Administration Guide

GroupWise Mobility Service 2.1

February 2015

Novell

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Contents

About This Guide

The *GroupWise Mobility Service 2.1 Administration Guide* helps you to manage your GroupWise Mobility system after you have set it up.

Audience

This guide is intended for network administrators who manage a Mobility system to support GroupWise users and their mobile devices.

Feedback

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

For all GroupWise Mobility Service documentation, see the GroupWise Mobility Service 2.1 Documentation website (http://www.novell.com/documentation/groupwisemobility2).

- *GroupWise Mobility User Quick Start*
- *GroupWise Mobility Service Readme*
- *GroupWise Mobility Service Installation Guide*
- *GroupWise Mobility Service Administration Guide*

In addition to the GroupWise Mobility Service product documentation, the following resources provide information about the Mobility Service:

- Novell Support and Knowledgebase (http://www.novell.com/support)
- GroupWise Mobility Service Cool Solutions (https://www.novell.com/communities/coolsolutions/tag/groupwise-mobility-service)
- GroupWise Mobility Service Devices Wiki (http://wiki.novell.com/index.php/GroupWise_Mobility_Devices)
- GroupWise Support Forums (https://forums.novell.com/forumdisplay.php/356-GroupWise)
- GroupWise Product Website (http://www.novell.com/products/groupwise)

1 GroupWise Mobility Administration Console

Configuration of your GroupWise Mobility system is done through the Mobility Administration console. When you log in as the Mobility administrator (the LDAP Admin user that was set up during installation, or `root`), you can configure your Mobility system. When users log in using their user names and passwords (GroupWise or LDAP, depending on the user source for authentication), they can control various aspects of data synchronization.

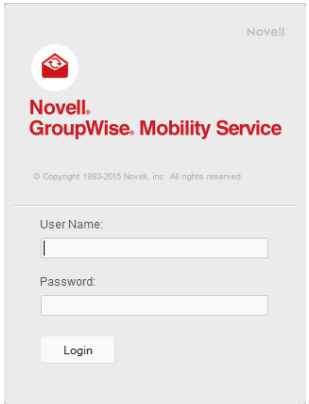
For a list of supported web browsers, see “Web Browser Requirements for the Mobility Admin Console” in the *GroupWise Mobility Service 2.1 Installation Guide*.

1.1 Accessing the Mobility Admin Console as an Administrator

1 In your web browser, access the Mobility Admin console at the following URL:

`https://mobility_server_address:8120`

Replace *`mobility_server_address`* with the IP address or DNS hostname of the server where the Mobility Service is installed.

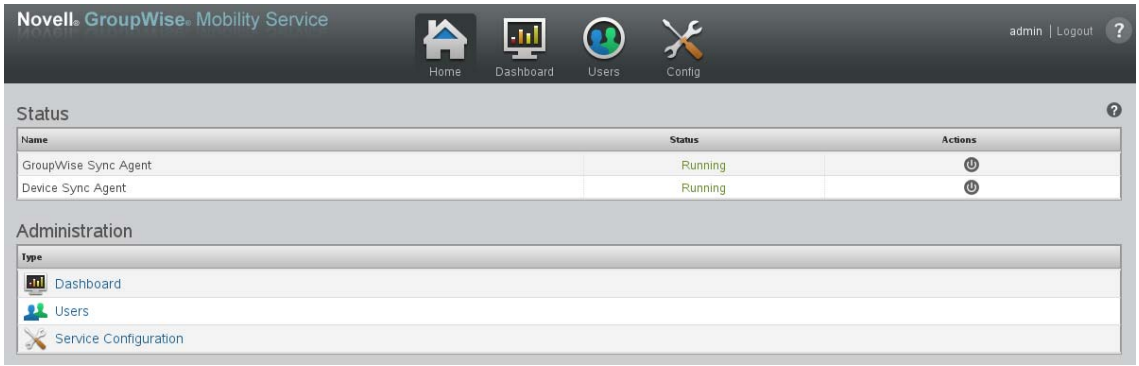


2 Specify the user name of the Mobility administrator.

If you are using LDAP as your user source, you can specify the `root` user name, the user name of the LDAP user provided during installation, or the user name any other LDAP user that has been added as a Mobility administrator (see "Setting Up Multiple Mobility Administrator Users" on page 14).

If you are using GroupWise as your user source, you can specify the `root` user name or the user name of any other GroupWise user that has been added as a Mobility administrator (see "Adding GroupWise Users as Mobility Administrators" on page 19).

3 Specify the password for the user, then click *Login*.



Mobility system configuration and administration is performed using the Mobility Admin console. For instructions, see the following sections:

- Chapter 2, "GroupWise Mobility System Management," on page 21
- Chapter 3, "GroupWise Sync Agent Configuration," on page 33
- Chapter 4, "Device Sync Agent Configuration," on page 41
- Chapter 5, "GroupWise Mobility System Monitoring," on page 49
- Chapter 6, "GroupWise Mobility User Management," on page 61
- Chapter 7, "GroupWise Mobility Device Management," on page 71

4 Click *Logout* to exit the Mobility Admin console.

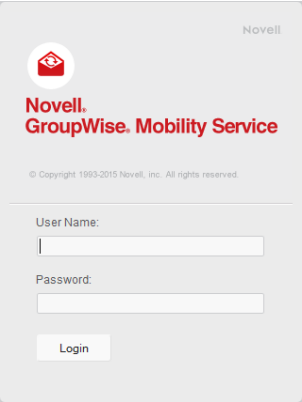
1.2 Accessing the Mobility Admin Console as a Mobile Device User

Mobile device users can use the Mobility Admin console URL to access the Mobility Settings page by logging in with their personal user names and passwords. If you are using LDAP as your user source, users log in with their LDAP (network) user names and passwords. If you are using GroupWise as your user source, users log in with their GroupWise (mailbox) user names and passwords.

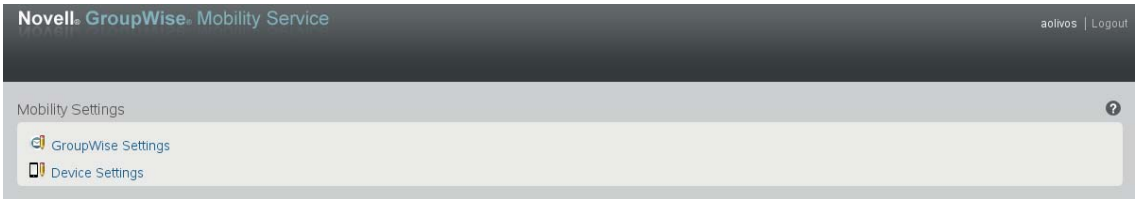
1 In your web browser, access the Mobility Admin console at the following URL:

`https://mobility_server_address:8120`

Replace *mobility_server_address* with the IP address or DNS hostname of the server where the Mobility Service is installed.



2 Specify your LDAP or GroupWise user name and password, then click *Login*.



3 View or print the *GroupWise Mobility User Quick Start* to learn how to use the Mobility Admin console Mobility Settings page.

1.3 Accessing the Mobility Admin Console As a User When You Are an Administrator

As a Mobility administrator, you can access your personal Mobility Settings page with the following URL:

`https://mobility_server_address:8120/admin/user/user_name`

Replace *mobility_server_address* with the IP address or DNS hostname of the server where you installed the GroupWise Mobile Service. Replace *user_name* with your personal LDAP or GroupWise user name.

1.4 Configuring the Mobility Admin Console

You can change the configuration of the Mobility Admin console to meet your administrative needs.

- Section 1.4.1, “Adjusting the Mobility Admin Console Polling Rate for Groups of Users,” on page 12
- Section 1.4.2, “Using the Mobility Admin Console with a Single Sign-On Solution,” on page 13
- Section 1.4.3, “Changing between LDAP and GroupWise as the User Source,” on page 13
- Section 1.4.4, “Modifying LDAP Information in Relation to Your Mobility System (Optional),” on page 14
- Section 1.4.5, “Adding GroupWise Users as Mobility Administrators,” on page 19

1.4.1 Adjusting the Mobility Admin Console Polling Rate for Groups of Users

During installation of the Mobility Service, you selected the source (LDAP or GroupWise) from which users and groups of users can be added to your Mobility system. For background information, see "Selecting the User Source for Your Mobility System" in the *GroupWise Mobility Service 2.1 Installation Guide*.

If you selected *LDAP* as your user source, groups of users in your Mobility system correspond to LDAP groups. The Admin console polls only the groups in containers that it has been configured to search. For more information, see "Searching Multiple LDAP Contexts for Users and Groups" on page 15.

If you selected GroupWise as your user source, groups of users in your Mobility system correspond to GroupWise groups (distribution lists in older GroupWise systems). The Mobility Admin console locates GroupWise groups based on their `group_name.post_office.domain` location in your GroupWise system

When you add a group of users to your Mobility system, the group's existing members are added to the group as displayed in the Mobility Admin console. Subsequently, the Mobility Admin console polls for updates to group membership. This ensures that the group membership that is displayed in the Mobility Admin console always matches the membership in the LDAP directory or the GroupWise system.

By default, the Mobility Admin console polls the user source for changes in group membership every 1800 seconds (30 minutes).

1. In the Mobility Admin console, click *Service Configuration*, then click *User Source*.

2. Adjust the poll rate as needed to synchronize the group membership in the Mobility Admin console with current group membership in the LDAP directory or the GroupWise system.
3. Click *Save* to save the new setting(s).
4. Restart the Mobility Service to put the new setting(s) into effect:

   ```
   rcgms restart
   ```

1.4.2 Using the Mobility Admin Console with a Single Sign-On Solution

If you are using a single sign-on solution such as NetIQ Access Manager or KeySheild SSO, the Mobility Admin console does not require authentication when you are already logged in to the single sign-on solution.

- For Access Manager, no extra configuration is required.
- For KeyShield SSO, you must provide Keyshield SSO settings on the Single Sign-On page in the Mobility Admin console. For more information, see KeyShieldSSO (http://www.keyshieldsso.com).

1.4.3 Changing between LDAP and GroupWise as the User Source

Regardless of the user source that you selected during installation (LDAP or GroupWise), you can change to the other user source at any time. For background information, see "Selecting the User Source for Your Mobility System" in the *GroupWise Mobility Service 2.1 Installation Guide*.

1 In the Mobility Admin console, click *Service Configuration*, then click *User Source*.

2 In the *Provisioning* field, select *LDAP* or *GroupWise* as the source from which you want the Mobility Admin console to obtain users and groups of users to add to your Mobility System.

If you selected *GroupWise* as the user source when you installed your Mobility system and you now select *LDAP*, you must provide the configuration information for the LDAP server in order to change from GroupWise to LDAP provisioning in the Mobility Admin console.

If you have set up your Mobility system so that some users are provisioned from LDAP and others are provisioned from GroupWise, you can mouse over each user on the Users page to display the LDAP context or GroupWise `user_name.post_office.domain` location.

3 (Conditional) If you selected *LDAP* in the *Provisioning* field, select *LDAP* or *GroupWise* in the *Authentication* field to select the password that is required for mobile devices to log in to your Mobility system.

If you select *LDAP*, mobile devices use LDAP passwords as provided by the LDAP server that your Mobility system is configured to access. If you select *GroupWise*, device authentication is provided through the GroupWise POA. The POA can be configured to provide either GroupWise authentication or LDAP authentication for GroupWise users and devices.

If you selected *GroupWise* in the *Provisioning* field, you cannot select *LDAP* in the *Authentication* field because the Device Sync Agent would have no way to contact an LDAP server for password information for the user.

4 Click *Save* to save the new setting(s).

5 Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

1.4.4 Modifying LDAP Information in Relation to Your Mobility System (Optional)

If you are using LDAP as your user source, you might need to change LDAP information over time.

Setting Up Multiple Mobility Administrator Users

During installation, you establish the initial LDAP user who can access the Mobility Admin console. After installation, you can grant this right to additional users.

1 In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.

2 Change to the following directory:

```
/etc/datasync/configengine
```

3 Open the `configengine.xml` file in a text editor.

4 Locate the following section:

```
<admins>
     <dn>cn=user_name,ou=organizational_unit,o=organization</dn>
</admins>
```

This section identifies the original Mobility administrator user that you established during installation.

5 Copy the line for the original Mobility user to a new line between the `<admins>` tags, then modify it as needed to identify an additional Mobility administrator user.

6 Save the `configengine.xml` file, then exit the text editor.

7 Restart the Mobility Service to put the new setting(s) into effect:

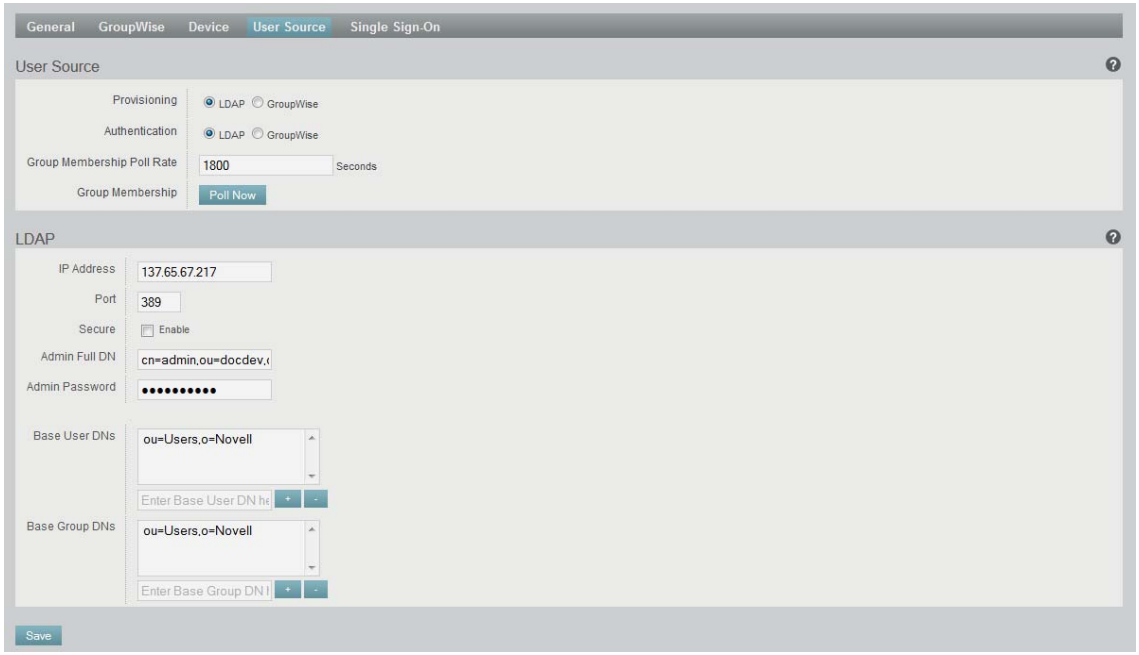
```
rcgms restart
```

Searching Multiple LDAP Contexts for Users and Groups

During installation, you specify one LDAP container to search in order to get user information and another container to search in order to get group information. After installation, you can add more containers for the Mobility Admin console to search for users and groups when you need to add users and groups to your Mobility system.

IMPORTANT: Subcontainers are also searched, so you do not need to add them separately.

1 In the Mobility Admin console, click *Service Configuration*, then click *User Source*.



2 To search in an additional container for users, specify the container context in the text entry field under *Base User DNs*.

3 To search in an additional container for groups, specify the container context in the text entry field under *Base Group DNs*.

