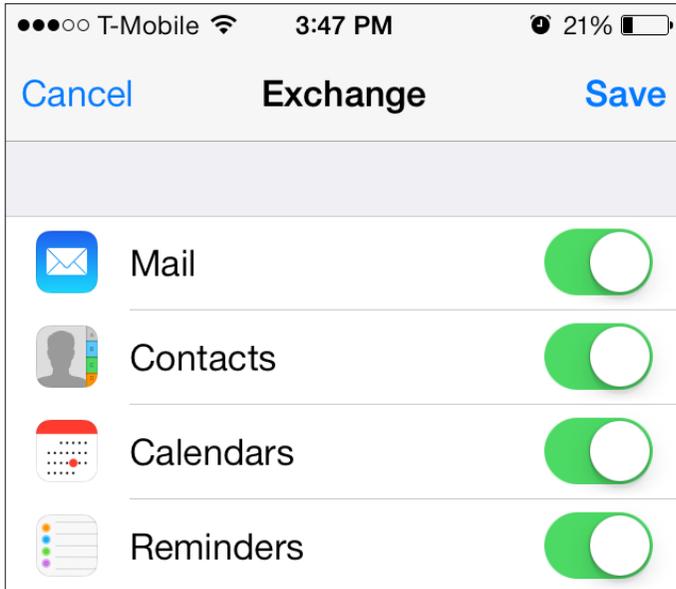


Figure 8-7: A successful iOS Setup Screen.

If your server certificate is not a trusted certificate, you will most likely receive a message that reads “Unable to Verify Certificate” indicating that the certificate for your setup cannot be verified. This is okay to accept at this point. It’s important to note here that some devices will either require a client certificate be downloaded for the device. See the information discussed above under “*Device Settings*” for more information on the client certificate.

Verifying the Setup

Once the iPhone returns to a “successful” completion of your setup, there are a few settings we need to go over before you proceed. There may be similar settings on other devices. It is recommended that you consult your device documentation if you need information on any of the following settings or their equivalents on your device.

If for some reason you have exited from the Settings app, please go back into Settings apps and choose Mail, Contacts and Calendar now. We will go over some settings that should be changed or explained before you continue. You should see the screen as shown in Figure 8-5.

On the main Mail Contacts, Calendars screen, there are some settings to look at. See Figure 8-5 as a reference. Please note that the settings changed here are for all email accounts you have on your iPhone. Account specific settings come later.

Fetch New Data

Right under the “Add Account” setting is Fetch New Data. This is where you define how often the iPhone will go get new messages from your GroupWise Account. You can choose Push if you wish to have mail delivered to your device as soon as the Mobility Service receives it. You can also choose to Fetch New Data on a schedule of Every 15 Minutes, Every 30 Minutes, Hourly or Manually. If you enable Push, you have the option to select additional folders to be pushed. What this means is that if, for example, you have mail moved to a folder in your GroupWise account via a rule, and you want that mail sent to your iPhone immediately (which will also notify you), you can choose that folder here. To choose folders, access the “Fetch New Data” section, click on the Mobility Service account, and you will see a list of folders in your account. Check the ones you wish to have pushed to the device.

Each individual email account can have different fetch/push settings.

Preview

How many lines of the message do you wish to have in the “preview” box of your message. You can choose from None to 5.

Show To/Cc Label

Choose this if you wish to see all recipients of an email that you receive. Otherwise you see only the “From” field, and can choose to see the other fields when necessary.

Flag Style

You can choose to have flags (important, etc.) listed as a color or a shape.

Ask Before Deleting

Choose this if you wish to be prompted before a deletion occurs in the mailbox.

Load Remote Images

Choose whether you wish to have remote images in HTML messages automatically loaded.

Always Bcc Myself

This is totally unnecessary if you are only using a GroupWise Mobility Service email account. The Mobility Service automatically places a Sent Item in your GroupWise mailbox when you send from the iPhone’s Mobility Pack account. However, since this setting applies to all mail accounts on the iPhone, if you have another email account that will not save your sent messages to a folder, then you would need to enable this here, and it will also affect your GroupWise Mobility Service account.

Signature

Each email account on your iOS device can have a different signature. The iPhone can also use HTML signatures. Keep in mind that if you have a Global signature set to append to all mail, this signature will be in addition to that.

Default Account

If you have more than one email account defined, this is the account that will be used if “outside” processes call email (for example, clicking on a mailto link in Safari).

Contacts Setup

In the contacts settings you can choose the Sort Order and the Display Order of your contacts. For example, you may wish to sort by last name, but still see contacts in the mailbox in First, Last order. The sort order here does not affect your GroupWise account, and are only applicable to your device. On the iPhone, if you have multiple accounts defined for your Mail, Contacts, Calendar, you must set a default account for Contacts. Make sure that if you want your newly created contacts to synchronize to GroupWise that you make your default account here the GMS account.

Calendar Settings

In the Calendar settings you turn on or off meeting invitations and set your timezone.

Changing Account Specific Settings

To change specific settings for your GroupWise Mobility Service account, click on it in the Accounts list. This is at the top of the Mail, Contacts, Calendar settings.

Account Info

It is unlikely that you will need to change the Account Info settings. This area contains the settings used to originally set up your account.

Turning the Account on or Off

Here you can choose whether your GroupWise options are active. Each component of GroupWise (Mail, Contacts, Calendars, Reminders) can be toggled on or off independent of each other.

Please note that if you turn any options off here the data “disappears” from the mail, contacts or calendars apps. Any items that have been previously downloaded will reappear if you turn the options back on, and updates will begin again. If you are roaming and wish to limit the amount of time your phone checks mail, that should be done in the Fetch New Data settings that were described above.

Mail Days to Sync

When you first initialize your account, mail is downloaded for the past 3 Days. You can alter that setting here. Your options are 1 Day, 3 Days, 1 Week, 2 Weeks, 1 Month or No Limit. No Limit, however is still limited by the maximum days set in “*The Device Sync Agent*” settings described earlier in this guide.

As we mentioned at the beginning of this chapter, we realize that many of the instructions in this chapter are very iOS specific. It is simply not practical in this guide to go through every possible device to set up for GroupWise Mobility Service. You can find more device information at http://wiki.novell.com/index.php/GroupWise_Mobility_Devices.