4 Click *Save* to save the new setting(s).

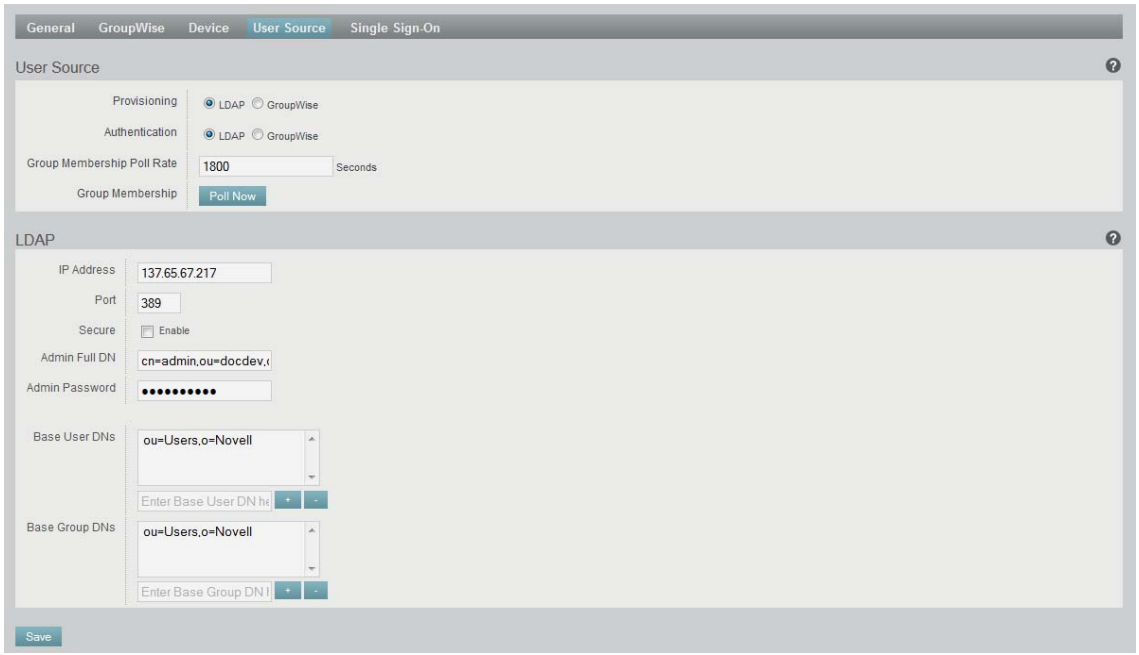
5 Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

Enabling and Disabling SSL for the Mobility Service LDAP Connection

During installation, you chose whether to use SSL for the connection between the Mobility Admin console and the LDAP directory. You can change the setting after installation as needed.

1 In the Mobility Admin console, click *Service Configuration*, then click *User Source*.



2 Select or deselect *Secure* to enable or disable SSL.

3 In the *Port* field, adjust the port number as needed to match the port number used by the LDAP server.

   The default secure SSL port is 636. The default non-secure port is 389.

4 Click *Save* to save the new setting(s).

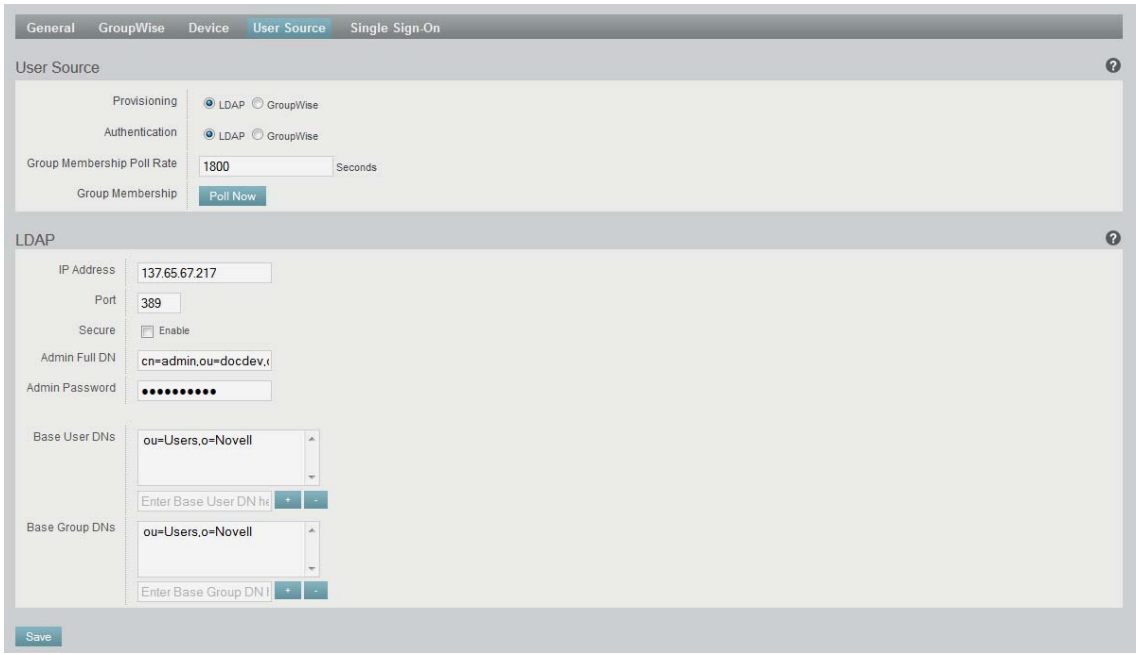
5 Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

Changing the LDAP Server for Provisioning and Authentication

During installation, you selected an LDAP server for the Mobility Admin console to communicate with when authenticating to the LDAP directory. You can change the LDAP server after installation as needed.

1 In the Mobility Admin console, click *Service Configuration*, then click *User Source*.



2 In the *IP Address* field, specify the IP address or DNS hostname of the LDAP server that you want to use for provisioning or authentication.

3 (Conditional) If needed for the new LDAP server, adjust the port number and secure SSL setting.

The default secure SSL port is 636. The default non-secure port is 389.

4 (Conditional) If needed for the new LDAP server, adjust the LDAP base DNs for users and groups.

5 (Conditional) If needed for the new LDAP server, adjust the LDAP administrator DN and password.

If you accidentally change any LDAP server information so that you are prevented from logging in to the Mobility Admin console using the new LDAP information, you can still log in using the `root` user name and password. For instructions, see "Accessing the Mobility Admin Console When the LDAP Server Is Inaccessible" on page 18.

6 Click *Save* to save the new setting(s).

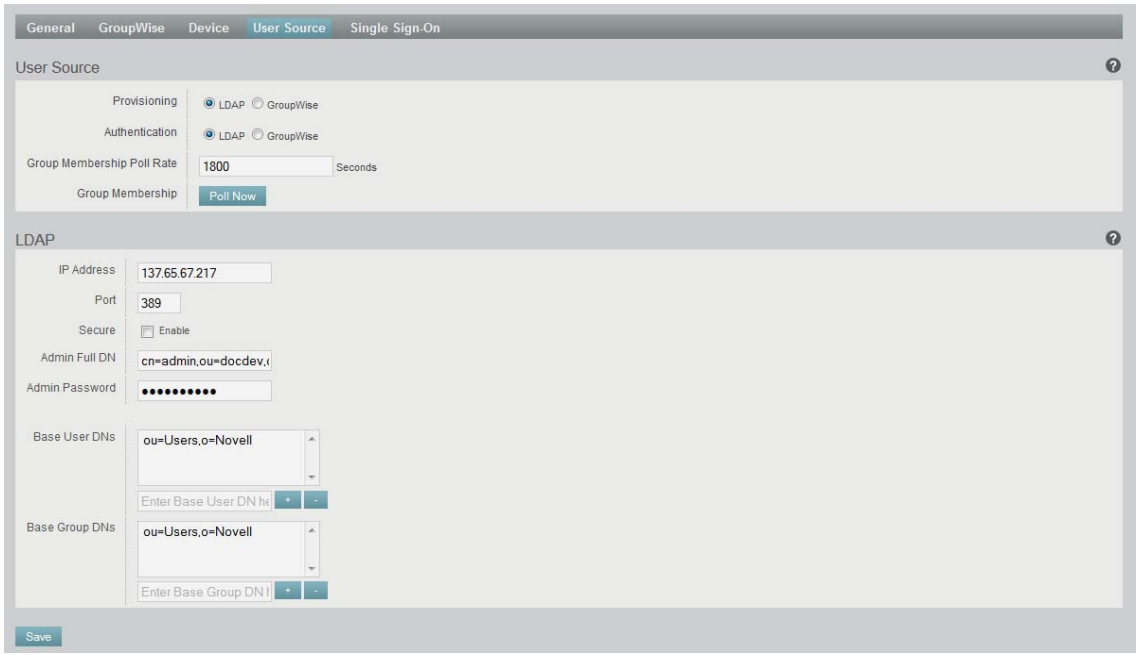
7 Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

Updating the LDAP Password

If you change the administrator password on your LDAP server, you must reconfigure your Mobility server to match the new password.

1. (Conditional) If you cannot access the Mobility Admin console because the LDAP server password has already changed, follow the instructions in "Accessing the Mobility Admin Console When the LDAP Server Is Inaccessible" on page 18.
2. In the Mobility Admin console, click *Service Configuration*, then click *User Source*.



3. In the *Admin Password* field, specify the new password.
4. Click *Save* to save the new setting(s).
5. Restart the Mobility Service to put the new setting(s) into effect:

   ```
   rcgms restart
   ```

Accessing the Mobility Admin Console When the LDAP Server Is Inaccessible

Occasionally, you might need to log in to the Mobility Admin console when the LDAP server is unavailable. At all times, you can log in to the Mobility Admin console using the `root` user name and password.

1.4.5 Adding GroupWise Users as Mobility Administrators

By default, when you use GroupWise as your Mobility system's user source, you must log in to the Mobility Admin console using the `root` user name and password.

You can configure the Mobility Service to allow specific users to log in using their GroupWise username and password. Then the `root` user name and password can continue to be used as well.

1. In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.
2. Change to the following directory:

   ```
   /etc/datasync/configengine
   ```

3. Open the `configengine.xml` file in a text editor.
4. Add the following section:

   ```
   <gw>
      <admins>
          <username>GroupWise_Username</username>
          <username>GroupWise_Username</username>
      </admins>
      <enabled>true</enabled>
   </gw>
   ```

   Replace *GroupWise_Username* with the appropriate GroupWise user name. You can add as many GroupWise users as needed.
5. Save the `configengine.xml` file, then exit the text editor.
6. Restart the Mobility Service to put the new settings into effect:

   ```
   rcgms restart
   ```

1.5 Unlocking the Mobility Admin Console

As a security precaution, the Mobility Admin console locks you out if you give the wrong user name or password more than three times. Use the following command on the command line of the Mobility server to restart the Mobility Admin Service and release the lock on the console:

```
rcdatasync-webadmin restart
```

2 GroupWise Mobility System Management

When you install the GroupWise Mobility Service, your initial Mobility system is configured with default settings that are generally appropriate. After installation, you can customize your Mobility system configuration.

2.1 Starting and Stopping the GroupWise Mobility Service

1. In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.
2. Use the following command to check the status of the Mobility Service:

   ```
   rcgms status
   ```

3. Use the following commands to manually start and stop the Mobility Service:

   ```
   rcgms start
   rcgms restart
   rcgms stop
   ```

2.2 Simplifying Device Setup for Users with the AutoDiscover Service

By default, mobile device users need to know the IP address or DNS hostname of the Mobility server in order to configure their email accounts on their devices. The AutoDiscover Service enables you to configure DNS so that supported mobile devices are automatically redirected to the Mobility server based on users’ email addresses.

2.2.1 Configuring the AutoDiscover Service in a Single-Server Mobility System

When a mobile device presents an email address and tries to access your Mobility system, the AutoDiscover Service uses a DNS CNAME record and SRV record in order to determine the IP address of the Mobility server, so that the device can log in.

Your Mobility server already has a DNS A record that maps a hostname to an IP address, similar to the following example:

```
mobility.example.com IN A 172.16.5.18
```

To set up the AutoDiscover Service, you must add the CNAME and SRV records:

- **CNAME record:** A canonical name record that provides an alias from one hostname to another
- **SRV record:** A service locator record that defines the hostname of a specific service

The following examples show the format for each type of DNS record:

CNAME record:	`autodiscover.example.com CNAME mobility.example.com`
SRV record:	`_autodiscover._tcp.example.com. IN SRV 0 0 443 mobility.example.com`

The user interface that you use to create the DNS SRV record might look similar to the following example:

Service Name:	`_autodiscover.*`
Domain Name:	`example.com`
Target Host:	`mobility.example.com`
Target Port:	`443`
Priority and Weight:	`0 0`

Skip to Section 2.2.3, “Setting Up SSL for the AutoDiscover Service,” on page 23.

2.2.2 Configuring the AutoDiscover Service in a Multiple-Server Mobility System

In a multiple-server Mobility system, the AutoDiscover Service uses a DNS CNAME record and multiple DNS SRV records to direct users’ devices to the correct Mobility server for each user so that devices can log in.

Your Mobility servers already have DNS A records that map hostnames to IP addresses, similar to the following examples:

```
mobility1.example.com IN A 172.16.5.18
mobility2.example.com IN A 172.16.5.19
mobility3.example.com IN A 172.16.5.20
```

To set up the AutoDiscover Service, you must add the CNAME record and SRV records:

- **CNAME record:** A canonical name record that provides an alias from one hostname to another
- **SRV record:** A service locator record that defines the hostname of a specific service

The following example shows the format for the SRV records that correspond to the A records:

CNAME record:	`autodiscover.example.com CNAME mobility1.example.com`
SRV record:	`_autodiscover._tcp.example.com. IN SRV 0 0 443 mobility1.example.com`
SRV record:	`_ngms._tcp.example.com. IN SRV 0 0 443 mobility1.example.com`
SRV record:	`_ngms._tcp.example.com. IN SRV 0 0 443 mobility2.example.com`
SRV record:	`_ngms._tcp.example.com. IN SRV 0 0 443 mobility3.example.com`

The user interface that you use to create the SRV records might look similar to the following example:

Service Name:	`_autodiscover.*` and `_ngms*`
Domain Name:	`example.com`
Domain Name:	`example.com`
Domain Name:	`example.com`
Target Host:	`mobility1.example.com`
Target Host:	`mobility2.example.com`
Target Host:	`mobility3.example.com`
Target Port:	`443`
Priority and Weight:	`0 0`

Continue with Setting Up SSL for the AutoDiscover Service.

2.2.3 Setting Up SSL for the AutoDiscover Service

The functionality of the AutoDiscover Service requires SSL. The following three conditions must be met:

- A valid and trusted SSL certificate must be available on the Mobility server and must be current (not expired).
- Mobile devices must be able to follow the certificate chain from the certificate on the Mobility server to the root CA certificate.
- The name of the SSL certificate must match the URL that mobile devices are trying to communicate with.

  This means that the certificate must be valid for all names of the Mobility server, such as `mobility.example.com` and `autodiscover.example.com`. A wildcard certificate meets this need.

  Another option is to use an SSL certificate with Subject Alternative Names (SANs), which enables you to specify a list of hostnames that are protected by a single SSL certificate.

2.3 Controlling Synchronization Size Limits

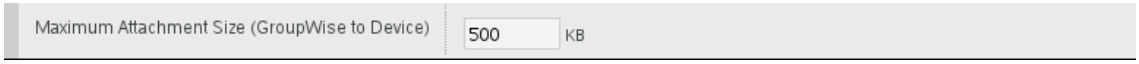
Synchronizing large quantities of data between GroupWise and mobile devices can put a substantial load on the sync agents. The GroupWise Sync Agent controls the maximum size of the individual attachments that can synchronize with an item to mobile devices. The Device Sync Agent controls the maximum size of an item (along with all attachments) that can synchronize to GroupWise.

2.3.1 Controlling Maximum Attachment Size from GroupWise to Mobile Devices

By default, attachments are synchronized from GroupWise to the mobile devices if they are smaller than 500 KB. Attachments larger than 500 KB are dropped by the GroupWise Sync Agent and do not synchronize to mobile devices.

When a user receives an item on the mobile device for which attachments have not been synchronized from GroupWise, the item includes a list of the attachments that are on the original item but not on the synchronized item. This lets the user know that attachments are available in the GroupWise mailbox.

1. In the Mobility Admin console, click *Service Configuration* .
2. In the *Maximum Attachment Size* field, adjust the maximum attachment size as needed.



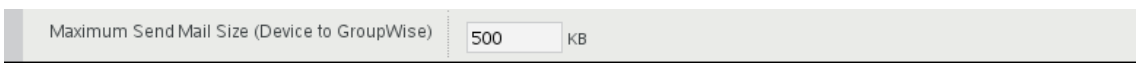
   This setting causes large attachments that exceed the size limit to be stripped from a message as it synchronizes from GroupWise to mobile devices. Small attachments that are within the size limit are still synchronized.
3. Click *Save* to save the new setting(s).
4. Restart the Mobility Service to put the new setting(s) into effect:

   ```
   rcgms restart
   ```

2.3.2 Controlling Maximum Send Mail Size from Mobile Devices to GroupWise

By default, if an item is larger than 500 KB when it is sent from a device, all attachments are stripped from the item before it is sent to GroupWise. In place of each stripped attachment, the user receives a text attachment indicating that the original attachment was stripped because of the size limit and what the size limit is.

1. In the Mobility Admin console, click *Service Configuration* .
2. In the *Maximum Send Mail Size* field, adjust the maximum message size as needed.



This setting causes all attachments to be stripped from an item as it synchronizes from a mobile device to GroupWise if the size of the item plus all attachments exceeds the size limit.

3. Click *Save* to save the new setting(s).
4. Restart the Mobility Service to put the new setting(s) into effect:

   ```
   rcgms restart
   ```

2.4 Diagnosing Synchronization Problems with MCheck

Although log files provide useful information about the functioning of the Mobility Service, they might not help you determine when data is not synchronizing as expected.

The MCheck utility compares Mobility system data with GroupWise data. When a discrepancy is detected, MCheck provides a recommendation for resolving the problem.

IMPORTANT: This utility is intended to be used under the direction of Novell Support.

You can use MCheck to perform the following actions:

- Gather configuration settings for your Mobility system.
- Verify that the contents of the GroupWise Address Book have synchronized to the Mobility system.
- Verify that the contents of a GroupWise user's mailbox have synchronized to the Mobility system.
- Remove a user that was originally added using the Data Synchronizer Mobility Pack software to either the GroupWise Connector or the Mobility Connector, but not both.

To run MCheck:

1. In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.
2. Change to the following directory:

   ```
   /opt/novell/datasync/tools/mcheck
   ```

3. Run the following command:

   ```
   python mcheck.pyc
   ```

   The main MCheck menu displays.

   ```
   1 System
   2 Users
   0 Exit

   Select Option:
   ```

4. Type the number for the action that you want to perform.

   ```
   1 System
     1 Get Mobility Configuration
     2 GroupWise System Address Book Check

   2 Users
     1 Check User
   ```

5 View the MCheck log file for results and recommendations.

A log file for each action is created in the following directory:

`/opt/novell/datasync/tools/mcheck/logs`

Action	Log File Name
Gather configuration settings	`mobConfiguration_dateTtime.log`
Verify the GroupWise Address Book	`sab_dateTtime.log`
Verify the user's mailbox	`username_dateTtime.log`

2.5 Maintaining the Mobility Database

The Mobility Service database is a PostgreSQL database. As with any database, the Mobility Service database requires regular maintenance in order to perform reliably. If you are new to managing a PostgreSQL database, see "Routine Database Maintenance Tasks" (http://www.postgresql.org/docs/8.3/interactive/maintenance.html) on the PostgreSQL Documentation website for assistance.

2.6 Backing Up Your Mobility System

All of the user data that exists at any time in your Mobility system also exists in GroupWise. Therefore, if there is a problem with your Mobility system, you can always resynchronize in order to restore your user data to a current working state.

However, you can back up your entire Mobility system in order to preserve the Mobility Service software, configuration files, certificate files, and database.

- Section 2.6.1, "Understanding What to Back Up," on page 26
- Section 2.6.2, "Backing Up a Mobility System after Stopping It," on page 27
- Section 2.6.3, "Backing Up a Mobility System While It Is Running," on page 27
- Section 2.6.4, "Restoring Your Mobility System," on page 28

For additional details, see TID 7008163, "How to Back Up and Restore the Mobility Service" in the Novell Support Knowledgebase (http://www.novell.com/support).

2.6.1 Understanding What to Back Up

- Use your backup software of choice to back up the following directories on your Mobility server:

Directory	Description
`/opt/novell/datasync`	Mobility Service software
`/etc/datasync`	Configuration files
`/var/lib/datasync`	Certificate files

- Use a PostgreSQL-supported backup solution to back up the Mobility Service database in the following directory:

  ```
  /var/lib/pgsql
  ```

- Decide how you want to back up the data:
  - Backing Up a Mobility System after Stopping It
  - Backing Up a Mobility System While It Is Running

2.6.2 Backing Up a Mobility System after Stopping It

Stopping your Mobility system before backing it up is the safest way to ensure a completely consistent backup.

1. In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.
2. Create a directory for storing your backup files, for example:

   ```
   mkdir /var/gmsbackup
   ```

3. Create a script similar to the following:

   ```
   #!/bin/bash
   # back up stopped Mobility system
   rcgms stop
   rcpostgresql stop
   #
   tar -czvpf /var/gmsbackup/pgsql.tgz /var/lib/pgsql
   tar -czvpf /var/gmsbackup/vardatasync.tgz /var/lib/datasync
   tar -czvpf /var/gmsbackup/optdatasync.tgz /opt/novell/datasync
   tar -czvpf /var/gmsbackup/etcdatasync.tgz /etc/datasync
   #
   rcpostgresql start
   rcgms start
   ```

   For example, you could create a script named `gmsbackup.sh` in the `/opt/novell/datasync` directory.

4. Add execute permissions to the backup script:

   ```
   chmod +x script_name.sh
   ```

5. Execute the backup script.
6. Change to the directory where you backed up the Mobility files to verify that the `.tgz` files were successfully created.

2.6.3 Backing Up a Mobility System While It Is Running

For convenience, you might want to back up your Mobility system while it is still running.

1. In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.
2. Create a script to back up the Mobility Service database:
   - **2a** Create a file named `.pgpass` in the `root` user's home directory (`/root`).
   - **2b** Put the following contents in the `.pgpass` file.

     ```
     *:*:*:datasync_user:database_password
     ```

The Mobility Service database user is `datasync_user`. The Mobility Service database password was established during installation.

2c Create a database backup script similar to the following, using the `pg_dump` (http://www.postgresql.org/docs/8.4/static/app-pgdump.html) command to back up just the Mobility Service databases:

```
#!/bin/bash
# back up Mobility Service database
pg_dump -U datasync_user mobility > /tmp/mobility.out
pg_dump -U datasync_user datasync > /tmp/datasync.out
/usr/bin/bzip2 /tmp/mobility.out
/usr/bin/bzip2 /tmp/datasync.out
```

For example, you could create a database backup script named `gmsdbbackup.sh` in the `/opt/novell/datasync` directory.

2d Add execute permissions to the backup script:

```
chmod +x script_name.sh
```

2e Execute the backup script.

3 Create a script to back up the Mobility Service directories:

3a Create a directory for storing your backup files, for example:

```
mkdir /var/gmsbackup
```

3b Use the following script to back up the rest of your Mobility system while it is sill running:

```
#!/bin/bash
# back up running Mobility system
tar -czvpf /var/gmsbackup/vardatasync.tgz /var/lib/datasync
tar -czvpf /var/gmsbackup/optdatasync.tgz /opt/novell/datasync
tar -czvpf /var/gmsbackup/etcdatasync.tgz /etc/datasync
```

For example, you could create a script named `gmsdirbackup.sh` in the `/opt/novell/datasync` directory.

3c Add execute permissions to the backup script:

```
chmod +x script_name.sh
```

3d Execute the backup script.

3e Change to the directory where you backed up the Mobility files to verify that the `.tgz` files were successfully created.

2.6.4 Restoring Your Mobility System

1 Change to the directory where you backed up the Mobility files.

2 Use the following `tar` command to restore the backed-up Mobility directories:

```
tar -xzvf file_name.tgz
```

3 (Conditional) If you used the `pg_dump` (http://www.postgresql.org/docs/8.3/static/app-pgdump.html) command to back up the Mobility Service databases separately, use the `psql` (http://www.postgresql.org/docs/8.3/static/app-psql.html) command to restore it.

2.7 Changing the IP Address of the Mobility Server

For a Mobility system with just a small number of users on a single server, the simplest approach is to reinstall the Mobility Service software, and then have users reinitialize their mobile devices.

For a Mobility system with a large number of users, where having users reinitialize their mobile devices after reinstalling the Mobility Service software could be problematic, you can reconfigure your Mobility system with a new IP address, and then have users change the IP address that their mobile devices use to access the Mobility system.

- Section 2.7.1, “Changing the IP Address for a Small Mobility System,” on page 29
- Section 2.7.2, “Changing the IP Address for a Large Mobility System,” on page 29

2.7.1 Changing the IP Address for a Small Mobility System

1. Uninstall the Mobility Service software.

   For instructions, see “Uninstalling the Mobility Service” in the *GroupWise Mobility Service 2.1 Installation Guide*.
2. Change the IP address of the server.
3. Reinstall the Mobility Service software.

   For instructions, see “Running the Mobility Service Installation Program” in the *GroupWise Mobility Service 2.1 Installation Guide*.
4. Instruct your mobile device users to delete their accounts from their mobile devices, set them up using the new IP address, then reinitialize their mobile devices.

2.7.2 Changing the IP Address for a Large Mobility System

1. Stop the Mobility Service:

   ```
   rcgms stop
   ```
2. Change the IP address of the server.
3. Use MCheck to clear event configurations:
   - **3a** In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.
   - **3b** Change to the following directory:

     ```
     /opt/novell/datasync/tools/mcheck
     ```
   - **3c** Run the following command:

     ```
     python mcheck.pyc
     ```

     The main MCheck menu displays.

     ```
     1 System
     2 Users
     0 Exit

     Select Option:
     ```
   - **3d** Select *2 Users*.
   - **3e** Select *2 Remove Old Event Configuration*.
   - **3f** Enter the MAC address for the Mobility server whose IP address you changed.

MCheck reads all users on the Mobility server and retrieves their event configurations. If the MAC address you entered matches the MAC address in an event configuration, it removes the event configuration.

When MCheck is finished, the console displays 1) a list of all event configurations that were removed and 2) a total of all event configurations that were removed.

4 Start the Mobility Service:

```
rcgms start
```

5 Instruct your mobile device users to reconfigure their accounts with the new IP address.

2.8 Providing Anonymous Feedback about Your Mobility System to Novell

Novell is striving to focus engineering efforts on the real-world needs of our GroupWise Mobility Service users. When you are willing to submit anonymous feedback from your Mobility system to Novell, you assist in these efforts to improve Mobility Service performance.

When you enable anonymous feedback, a script runs daily to gather statistics about the usage of your Mobility system. The statistics are sent daily to Novell.

You can enable and disable the sending of feedback at any time. You can review the usage data that has been collected before it is sent to Novell.

- Section 2.8.1, “Enabling/Disabling Anonymous Feedback,” on page 30
- Section 2.8.2, “Viewing the Collected Feedback,” on page 30

2.8.1 Enabling/Disabling Anonymous Feedback

1 In the Mobility Admin console, click *Service Configuration*, then scroll down to the *Send Anonymous Feedback* field.

2 Select or deselect *Send Anonymous Feedback*.

3 Click *Save* to save the new setting(s).

4 Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

2.8.2 Viewing the Collected Feedback

You can feel comfortable about letting Novell gather usage data from your Mobility system. The data is collected by the following script:

```
/opt/novell/datasync/tools/getstats.sh
```

The script is run by the following cron job:

```
/etc/cron.daily/gw-mobility-feedback
```

The cron job runs once a day at midnight. The results are stored in `*.gz` files in the following directory:

```
/var/log/datasync/configengine
```

The files are saved for 90 days and then deleted.

Use the following command to extract the data from a *.gz file:

```
tar xvfz gwmobility_stats_string_date_time.gz
```

By viewing the gathered usage data, you can assure yourself that no personal data of any kind is being collected by Novell. The following is an example of the type of data that is collected:

```
GWMobilityVersion,SLESVersion,CPUCount,CPUType,SYSKBMemory,SYSType,
  GroupWiseEventUserCount,FolderItemAdd,ItemMarkRead,ItemMarkUnread,
  GWCAttachmentSize,MCAttachmentSize,TotalAttachments,Attachment1MB,Attachment2MB,
  Attachment3MB,Attachment4MB,Attachment5MBPlus,BlockedAttachments,MailFromDevice,
  ReadFromFromDevice,DeleteFromFromDevice,MoveFromFromDevice,UserCount,DevCount,
  DevPerUser2,DevPerUser3,DevPerUser0,DevPerUser1,DevPerUser4,DevPerUser5,
  DevPerUser6Plus,iPad,AndroidTablet,OtherDevices,iPhone,WindowsPhone,iPod,
  AndroidPhone,WindowsTablet,BlackBerry,WindowsOther,iOSOther,Android2,
  BlackBerryOther,BlackBerry10,iOS5,Windows8,iOS7,iOS6,Android5,Android4,
  Android3,AndroidOther,OtherOS

2.0.0.349,SLES11SP3,1,Intel(R)Core(TM)i7-2600CPU@3.40GHz,1017680,VMwareInc.,1,8,4,
  1,500,500,1,1,0,0,0,0,0,0,0,0,0,3,0,0,0,3,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
  0,0,0,0,0,0,0,0,0,0
```

Thank you in advance for enabling Anonymous Feedback and submitting your Mobility system usage data to help improve the GroupWise Mobility Service.

3 GroupWise Sync Agent Configuration

After you have installed the GroupWise Mobility Service, you can refine the configuration of the GroupWise Sync Agent to meet your Mobility system's needs.

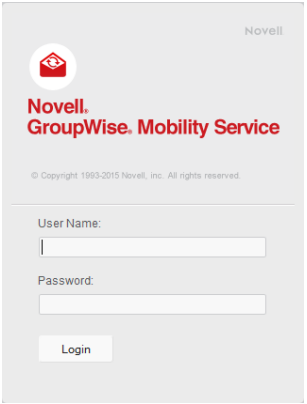
3.1 Monitoring and Configuring the GroupWise Sync Agent

You use the Mobility Admin console to monitor and configure the GroupWise Sync Agent.

1 In your web browser, access the Mobility Admin console at the following URL:

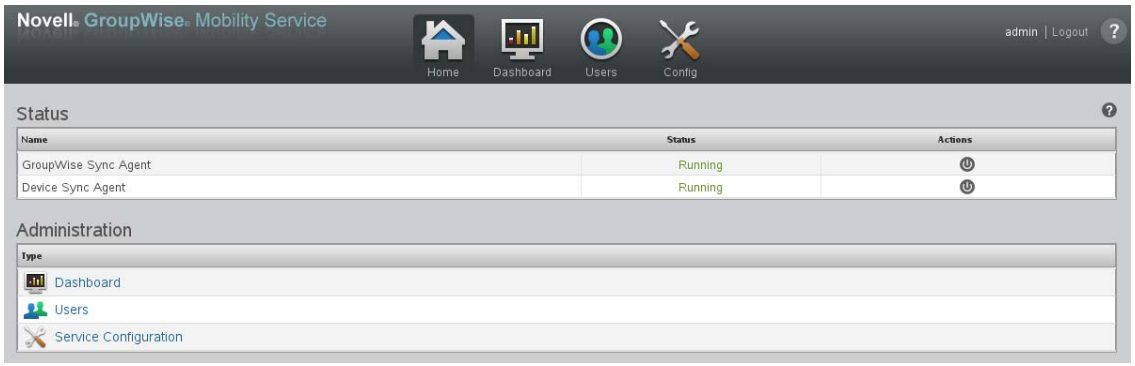
`https://mobility_server_address:8120`

Replace *mobility_server_address* with the IP address or DNS hostname of the server where the Mobility Service is installed.



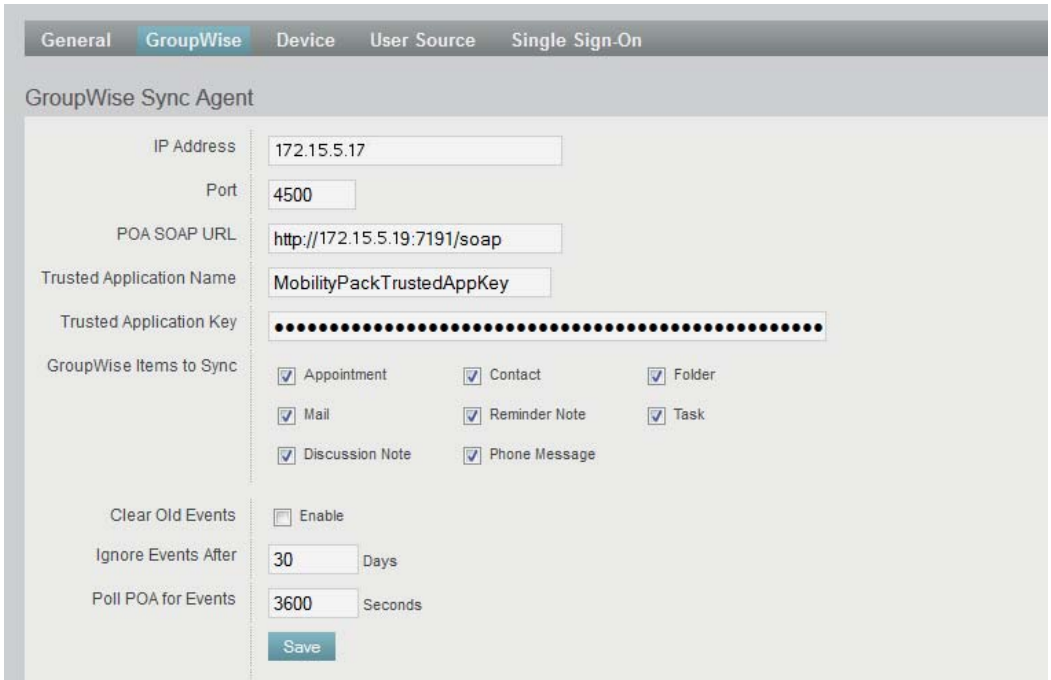
2 Log in as the Mobility administrator (the LDAP Admin user that was set up during installation, or `root`).

The sync agents should display a status of *Running*.



3 If the GroupWise Sync Agent is not running and does not start normally, refer to Section A.3, “GroupWise Sync Agent Troubleshooting,” on page 92 for assistance.

4 In the Mobility Admin console, click *Service Configuration*, then click *GroupWise Sync Agent* to display the GroupWise Sync Agent Configuration page.

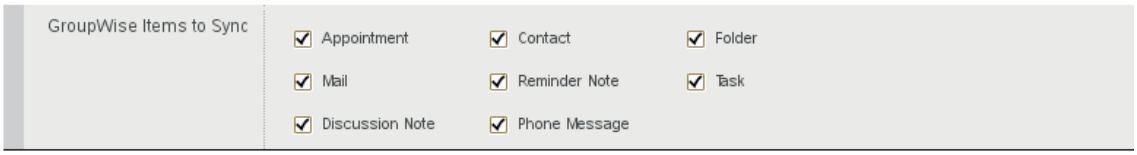


For more information about the Mobility Admin console, see Chapter 1, “GroupWise Mobility Administration Console,” on page 9.

3.2 Selecting GroupWise Items to Synchronize

By default, all GroupWise items are synchronized to mobile devices.

1. In the Mobility Admin console, click *Service Configuration*, then click *GroupWise* to display the GroupWise Sync Agent Configuration page.
2. In the *GroupWise Items to Sync* section, select and deselect items as needed to configure the GroupWise Sync Agent to synchronize more items or fewer items.



3. Click *Save* to save the new setting(s).
4. Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

The following sections contain information about settings that can also affect item synchronization:

- Section 3.5, “Ignoring Old GroupWise Items,” on page 36
- Section 4.7, “Controlling Maximum Item Synchronization,” on page 46

3.3 Synchronizing Sticky Notes

The Sticky Notes option allows notes to be synchronized between mobile devices and GroupWise:

- *Mobile device*: Synchronizes notes created using the device’s Notes app. The Notes app varies depending on the device operating system. On iOS devices, the native *Notes* app is supported. On Blackberry devices, the native *Remember* app is supported. On Android devices, the third-party *TouchDown* app and *Tasks and Notes for MS Exchange* app are supported.
- *GroupWise client*: Synchronizes Discussion Note and Personal Message items created in or moved to the *Mobile Notes* folder. GroupWise automatically creates the *Mobile Notes* folder when the Sticky Notes option is enabled. In some cases, the folder might be named *Notes* rather than *Mobile Notes*.

Sticky Notes synchronization is bidirectional. Notes that are created, modified, or deleted on the device are synchronized to the *Mobile Notes* folder. Discussion Note/Personal Message items that are created, modified, or deleted in the *Mobile Notes* folder are synchronized to the mobile device.

1. In the Mobility Admin console, click *Service Configuration*, then click *GroupWise* to display the GroupWise Sync Agent Configuration page.
2. In the *Sticky Notes* field, select *Enable* to synchronize Sticky Notes or deselect it to disable synchronization.

3. Click *Save* to save the new setting(s).
4. Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

The following sections contain information about settings that can also affect Sticky Note synchronization:

- Section 3.5, “Ignoring Old GroupWise Items,” on page 36
- Section 4.7, “Controlling Maximum Item Synchronization,” on page 46

3.4 Increasing GroupWise Sync Agent Reliability or Performance

If the GroupWise POA encounters an error and stops notifying the GroupWise Sync Agent about GroupWise events, GroupWise events stop synchronizing to mobile devices. By default, the GroupWise Sync Agent polls the POA for new events every 3600 seconds (1 hour).

You can configure how often the GroupWise Sync Agent polls the POA for events that have not yet been synchronized. Decreasing the poll cycle causes the GroupWise Sync Agent to poll more frequently, so that synchronization is more reliable. However, if you have a large number of users, you might want to increase the poll cycle in order to improve GroupWise Sync Agent performance.

1. In the Mobility Admin console, click *Service Configuration*, then click *GroupWise* to display the GroupWise Sync Agent Configuration page.
2. In the *Poll POA for Events* field, increase or decrease the poll cycle as needed.

   Set the poll cycle to 0 (zero) to disable the sweep cycle.
3. Click *Save* to save the new setting(s).
4. Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

3.5 Ignoring Old GroupWise Items

By default, the GroupWise POA does not transfer items to the GroupWise Sync Agent if they are older than 30 days. Typically, mobile device users have an even shorter time window during which they want items retained on their mobile devices. Allowing the GroupWise Sync Agent to accept items into your Mobility system that will ultimately be discarded by the Device Sync Agent is not an efficient use of system resources.

You can decrease this setting in order to decrease sync agent traffic for old items and to align more closely with the needs of mobile device users. If necessary, you can increase this setting to a maximum of 60 days.

1. In the Mobility Admin console, click *Service Configuration*, then click *GroupWise* to display the GroupWise Sync Agent Configuration page.
2. In the *Ignore Events After* field, increase or decrease the item age as needed.

3. Click *Save* to save the new setting(s).

4 Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

3.6 Clearing Accumulated GroupWise Events

When the GroupWise Sync Agent stops synchronizing for some reason, GroupWise events accumulate in users' GroupWise mailbox databases until the GroupWise Sync Agent resumes synchronization.

By default, when the GroupWise Sync Agent restarts, it processes all accumulated events. This default behavior prevents the loss of events and is the desired behavior for normal GroupWise Sync Agent functioning. However, when you are troubleshooting a problem with the GroupWise Sync Agent, you might find it helpful to skip processing accumulated events so that the GroupWise Sync Agent starts processing current events more quickly.

To clear old events (not recommended unless you are troubleshooting):

1 In the Mobility Admin console, click *Service Configuration*, then click *GroupWise* to display the GroupWise Sync Agent Configuration page.

2 In the *Clear Old Events* field, select *Enable*.

This causes the GroupWise Sync Agent to discard accumulated events and start processing new events immediately. The discarded events are never processed.

3 Click *Save* to save the new setting(s).

4 Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

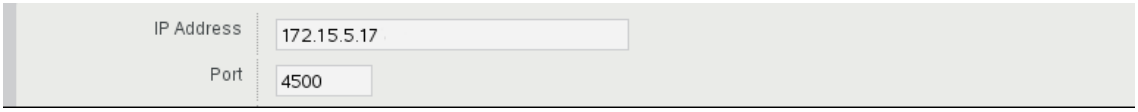
IMPORTANT: As soon as you are finished troubleshooting, return to the GroupWise Sync Agent Configuration page and deselect *Clear Old Events*, so that GroupWise events are not accidentally lost during normal GroupWise Sync Agent functioning.

3.7 Changing the GroupWise Sync Agent Listening Port

By default, the GroupWise Sync Agent communicates with the GroupWise POA using port 4500. If necessary, you can configure the GroupWise Sync Agent to use a different port.

1 In the Mobility Admin console, click *Service Configuration*, then click *GroupWise* to display the GroupWise Sync Agent Configuration page.

2 In the *Port* field, change the port number as needed.



3 (Conditional) If there is a firewall between the Mobility server and the POA server, make sure that the specified port is open.

4 Click *Save* to save the new setting(s).

5 Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

3.8 Enabling and Disabling SSL for POA SOAP Connections

During installation, you chose whether to use SSL for connections between the GroupWise Sync Agent and the GroupWise POA. The default is to use SSL. You can change the setting after installation as needed.

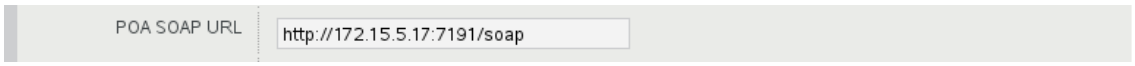
1 On the POA, enable or disable SSL as needed for the SOAP connection.

For more information, see the documentation for your version of GroupWise:

- GroupWise 2014: SOAP is enabled by default.
- GroupWise 2012: "Supporting SOAP Clients" in the *GroupWise 2012 Administration Guide*

2 In the Mobility Admin console, click *Service Configuration*, then click *GroupWise* to display the GroupWise Sync Agent Configuration page.

3 In the *GroupWise POA SOAP URL* field, use `https` for a secure SSL connection or `http` for a non-secure connection.



4 Click *Save* to save the new setting(s).

5 Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

3.9 Matching GroupWise Configuration Changes

Changes in your GroupWise system can require changes to the configuration of the GroupWise Sync Agent.

1 In the Mobility Admin console, click *Service Configuration*, then click *GroupWise* to display the GroupWise Sync Agent Configuration page.

2 Change GroupWise Sync Agent settings to match changes in your GroupWise system configuration as needed.

If the POA is reconfigured to change whether it uses SSL, the POA SOAP URL must be changed. In the *GroupWise POA SOAP URL* field, use `https` for a secure SSL connection or `http` for a non-secure connection.

If you create a new trusted application, you must update both the trusted application name and key at the same time. When you copy in a new trusted application key, the new key is obfuscated when it is saved.

3. Click *Save* to save the new setting(s).
4. Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

3.10 Configuring the GroupWise Sync Agent with an External IP Address and Port

On the GroupWise Sync Agent Configuration page in the Mobility Admin console, you specify the GroupWise Sync Agent server IP address and port for internal communication within your local network. However, you need to configure the GroupWise Sync Agent to use an external IP address and port for the following configurations:

- There is a firewall between the GroupWise Sync Agent and the POA that it communicates with.
- The GroupWise Sync Agent and the POA are located on two different logical networks with NAT (network address translation) between them.
- The GroupWise Sync Agent is running in a virtual machine.

To configure the GroupWise Sync Agent to use an external IP address and port:

1. In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.
2. Change to the following directory:

```
/etc/datasync/configengine/engines/default/pipelines
                                          /pipeline1/connectors/groupwise
```

3. Open the `connector.xml` file in a text editor.
4. Add the following lines between the <custom> and </custom> tags:

```
<externalAddress>external_ip_address</externalAddress>
<externalPort>external_port_number</externalPort>
```

5. Replace *external_ip_address* and *external_port_number* with the IP address and port number for the GroupWise Sync Agent to communicate with the POA across whatever network configuration lies between them.
6. Save the `connector.xml` file, then exit the text editor.
7. Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

3.11 Modifying or Preventing Synchronization of Specified Items by Using an XSLT Filter

If you are familiar with XSLT, you can configure the GroupWise Sync Agent to modify or drop specified items. The sample filter below drops items that contain a specified subtype or that have a subject equal to a specified string. With a little XSLT knowledge, you can modify this sample filter to meet your needs.

1. Create the following directory:

   ```
   /var/lib/datasync/groupwise/filter
   ```

2. Copy the following sample filter into a text editor:

   ```
   <?xml version='1.0' encoding='utf-8'?>

   <xsl:stylesheet version='1.0' xmlns:xsl='http://www.w3.org/1999/XSL/
                                                                Transform'>

   <xsl:variable name="subtype" select="//*[local-name()='subType']"/>
   <xsl:variable name="subject" select="//*[local-name()='subject']"/>
   <xsl:template match="node()|@*">
     <xsl:if test="not(contains($subtype, 'SearchText') or
                   contains($subtype, 'SearchText') or
                   ($subject = 'put_the_subject_here'))">
       <xsl:copy>
         <xsl:apply-templates select="node()|@*"/>
       </xsl:copy>
     </xsl:if>
   </xsl:template>

   </xsl:stylesheet>
   ```

   This sample file is available in the following location:

   ```
   /opt/novell/datasync/syncengine/connectors/groupwise/filter/
                                                   sourceCustomExample.xslt
   ```

3. Save the text file as `sourceCustomSample.xslt` in the new `groupwise/filter` directory that you created in Step 1.
4. Modify the file to identify the items that you want the GroupWise Sync Agent to drop.
5. Save the `sourceCustomSample.xslt` file, then exit the text editor.
6. When you are ready to put the new filter into effect, rename `sourceCustomSample.xslt` to `sourceCustom.xslt`, then restart the GroupWise Sync Agent.
7. (Conditional) If you need to remove the new filter, rename the `sourceCustom.xslt` file to a different name, then restart the GroupWise Sync Agent.

4 Device Sync Agent Configuration

After you have installed the GroupWise Mobility Service, you are ready to refine the configuration of the Device Sync Agent to meet your Mobility system's needs.

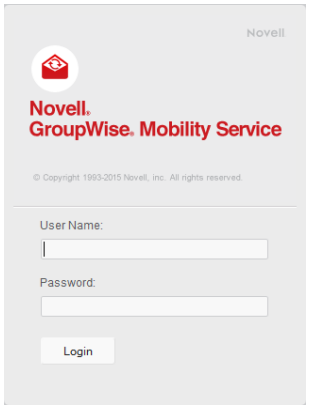
4.1 Monitoring and Configuring the Device Sync Agent

You use the Mobility Admin console to monitor and configure the Device Sync Agent.

1 In your web browser, access the Mobility Admin console at the following URL:

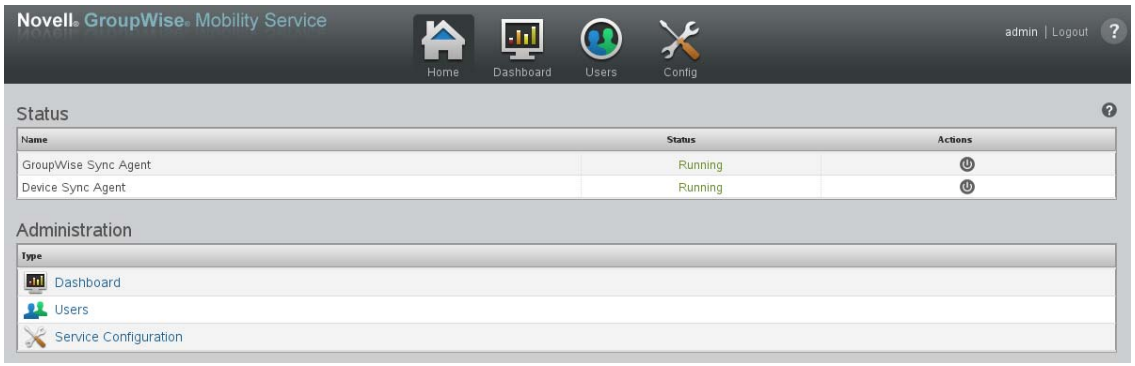
`https://mobility_server_address:8120`

Replace *`mobility_server_address`* with the IP address or DNS hostname of the server where the Mobility Service is installed.



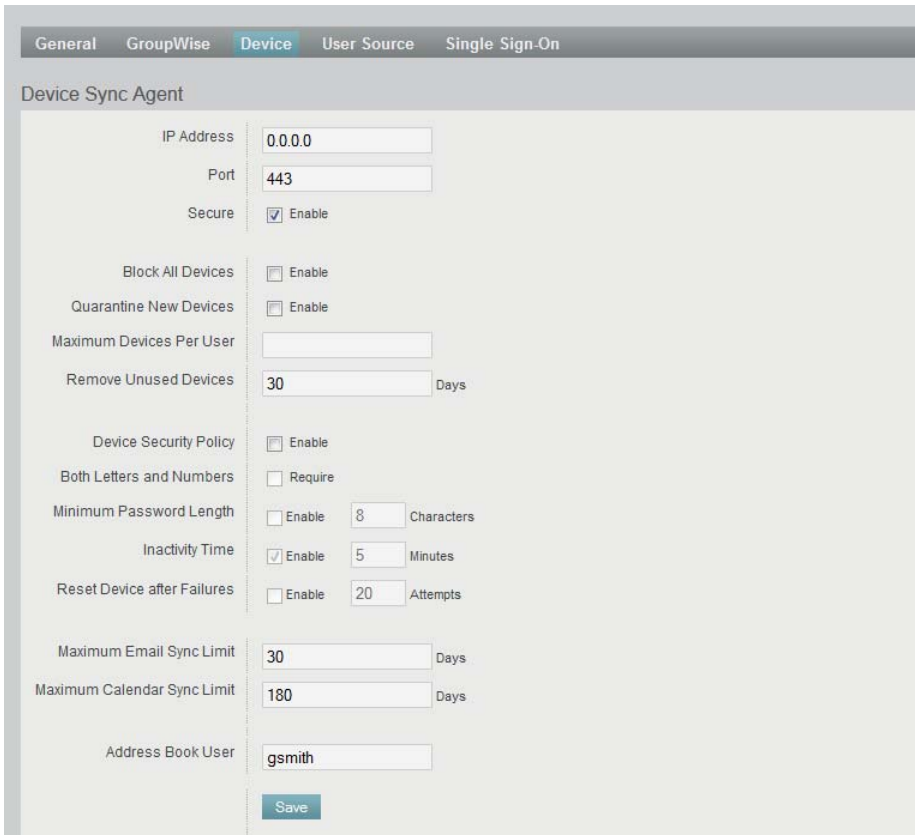
2 Log in as the Mobility administrator (the LDAP Admin user that was set up during installation, or `root`).

The sync agents should display a status of *Running*.



3 If the Device Sync Agent is not running and does not start normally, refer to Section A.4, “Device Sync Agent Troubleshooting,” on page 94 for assistance.

4 In the Mobility Admin console, click *Service Configuration*, then click *Device Sync Agent* to display the Device Sync Agent Configuration page.



For more information about the Mobility Admin console, see Chapter 1, “GroupWise Mobility Administration Console,” on page 9.

4.2 Blocking/Unblocking All Incoming Devices

You can prevent all users from connecting their devices to the Mobility system, and then allow access when you are ready. This is helpful when you are installing an update to the Mobility Service software.

1. In the Mobility Admin console, click *Service Configuration*, then click *Device* to display the Device Sync Agent Configuration page.
2. Select *Block All Devices*.

3. Click *Save* to save the new setting(s).
4. Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

5. When you are ready to allow access again, deselect *Block Devices*, then restart the Mobility Service.

NOTE: Whenever you block or unblock a device, notify the device owner of the change in device status.

Occasionally, you might encounter synchronization problems with specific users or devices. For example, a problem with a specific user or device might start to consume an inappropriately large amount of system resources on your Mobility server. If this occurs, see Section 7.3, “Blocking/Unblocking Specific Devices,” on page 74 for assistance with resolving the problem.

4.3 Enabling a Device Password Security Policy

As an administrator, you can control several aspects of the behavior of mobile devices that connect to your Mobility system. By establishing a security policy for the passwords that users set on their mobile devices, you help prevent unauthorized access to your Mobility system from lost or misplaced devices.

1. In the Mobility Admin console, click *Service Configuration*, then click *Device* to display the Device Sync Agent Configuration page.
2. Select *Enable* in the *Device Security Policy* field.

When you enable the security policy, users are informed of the specific security settings that are in effect when they create their mobile device accounts and set their device passwords. Users are prevented from configuring their mobile devices to connect to the Mobility system without following the security policy you establish.

If a user's device uses another locking method, like a lock pattern, that method is overridden by the Mobility system's device password security policy when they attempt to connect for the first time.

NOTE: When mobile devices connect for the first time to a system that has been updated from the Data Synchronizer Mobility Pack to GroupWise Mobility Service 2.0.*x*, some devices automatically switch from ActiveSync 2.5 to 12.1. When this occurs, some devices prompt users to accept a new "security policy," which can sound like a substantial change. In reality, no substantial change is being made, and users should simply accept the "policy" when prompted.

---

3 Set the security policy options as needed for the level of device password security that you want for your Mobility system:

Both Letters and Numbers: By default, any combination of characters is permitted in device passwords. Enable this option to require device passwords that include at least one letter, one number, and one special character.

Minimum Password Length: By default, the user can set a device password of any length. Enable this option to specify the minimum number of characters required in device passwords. The minimum value is 0; the maximum value is 18. If you specify 0, the security policy does not require the user to set a password on the device.

Inactivity Time: By default, the mobile device does not lock itself in the absence of user activity. Enable this option to specify the number of minutes after which a mobile device locks itself when no user activity occurs.

Reset Device after Failures: By default, an external Reset command must be sent to the mobile device in order to wipe personal data from it. Enable this option to specify the number of failed password attempts after which the mobile device automatically resets itself to factory default settings.

4 Click *Save* to save the new setting(s).

5 Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

4.4 Quarantining New Devices to Prevent Immediate Connection

By default, when a user configures a new mobile device to synchronize GroupWise data, the device can immediately connect to your Mobility system and start synchronizing data. If you prefer, you can configure your Mobility system to prevent new devices from connecting until you allow access.

1 In the Mobility Admin console, click *Service Configuration*, then click *Device* to display the Device Sync Agent Configuration page.

2 Select *Enable* in the *Quarantine New Devices* field so that new devices cannot connect to your Mobility system until you allow them to.

3 Click *Save* to save the new setting(s).

4 Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

5 Configure the Mobility Service to notify you when users connect new devices.

For instructions, see Section 5.2, “Enabling System and Service Notifications,” on page 51.

6 Skip to Section 7.4, “Releasing a New Device from the Quarantine,” on page 75.

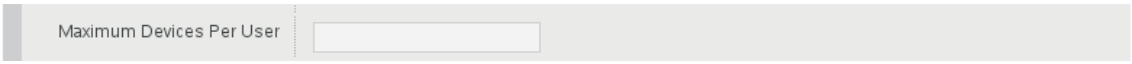
4.5 Controlling the Maximum Number of Devices per User

When a single user has multiple devices, the user’s data is duplicated in your Mobility system. To control data duplication and improve performance, you can control the number of devices that each user is allowed to connect to your Mobility system.

By default, each user can connect to your Mobility system with as many devices as he or she wants. When you set the maximum limit, a user who is above the limit is not prevented from connecting with existing devices. However, the user cannot connect with any additional devices until the number of devices is within the limit that you have set.

1 In the Mobility Admin console, click *Service Configuration*, then click *Device* to display the Device Sync Agent Configuration page.

2 In the *Maximum Devices per User* field, set the maximum number of devices that each user can connect with.



To remove an existing limit, delete the number for an unlimited number of devices.

3 Click *Save* to save the new setting(s).

4 Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

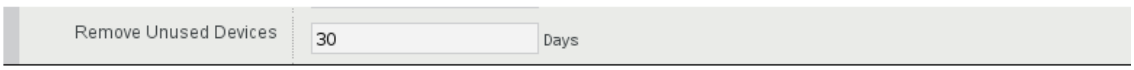
4.6 Removing Unused Devices Automatically

By default, mobile devices that have not connected to your Mobility system for 30 days are automatically removed from your Mobility system. You can change the time interval after which unused devices are automatically removed.

NOTE: To remove a device immediately, see Section 7.6, “Deleting a Device,” on page 77.

1 In the Mobility Admin console, click *Service Configuration*, then click *Device* to display the Device Sync Agent Configuration page.

2 In the *Remove Unused Devices* field, adjust the number of days as needed to control the proliferation of unused devices.



3 Click *Save* to save the new setting(s).

4 Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

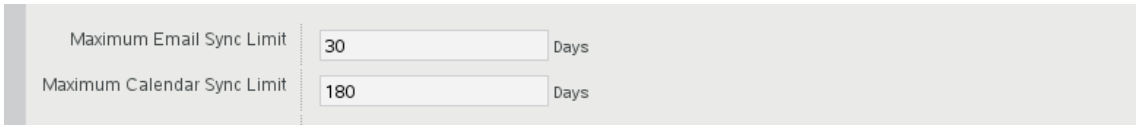
4.7 Controlling Maximum Item Synchronization

Users can configure their mobile devices to request synchronization for all email and calendar items. However, you might not want to allow users to synchronize that much data.

By default, users are allowed to synchronize a maximum of 30 days of email and 180 days of calendar items. You can set the allowed maximums higher or lower as needed.

1. In the Mobility Admin console, click *Service Configuration*, then click *Device* to display the Device Sync Agent Configuration page.
2. In the *Maximum Email Sync Limit* field, adjust the maximum number of days for email.

   This setting also applies to Sticky Notes.

3. In the *Maximum Calendar Sync Limit* field, adjust the maximum number of days for calendar items.

   The maximum settings for these fields is 730 days (2 years).

   If users try to configure their mobile devices to synchronize more days of data than you have allowed, they receive a warning message.
4. Click *Save* to save the new setting(s).
5. Restart the Mobility Service to put the new setting(s) into effect:

   ```
   rcgms restart
   ```

4.8 Binding to a Specific IP Address

By default, the Device Sync Agent uses all available IP addresses on the Mobility server. You can reconfigure the Device Sync Agent to use only one specific address.

1. In the Mobility Admin console, click *Service Configuration*, then click *Device* to display the Device Sync Agent Configuration page.
2. In the *IP Address* field, specify the IP address that you want to bind the Device Sync Agent to.

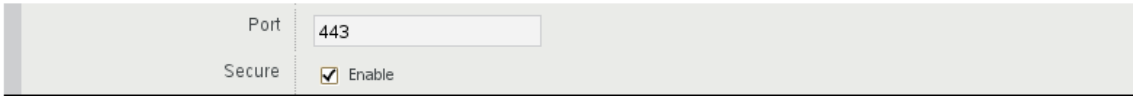
   The default of `0.0.0.0` indicates that the Device Sync Agent is not bound to a specific IP address.
3. Click *Save* to save the new setting(s).
4. Restart the Mobility Service to put the new setting(s) into effect:

   ```
   rcgms restart
   ```

4.9 Enabling and Disabling SSL for Device Connections

During Mobility Service installation, you chose whether to use SSL for connections between the Device Sync Agent and mobile devices. By default, the Device Sync Agent uses a secure SSL connection on port 443. You can change the setting after installation as needed.

1. In the Mobility Admin console, click *Service Configuration*, then click *Device* to display the Device Sync Agent Configuration page.
2. Select or deselect *Enable* in the *Secure* field to change whether SSL is in use.



3. Click *Save* to save the new setting(s).
4. Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

4.10 Changing the Address Book User

The Device Sync Agent accesses the GroupWise Address Book to obtain contact information for synchronization to mobile devices. The Device Sync Agent can obtain the information it needs by logging in as any valid GroupWise user. An initial Address Book user was specified during installation. You might want to change to a different user for whom either more or fewer contacts are visible in the GroupWise Address Book.

NOTE: The Device Sync Agent uses this user name only to access and search the GroupWise Address Book. It does not use this user name to access any personal aspects of the specified user's mailbox.

---

1. In the Mobility Admin console, click *Service Configuration*, then click *Device* to display the Device Sync Agent Configuration page.
2. In the *Address Book User* field, specify the GroupWise user name of the user whose view of the GroupWise Address Book best meets the needs of your mobile device users.

3. Click *Save* to save the new setting(s).
4. Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

5 GroupWise Mobility System Monitoring

GroupWise mobile device users rely on their devices for many aspects of their professional and personal lives. By carefully monitoring your Mobility system, you can keep device synchronization functioning quickly and reliably.

5.1 Using the Mobility Dashboard

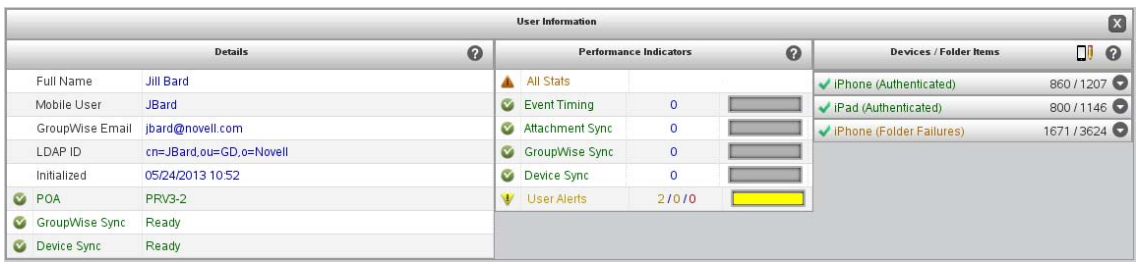
The Mobility Dashboard provides statistics about the functioning of your Mobility system. At the same time, colorful indicators draw your attention to those details that matter most.

5.1.1 Exploring the Dashboard

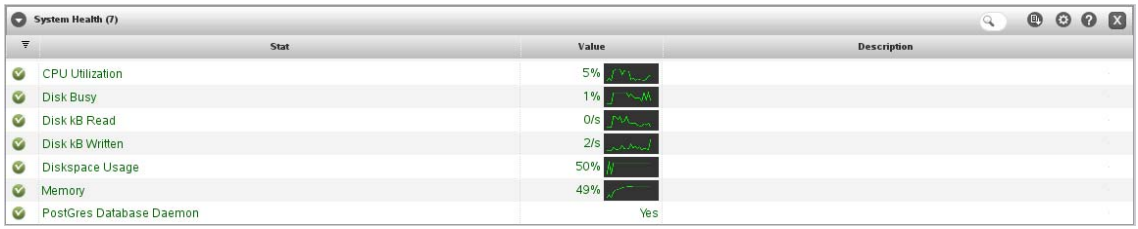
1 In the Mobility Admin console, click *Dashboard* .

The initial three panels provide high-level information about your Mobility system.

2 Click *Users*, then click a specific user to open three additional panels with user-specific information.



3 Click a specific type of information in any panel to open the *Listing* panel to display detailed statistics.



4 Click the *Listing* drop-down menu on the left side of the *Listing* panel header to select a specific listing or to create a customized listing view.

When you customize a listing in any way, the customization remains until you log out of the Admin console.

5 Click a graph in a listing to display a large, detailed version of the graph.

6 Click *Help* in any panel for explanations of all the statistics and graphs.

7 Click *Search Filter* on the right side of the *Listing* panel header, type a search string, then press Enter to restrict the content of the listing.

8 Click *Export Table* to export the listing to a CSV file for use in a spreadsheet program.

9 Click Configure Columns to select the columns to display in the listing.

In addition to the Dashboard, the Mobility Admin console provides the User page for monitoring synchronization of users and devices. For usage instructions, see:

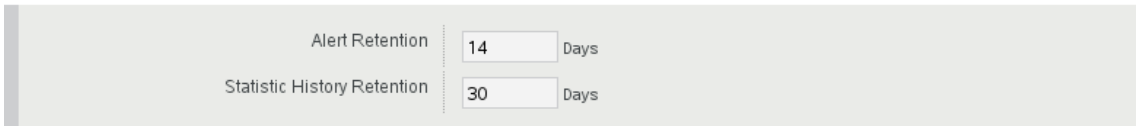
- Section 5.3, “Monitoring User Status,” on page 52
- Section 5.4, “Monitoring Device Status,” on page 54

5.1.2 Configuring Dashboard Data Retention

The Dashboard continuously collects data about your Mobility system to produce the indicators and statistics listings that it displays. You can configure how long alerts remain active and how long historical data for graphs is stored.

1 In the Mobility Admin console, click *Service Configuration*.

2 In the *Alert Retention* field, adjust how long you want alerts to display.



By default, alerts are retained for 14 days or until you manually delete them.

3 In the *Statistic History Retention* field, adjust how long you want the data used to generate graphs to be stored.

By default, the historical data used to generate the graphs is retained for 30 days.

4 Click *Save* to save the new setting(s).

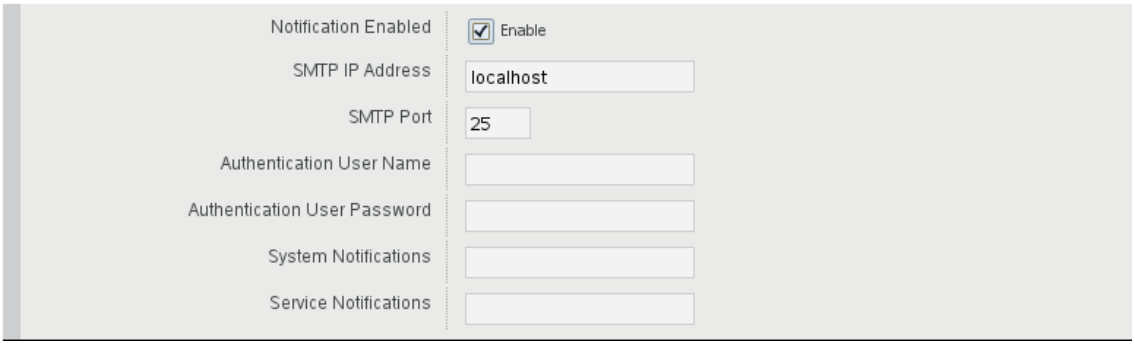
5 Restart the Mobility Service to put the new setting(s) into effect:

```
rcgms restart
```

5.2 Enabling System and Service Notifications

You can configure the Mobility system to notify specified users when critical situations arise that require administrator attention.

1. In the Mobility Admin console, click *Service Configuration* .
2. In the *Notification Enabled* field, select *Enabled*.



3. Fill in the following fields:

   SMTP IP Address: Specify the IP address of an SMTP host for sending email. This could be a GroupWise GWIA server, but you can also use another email system such as sendmail on a Linux server or a personal email account.

   SMTP Port: The port number on which the Mobility Service can communicate with the SMTP host.

   Authentication User Name: The email user name to send the notification messages from.

   Authentication User Password: (Conditional) The email password if one is required on the email account.

   System Notifications: A comma-delimited list of email addresses to send a notification to when the Mobility server encounters a critical (red) alert or condition.

   Service Notifications: A comma-delimited list of email addresses to send a notification to when a new device needs to be released from the quarantine.

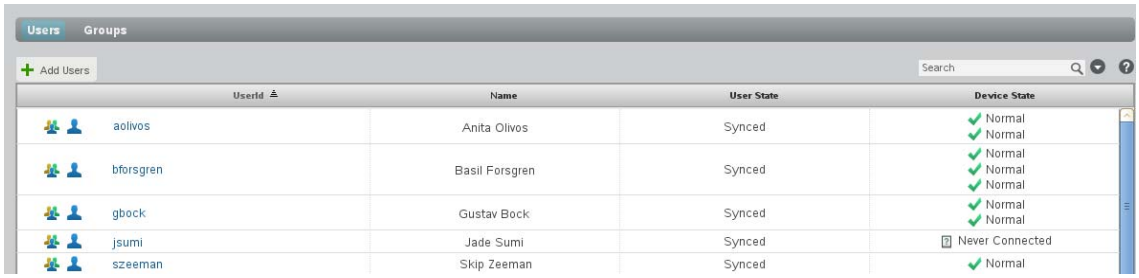
   For more information about the quarantine, see Section 4.4, “Quarantining New Devices to Prevent Immediate Connection,” on page 44 and Section 7.4, “Releasing a New Device from the Quarantine,” on page 75.
4. Click *Save* to save the new setting(s).
5. Restart the Mobility Service to put the new setting(s) into effect:

   ```
   rcgms restart
   ```

5.3 Monitoring User Status

The Users page helps you monitor synchronization progress as data transfers from GroupWise through the GroupWise Sync Agent to the Device Sync Agent in preparation for transfer to mobile devices.

1 In the Mobility Admin console, click *Users* .



A *Group* icon to the left of a *User* icon shows that the user was added to your Mobility system as a member of an LDAP group. If you mouse over the Group icon, the name and context of the group displays.

A synchronized resource is identified with the *Resource* icon .

2 Check the *User State* column for each user.

The *User State* column displays the following states that indicate the progress of initial synchronization from GroupWise into the Mobility system:

User State	Explanation
Queued	The initial synchronization process from GroupWise to the Mobility system has not yet started for this user.
Syncing-Init	The initial synchronization process is in progress. As many as four users can be synchronizing at once. As one user is finished, initial synchronization for the next user starts.
Sync-Validate	The Mobility system has received all of the user's GroupWise data, and is in the process of comparing the data in the Mobility system with the data in GroupWise to verify the completeness of the data transfer.
Synced	The initial synchronization process is complete.
Syncing-Days+	After initial synchronization, users can request more email in addition to the default of the email in the Mailbox folder for the last three days.
Blocked	The specific user is currently blocked from connecting any devices.
Failed	The initial synchronization process has failed. For failed users, the GroupWise Sync Agent automatically retries as many as four times after all other users have been synchronized.
Delete	The user is in the process of being deleted from your Mobility system. If the user has a large amount of data and attachments in the system, the deletion process can take some time.

User State	Explanation
Re-Init	The user is in the process of being reinitialized. During reinitialization, the user's GroupWise data is deleted from the Mobility system and is requested again from the GroupWise system. If the user has a large amount of GroupWise data and attachments, the reinitialization process might take a long time.

See also Section 5.4, "Monitoring Device Status," on page 54.

3 (Condition) For users in the *Queued* state, be patient until the state progresses from *Queued* to *Syncing* to *Synced*.

4 (Conditional) For users in the *Syncing* state, refresh the Users page until the status changes to *Synced*.

5 (Conditional) For users in the *Synced* state, notify the users to configure their mobile devices to connect to the Mobility system.

After users have configured their mobile devices to connect to the Mobility system, they can configure their devices to synchronize additional items beyond the defaults. For more information about initial synchronization, see "Managing Initial Synchronization of Users" in the *GroupWise Mobility Service 2.1 Installation Guide*. For such users, their *Synced* state can change to *Syncing* again as additional items are retrieved, and then return to *Synced* when the additional synchronization is finished.

6 (Conditional) If a user is in the *Blocked* state because all of his or her devices are blocked, click *Unblock Device* in the *User Actions* column to unblock the user and all devices.

For more information, see Section 4.2, "Blocking/Unblocking All Incoming Devices," on page 43 and Section 7.3, "Blocking/Unblocking Specific Devices," on page 74.

7 (Conditional) If a user is in the *Failed* state:

7a Click the user name to display the User/Device Actions page.

7b In the *Actions* column, click .

Reinitialization deletes the user from the Device Sync Agent, adds the user again, then starts the synchronization process over from the beginning.

7c (Conditional) If reinitializing the user still does not allow the user to connect, delete the user from the Mobility system, then re-add the user.

For instructions, see Section 6.1, "Managing Mobile Device Users," on page 61.

7d Click *Users* to return to the Users page.

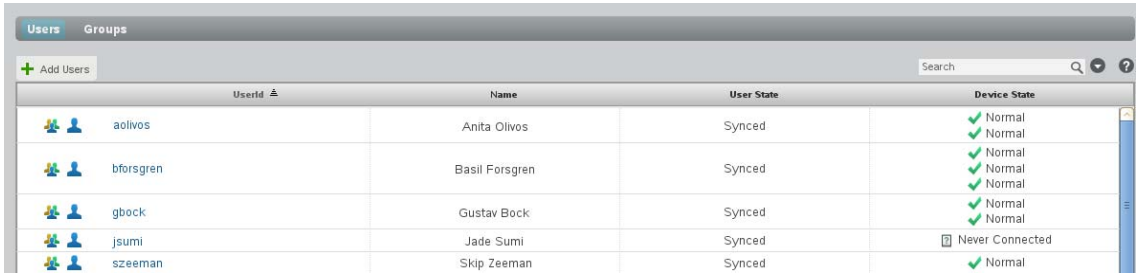
8 To display more detailed user status, click *Dashboard*, then click *Users*.

For more information about the Dashboard, see Section 5.1, "Using the Mobility Dashboard," on page 49.

5.4 Monitoring Device Status

After GroupWise data has successfully transferred from GroupWise into the Mobility system, the Device Sync Agent is then responsible for transferring the data to and from mobile devices.

1 In the Mobility Admin console, click *Users* .



2 Check the *Device State* column for each user.

If there are multiple lines in the *Device State* column. the user has multiple devices. Hover over the device state icon to display the device ID.

The *Device State* column displays the following states that indicate the status of each device's connection to the Mobility system:

Device State	Explanation
Never Connected	The user has not yet configured the device to connect to the Mobility system. Device synchronization has not yet begun.
Normal	The device has successfully connected to the Mobility system and synchronization to the device is complete.
Blocked	The device is being prevented from connecting to the Mobility system for either of these conditions: ◆ All devices have been prevented from connecting by using the Block All Devices setting on the Device Sync Agent Configuration page. ◆ An individual device has been manually blocked on the User/Device Actions page because it was having a problem that was adversely affecting the Mobility system.
Quarantined	A new device is being prevented from connecting until you release it from the device quarantine.
Resetting	A Reset command has been sent to a device in order to wipe all personal data from it.
Reset	The device has acknowledged the Reset command and has been successfully wiped.

See also Section 5.3, "Monitoring User Status," on page 52.

3 (Optional) In the *Search* field, type all or part of a user's first name, last name, or GroupWise user name to filter the list.

4 (Optional) Use the drop-down menu to the right of the *Search* field to filter the list by device state.

5 Click the user name of the device owner to display the User/Device Actions page.

For each device, the device type, device operating system, ActiveSync version, and time of last synchronization are listed. The *Device State* column displays the same states that are displayed on the User page.

6 (Conditional) If a device is in the *Blocked* state, click *Unblock Device* in the *Device Actions* column to unblock the device.

For more information, see Section 4.2, “Blocking/Unblocking All Incoming Devices,” on page 43 and Section 7.3, “Blocking/Unblocking Specific Devices,” on page 74.

7 (Conditional) If a device is in the *Quarantined* state, click *Allow Device* to release the device from the quarantine.

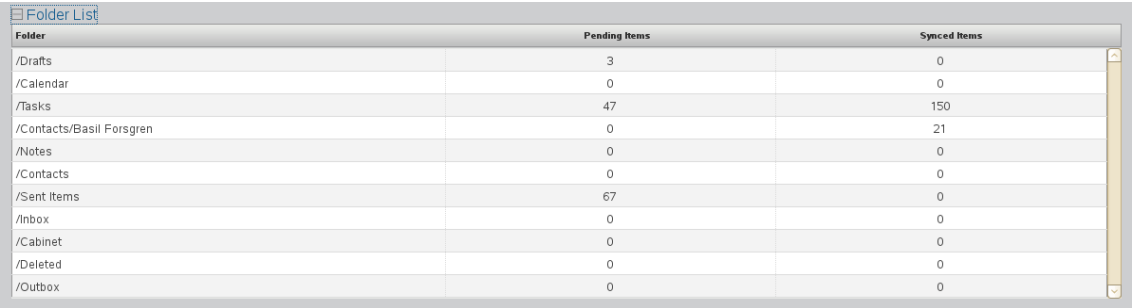
For more information about the quarantine, see Section 4.4, “Quarantining New Devices to Prevent Immediate Connection,” on page 44 and Section 7.4, “Releasing a New Device from the Quarantine,” on page 75.

8 To display more detailed device information, such as the last time each device connected to your Mobility system, click *Dashboard*, then click *Devices*.

If a device has not connected to the Mobility system for 30 days, the nightly maintenance process automatically removes the inactive device from the Mobility system.

For more information about the Dashboard, see Section 5.1, “Using the Mobility Dashboard,” on page 49.

9 (Optional) Click *Folder List* to display the totals of pending and synchronized items in each folder in the user’s GroupWise mailbox.



This information is helpful when troubleshooting a synchronization problem for the user.

5.5 Monitoring Disk Space Usage

Every effort should be made to provide adequate disk space on the Mobility server. An abnormal shutdown because of insufficient disk space can result in data loss in your Mobility system.

The `datasync-diskcheck.sh` script runs automatically along with the Mobility Service and monitors disk space usage in the `/var` partition where log files are stored.

IMPORTANT: If disk space usage exceeds 90%, the script shuts down the Mobility Service normally, to prevent the potential data loss associated with an abnormal shutdown.

The `datasync-diskcheck.sh` script runs every hour. When it detects a low disk space condition, it writes an entry to the `/var/log/datasync/datasync_status` log file. No other notification of the condition is provided before the script shuts down the Mobility Service.

After a low disk space condition occurs, you can do one or more of the following things to prevent future problems:

- Improve your database maintenance practices. See Section 2.5, “Maintaining the Mobility Database,” on page 26.
- Remove old log files. For the location of log files, see Section 5.6, “Working with Log Files,” on page 56.
- Add more disk space to the Mobility server.

5.6 Working with Log Files

Log files provide useful information about the functioning of the various Mobility system components.

5.6.1 Understanding Log Files

The Mobility Service components generate a set of log files that are created in subdirectories under the following directory:

`/var/log/datasync`

The log file subdirectories under `/var/log/datasync` and the log file names are as follows:

Internal Mobility Service Component	Log File Subdirectory under /var/log/datasync	Log File Name
Sync Engine	`syncengine`	`engine.log`
Config Engine	`configengine`	`configengine.log`
Web Admin	`webadmin`	`server.log`
Connector Manager	`syncengine`	`connectorManager.log`

Internal Mobility Service Component	Log File Subdirectory under /var/log/datasync	Log File Name

Sync Agents	`connectors`	`groupwise-agent.log`
		`groupwise.log`
		`mobility-agent.log`
		`mobility.log`

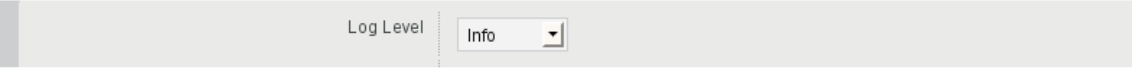
Use the following command to check the most recent additions to a log file:

```
tail -f log_file_name.log
```

5.6.2 Setting the Log Level

All Mobility log files use the same log level, which you set on the General page in the Mobility Admin console.

1. In the Mobility Admin console, click *Service Configuration* .
2. In the *Log Level* field, select from the following log levels:



   - **Info:** Logs informational messages about normal synchronization processing. This log level is suitable for a Mobility administrator who wants to observe the functioning of the Mobility system.

     Info is the default log level and is strongly recommended because it balances the amount of data logged, the amount of disk space required for log files, and the load on the Mobility system.
   - **Debug:** Logs large quantities of developer-level data. This log level is appropriate for troubleshooting purposes. It puts a heavy load on the Mobility system and should be used only until the troubleshooting activities are completed.
   - **Warning:** Logs problems that should not adversely affect synchronization processing but should be investigated and resolved for optimum performance. This log level can be appropriate for a smoothly running Mobility system where you only want to be notified of warnings and errors.
   - **Error:** Logs error messages that indicate critical problems in synchronization processing. This log level puts the least load on the Mobility system because it logs only critical errors, but it does not log sufficient data to help resolve any errors that occur.
3. Click *Save* to save the new setting(s).
4. Restart the Mobility Service to put the new setting(s) into effect:

   ```
   rcgms restart
   ```

TIP: The user interface instructs you to restart the Mobility Service, because this is required for all other settings on this page. However, if you only change the log level, you do not need to restart the Mobility Service. The sync agents immediately put the new log level into effect.

5.6.3 Configuring Log File Rotation

The Mobility log files are automatically compressed and rotated by a `logrotate cron` job. The schedule is set by the `DAILY_TIME="00:30"` line in the `/etc/sysconfig/cron` file, which means that the log files are checked at 12:30 a.m. each night. Any Mobility log files that have exceeded 4 MB in size are compressed and rotated at that time. After 30 days or 99 instances of each log file have accumulated, the oldest log file is deleted when a new log file is created.

Log rotation is controlled by the following files:

```
/etc/logrotate.d/datasync-syncengine
/etc/logrotate.d/datasync-configengine
/etc/logrotate.d/datasync-webadmin
/etc/logrotate.d/datasync-monitorengine
```

By default, `gzip` is used to compress old log files. You can change the compression method by changing the following line in the files listed above:

```
compresscmd /usr/bin/gzip
```

For example, to change from `gzip` (http://en.wikipedia.org/wiki/Gzip) compression to `bz2` (http://en.wikipedia.org/wiki/Bzip2) compression, use the following line:

```
compresscmd /usr/bin/bzip2
```

Using `bz2` compression produces smaller log files but uses more system resources during compression.

For more information, see the Linux `logrotate` (http://linux.about.com/od/commands/l/blcmdl8_logrota.htm) command.

5.6.4 Gathering Log Files for Novell Technical Services

The `supportconfig` tool provided by Novell Technical Services gathers information about your Mobility system to help them resolve issues with which you require assistance. It is provided as part of the SUSE Linux Enterprise Server 11 operating system. You can also use it for your own troubleshooting activities.

Each component of your Mobility system (sync agents, engines, and so on) has a `supportconfig` plug-in that gathers information specific to its functioning. The following information is gathered:

- The component's configuration file with security information, such as passwords, stripped out
- The component's current log file
- The component-specific script that `supportconfig` ran to collect the information

To run `supportconfig` for your own troubleshooting activities:

1. In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.
2. Enter the following command:

   ```
   supportconfig
   ```

   The `supportconfig` tool examines the server very thoroughly and lists its findings. The tool then zips all the data it collected into the following file:

   `/var/log/nts_`*`servername_yymmdd_hhss`*`.tbz`

   This file name identifies the server and the time stamp for the files that `supportconfig` has collected.

3 Examine the files that `supportconfig` collected:

   3a Copy the `.tbz` file to a convenient temporary directory.

   3b Use the following command to unzip the compressed file into the set of text files that hold the findings produced by the `supportconfig` tool:

   ```
   tar xjf file_name.tzb
   ```

4 View each `.txt` file to see the configuration file, current log file, and script file for each Mobility component.

For more information, see `supportconfig` for Linux (http://www.novell.com/communities/node/2332/supportconfig-linux).

5.7 Monitoring GroupWise SOAP Processing

The GroupWise Sync Agent uses the SOAP protocol to communicate with the GroupWise POA. GroupWise includes tools for monitoring those SOAP connections.

- Section 5.7.1, “Using the GroupWise POA Web Console,” on page 59
- Section 5.7.2, “Using GroupWise Monitor,” on page 59

5.7.1 Using the GroupWise POA Web Console

The POA web console provides information about SOAP events that are passing between the GroupWise Sync Agent and the POA. For more information, see the documentation for your version of GroupWise:

- GroupWise 2014: “Monitoring SOAP Events” in the *GroupWise 2014 Administration Guide*
- GroupWise 2012: “Monitoring SOAP Events” in the *GroupWise 2012 Administration Guide*

5.7.2 Using GroupWise Monitor

GroupWise Monitor can be configured to notify you when a POA is running out of SOAP threads. When you receive the notification, you can restart the POA. Configure GroupWise Monitor to notify you when the `poaSOAPThreadBusy` variable exceeds a threshold of 20. For more information, see the documentation for your version of GroupWise:

- GroupWise 2014: “Configuring Email Notification for Agent Problems” in the *GroupWise 2014 Administration Guide*
- GroupWise 2012: “Configuring Email Notification for Agent Problems” in the *GroupWise 2012 Administration Guide*

6 GroupWise Mobility User Management

You can add GroupWise users, groups of users, and GroupWise resources to your GroupWise Mobility system. Some aspects of GroupWise system management affect management of mobile device users.

6.1 Managing Mobile Device Users

You should add GroupWise users to your Mobility system when they express the need to synchronize their GroupWise data to their mobile device.

IMPORTANT: Do not add GroupWise users to your Mobility system who do not have a current need for data synchronization. When you add a user to your Mobility system, GroupWise data continually synchronizes from GroupWise into your Mobility system. If that data is not being used on a mobile device, that synchronization produces unnecessary overhead in your Mobility system.

For information about new, moved, and deleted GroupWise users, see Section 6.4, “Managing Changes in the GroupWise System,” on page 69.

6.1.1 Adding Individual Users

During installation of the Mobility Service, you selected the source (LDAP or GroupWise) from which users and groups of users can be added to your Mobility system. For background information, see “Selecting the User Source for Your Mobility System” in the *GroupWise Mobility Service 2.1 Installation Guide*.

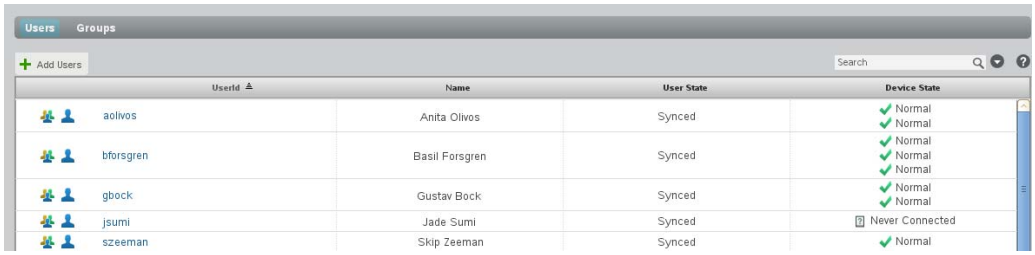
If you selected LDAP as your user source, you specified one LDAP user container in your LDAP directory. By default, the Mobility Admin console searches that LDAP container and its subcontainers for users to add to your Mobility system. After installation, you can configure the Mobility Admin console to search additional LDAP containers for users to add. For setup instructions, see “Searching Multiple LDAP Contexts for Users and Groups” on page 15.

If you selected GroupWise as your user source during installation, all users in the GroupWise Address Book are available to add to your Mobility system.

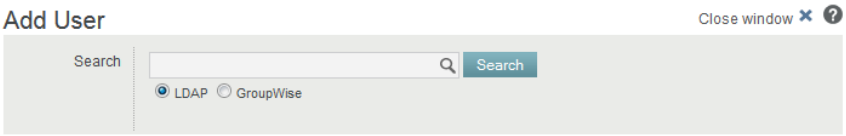
Adding users individually is appropriate for a small number of users. Maintenance of large numbers of users is much easier if you add them as members of LDAP groups or GroupWise groups. For usage instructions, see Section 6.1.2, “Adding Users through an LDAP Group or a GroupWise Group,” on page 63.

To add a user to your Mobility system:

1 In the Mobility Admin console, click *Users* .



2 Click *Add User*.

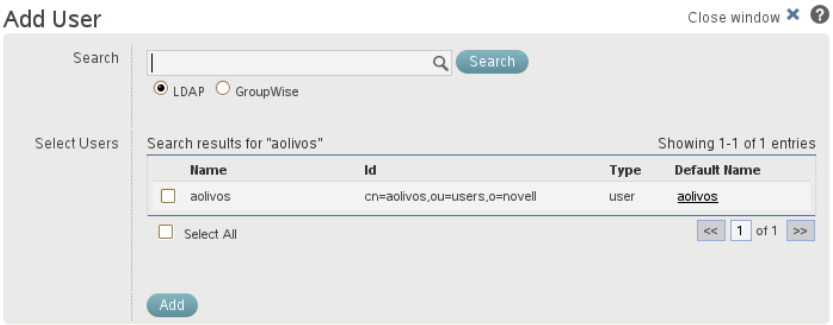


3 Select the user source (*LDAP* or *GroupWise*).

4 In the *Search* field, type the first or last name of a specific user, then click *Search*.

or

Click *Search* to list the users in the user source that the Mobility Admin console has been configured to search.



5 Select one or more users to add to your Mobility system.

6 (Conditional) If you are using LDAP as the user source and if the user’s GroupWise user name is not the same as the user’s LDAP user name:

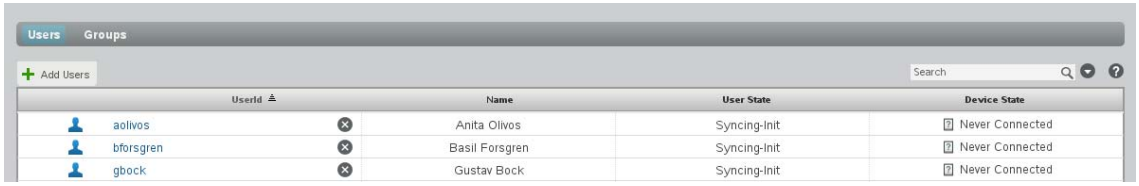
6a In the *Default Name* column, click the user name.

6b Enter the user’s GroupWise user name in the text box.

The Mobility Service uses default user names to match users who have different user names in GroupWise and in the LDAP directory.

7 Click *Add* to add the users to your Mobility system.

The users appear on the Users page.



6.1.2 Adding Users through an LDAP Group or a GroupWise Group

As the preferred alternative to adding individual users in the Mobility Admin console, you can add users to any LDAP groups or GroupWise groups. You can use iManager to manage LDAP groups. You can use the GroupWise Admin console (or ConsoleOne in older GroupWise systems) to manage GroupWise groups (distribution lists in older GroupWise systems).

Users who are added to groups are added to the Mobility system based on the Group Membership Polling Rate setting. For setup instructions, see Section 1.4.1, “Adjusting the Mobility Admin Console Polling Rate for Groups of Users,” on page 12.

You can also poll groups immediately. For instructions, see Section 6.2.2, “Updating a Group of Users in Your Mobility System,” on page 68.

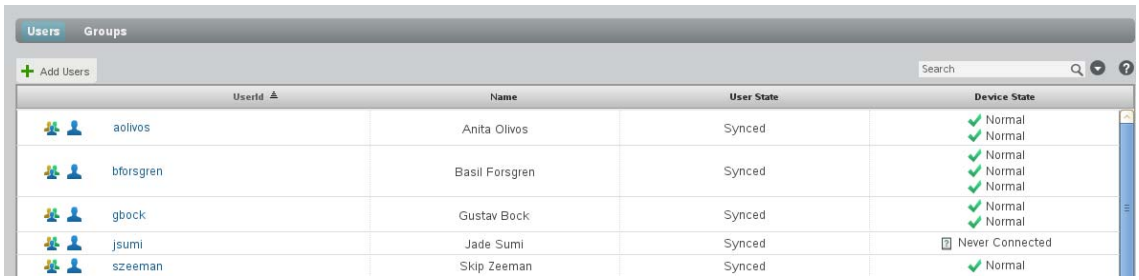
For more information, see Section 6.2, “Managing Groups of Users,” on page 66.

6.1.3 Customizing a User’s Synchronization Settings

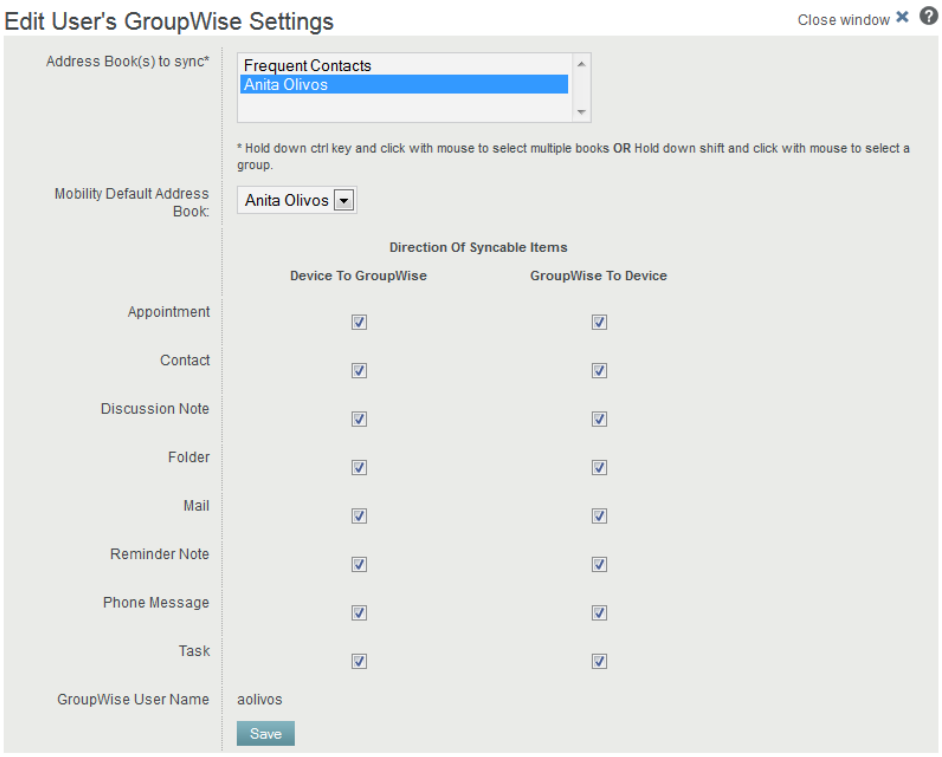
The *GroupWise Mobility User Quick Start* describes the synchronization settings that are available to users on the Mobility Settings page of the Mobility Admin console. You can also control users’ synchronization settings as an administrator. The settings most recently saved by either you or the user become the user’s current settings.

To change a user’s synchronization settings:

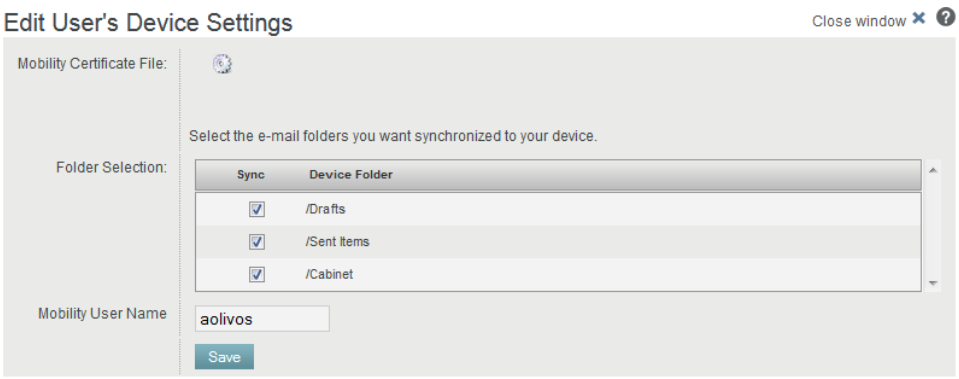
1 In the Mobility Admin console, click *Users* .



2 (Conditional) To set GroupWise settings for users, click *Edit GroupWise Settings* .



3 (Conditional) To set device settings, click *Edit Device Settings* .



4 Select and deselect options as needed to customize the user's data synchronization.

5 Click *Save*, then click *Close Window*.

The user's synchronization settings are immediately changed.

6.1.4 Setting GroupWise User Names for LDAP Users (Optional)

During installation of the Mobility Service, you selected the source (LDAP or GroupWise) from which users and groups of users can be added to your Mobility system. For background information, see "Selecting the User Source for Your Mobility System" in the *GroupWise Mobility Service 2.1 Installation Guide*.

If you selected LDAP as your user source and if LDAP (network) user names are not the same as GroupWise user names, the Mobility Admin console attempts to determine the GroupWise user names from the user information available in the LDAP directory.

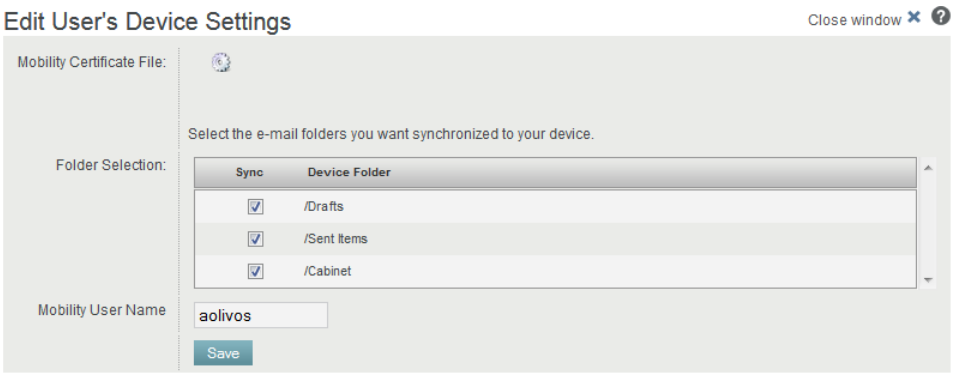
When you add individual LDAP users, you can verify the GroupWise user name as you add each user. For instructions, see Step 6 in Section 6.1.1, "Adding Individual Users," on page 61. If you used this approach to adding users, you do not need to verify and adjust GroupWise user names as a separate step, as described below.

When you add users to your Mobility system by adding them to LDAP groups, you can specify the GroupWise user names if a problem arises during initial synchronization. If the Device Sync Agent cannot successfully match an LDAP user name with a GroupWise user name, initial synchronization fails.

To specify a user's GroupWise user name, because it is different from the user's LDAP user name:

1. In the Mobility Admin console, click *Users*, then click the name of the user.

2. Click *Edit Device Settings* to the right of the user.



3. In the *Mobility User Name* field, specify the GroupWise user name that is different from the LDAP user name.
4. Click *Save*, then click *Close Window*.

6.1.5 Deleting a User

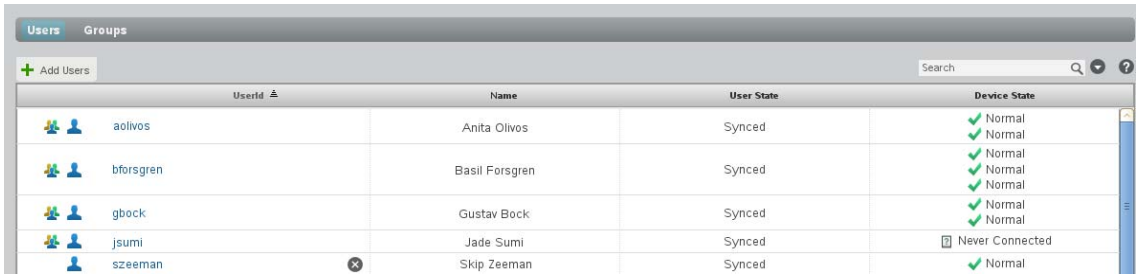
The method that you use to delete a user from your Mobility system depends on how you added the user:

- “Deleting a User Directly” on page 66
- “Deleting a User from a Group of Users” on page 66

Deleting a User Directly

If you added an individual user, you delete the user in the Mobility Admin console.

1 In the Mobility Admin console, click *Users* .



2 Click *Delete* to the right of the user, then click *Delete User* to confirm.

The user’s status changes briefly to *Deleting*, then the user disappears from the list.

Deleting a User from a Group of Users

If you added the user to your Mobility system by adding the user to an LDAP group or a GroupWise group, you must delete the user from the group in order to delete the user from your Mobility system. You can use iManager to manage LDAP groups. You can use the GroupWise Admin console (or ConsoleOne in older GroupWise systems) to manage GroupWise groups (distribution lists in older GroupWise systems).

In your Mobility system, the user is removed from the group according to the group polling rate. For background information, see Section 1.4.1, “Adjusting the Mobility Admin Console Polling Rate for Groups of Users,” on page 12.

You can also poll immediately. For instructions, see Section 6.1.2, “Adding Users through an LDAP Group or a GroupWise Group,” on page 63.

6.2 Managing Groups of Users

During installation of the Mobility Service, you selected the source (LDAP or GroupWise) from which users and groups of users can be added to your Mobility system. For background information, see “Selecting the User Source for Your Mobility System” in the *GroupWise Mobility Service 2.1 Installation Guide*.

You can use iManager to manage LDAP groups. You can use the GroupWise Admin console (or ConsoleOne in older GroupWise systems) to manage GroupWise groups (distribution lists in older GroupWise systems).

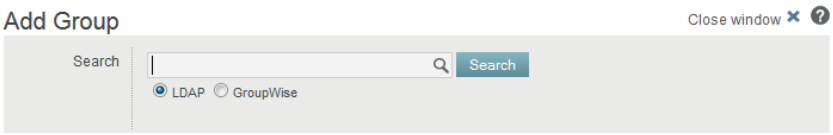
If you selected LDAP as your user source, you specified one LDAP group container in your LDAP directory. By default, the Mobility Admin console searches that LDAP container and its subcontainers for groups to add to your Mobility system. After installation, you can configure the Mobility Admin console to search additional LDAP containers for groups to add. For setup instructions, see "Searching Multiple LDAP Contexts for Users and Groups" on page 15.

If you selected GroupWise as your user source during installation, all GroupWise groups in the GroupWise Address Book are available to add to your Mobility system.

6.2.1 Adding a Group of Users to Your Mobility System

1 In the Mobility Admin console, click *Users*  , then click *Groups*.

2 Click *Add Groups*.

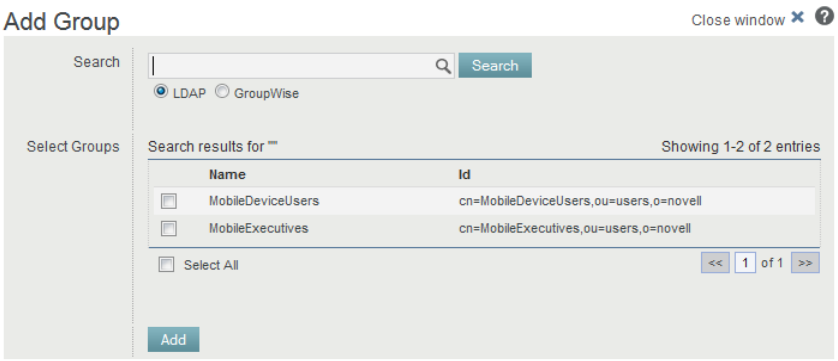


3 Select the user source (*LDAP* or *GroupWise*).

4 Click *Search* to list the groups of users that are available in the user source.

or

In the *Search* field, type part of the group name, then click *Search*.



5 Select the group of users to add to your Mobility system.

6 Click *Add* to add the group.

The group is immediately added to your Mobility system, and the users in the group are immediately listed on the Users page.

6.2.2 Updating a Group of Users in Your Mobility System

During installation of the Mobility Service, you selected the source (LDAP or GroupWise) from which users and groups of users can be added to your Mobility system. For background information, see "Selecting the User Source for Your Mobility System" in the *GroupWise Mobility Service 2.1 Installation Guide*.

By default, the Mobility Admin console polls the user source for group membership changes every 30 minutes. For background information, see Section 1.4.1, "Adjusting the Mobility Admin Console Polling Rate for Groups of Users," on page 12. However, you can poll the user source immediately to get the latest updates.

1 In the Mobility Admin console, click *Service Configuration*, then click *User Source*.

2 In the *Group Membership* field, click *Poll Now*.

6.2.3 Deleting a Group of Users from Your Mobility System

Deleting a group of users deletes the users in that group from your Mobility system.

1 In the Mobility Admin console, click *Users*, then click *Groups*.

2 Click *Delete* for the group to delete, then click *Yes* to confirm the deletion.

6.3 Managing Synchronized Resources

You can add GroupWise resources to your Mobility system as if they are users. If you are using LDAP as your user source, the Resource objects must be located in the same LDAP container with users or groups in order to add them to your Mobility system. If you are using GroupWise as your user source, all resources are automatically available to add to your Mobility system.

Whenever you create a new resource that you want to synchronize to mobile devices, you must proxy in to the resource mailbox and set its mailbox password before it is available for synchronization. Accessing the mailbox creates the Frequent Contacts address book and establishes the default personal address book for the mailbox. These address books must exist in order for the GroupWise Sync Agent to successfully process address book information for the mailbox.

GroupWise users with rights to a synchronized resource mailbox can then configure their mobile devices with an account for the resource mailbox just as they create an account for their own mailbox. This enables GroupWise users who are resource owners to monitor the contents of resource mailboxes from their mobile devices.

To add and manage resources in your Mobility system, follow the instructions in Section 6.1, “Managing Mobile Device Users,” on page 61.

6.4 Managing Changes in the GroupWise System

The following changes in the GroupWise system affect the functionality of your Mobility system:

6.4.1 When New Users Are Added to the GroupWise System

When you add new users to GroupWise, they are not immediately available in the Mobility Admin console for adding to your Mobility system. They automatically become available within 30 minutes of when the Mobility Global Address List (GAL) is updated from the GroupWise Address Book.

You can use the *Poll Now* option in the Mobility Admin console to update the Mobility GAL immediately. For instructions, see Section 6.2.2, “Updating a Group of Users in Your Mobility System,” on page 68.

Whenever you create a new GroupWise user, the user must log in to the GroupWise client or WebAccess to prepare the mailbox for synchronization. Accessing the mailbox creates the Frequent Contacts address book and establishes the default personal address book for the mailbox. These address books must exist in order for the GroupWise Sync Agent to successfully process address book information for the mailbox.

6.4.2 When a Mailbox Moves

When the GroupWise administrator moves a mailbox from one post office to another, the following changes occur in your Mobility system:

- In the Mobility Admin console, the Dashboard displays the user as *Moved*.

- The moved user is automatically reinitialized to associate it with the new post office and POA.

NOTE: If you are running GroupWise 8, you must manually reinitialize the user. For instructions, see Section 7.7, “Reinitializing a User,” on page 78.

6.4.3 When a GroupWise Account Is No Longer Available

When the GroupWise administrator disables, expires, or deletes a GroupWise account, the following changes occur in your Mobility system:

- In the Mobility Admin console, the Dashboard displays the user as *Disabled*, *Expired*, or *Deleted*.
- The GroupWise Sync Agent stops contacting the POA for items to synchronize to the user’s mobile device.
- The Device Sync Agent drops any items from the user’s mobile device that would otherwise synchronize to GroupWise.
- If the GroupWise administrator re-establishes the account, the user must re-add the account to the device.

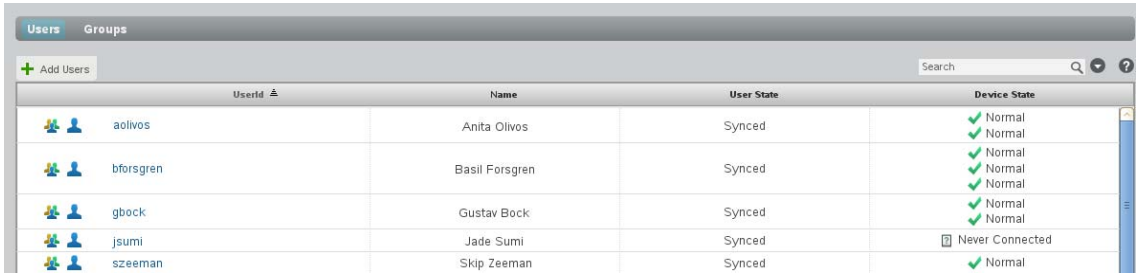
7 GroupWise Mobility Device Management

When you install the GroupWise Mobility Service, the sync agents start automatically. You can monitor the synchronization of data to and from mobile devices in the Mobility Admin console.

7.1 Managing Mobile Devices

After users have configured their mobile devices and connected to the Mobility system, additional options are available on the User/Device Actions page in the Mobility Admin console.

1 In the Mobility Admin console, click *Users* .



2 Click the user name of the device owner to display the User/Device Actions page.

3 Use the options in the *Device Actions* column to manage devices where synchronization is active:

Device Action	Description
Resync Device 	Resynchronizes the mobile device with the Mobility system. Use this option to resolve the following problems: ◆ Synchronization from the Mobility system to a mobile device might occasionally stop, perhaps because abnormal cellular network conditions resulted in dropped synchronization data. ◆ Data on a mobile device might not match data as displayed in the GroupWise mailbox. A user can accomplish the same thing by removing the account from the mobile device and re-adding it, so that the GroupWise data resynchronizes from the Mobility system to the mobile device. If resynchronizing the device does not resolve discrepancies between data on the device and data in GroupWise, you must reinitialize the user. During reinitialization, the user's GroupWise data is deleted from the Mobility system and is requested again from the GroupWise system. If the user has a large amount of GroupWise data and attachments, the reinitialization process might take a long time.
Block Device 	Prevents the mobile device from connecting to the Mobility system. Use this option when a mobile device is temporarily disrupting your Mobility system by using excessive system resources.
Unblock Device 	Enables a blocked mobile device to connect again to your Mobility system.
Allow Device 	Allows a quarantined device to connect for the first time to your Mobility system.
Reset Device 	Resets the mobile device to factory default settings. Use this option when a user has lost a mobile device. On some mobile devices, this functionality is known as a "remote wipe" or a "kill pill." Regardless of the device-specific functionality, this is a very serious step to take with a mobile device. The Device Sync Agent sends the Reset command to the mobile device, but different devices respond to the Reset command in different ways. Some devices do not respond to a Reset command unless a security policy has been set on the device. The Reset Device button does not display for a device if it will not respond to a Reset command.
Delete Device 	Deletes the mobile device from your Mobility system. Use this option when a user is no longer using a particular mobile device.

For more information about device states and actions, see:

- Section 7.2, "Resynchronizing a Device," on page 73
- Section 7.3, "Blocking/Unblocking Specific Devices," on page 74
- Section 7.4, "Releasing a New Device from the Quarantine," on page 75
- Section 7.5, "Resetting a Device to Factory Default Settings," on page 75

  See also Section 4.3, "Enabling a Device Password Security Policy," on page 43
- Section 7.6, "Deleting a Device," on page 77
- Section 7.7, "Reinitializing a User," on page 78

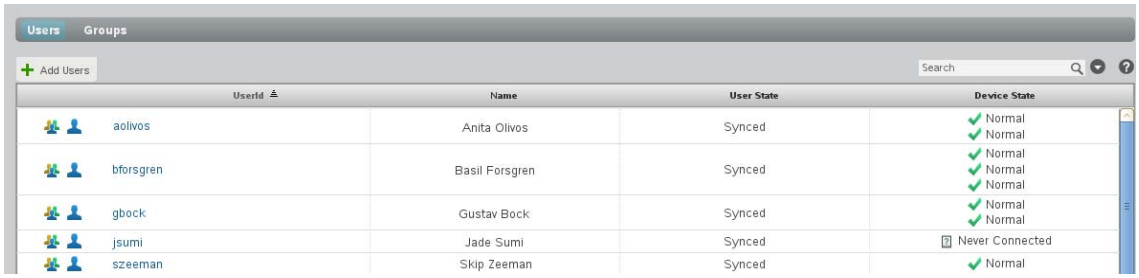
7.2 Resynchronizing a Device

Occasionally, synchronization problems arise between mobile devices and GroupWise:

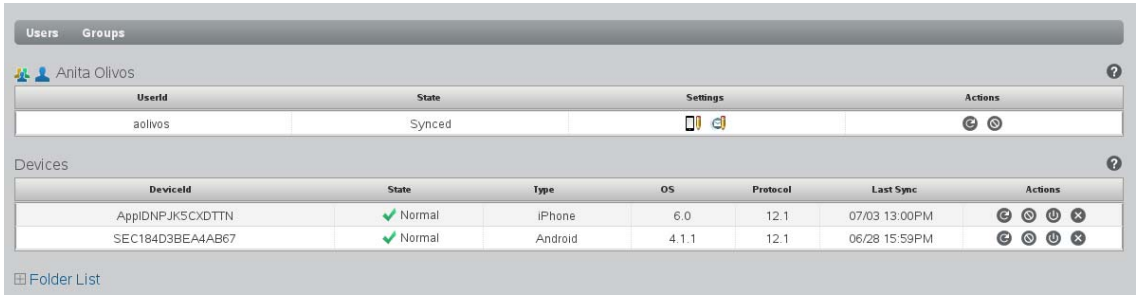
- Synchronization from the Mobility system to a mobile device might occasionally stop, perhaps because abnormal cellular network conditions resulted in dropped synchronization data.
- Data on a mobile device might not match data as displayed in the GroupWise mailbox.

Resynchronizing the device can resolve these problems. Resynchronization causes existing GroupWise data on the device to be deleted, and then synchronized again from the Mobility system. The user can accomplish the same thing by removing the account from the mobile device and adding it again.

1 In the Mobility Admin console, click *Users* .



2 Click the user name of the device owner to display the User/Device Actions page.



3 In the *Actions* column in the *Devices* section, click *Resync Device* .

You are prompted to confirm the action.

4 Click *OK* to acknowledge completion of the action.

The device is resynchronized the next time it tries to connect to the Mobility system.

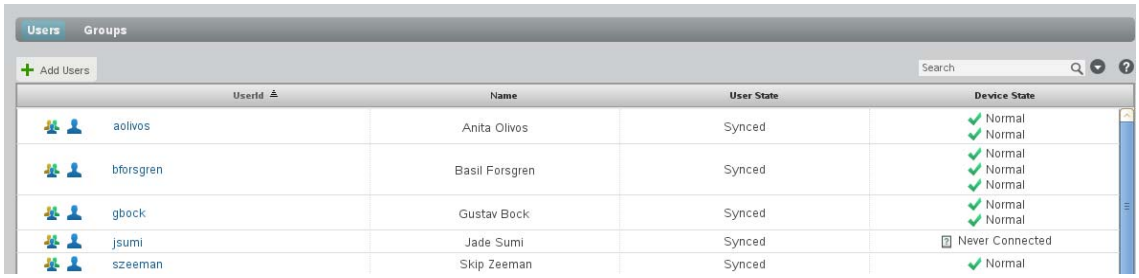
5 (Conditional) If resynchronizing the device does not resolve data discrepancies between the device and GroupWise, you must reinitialize the user.

For instructions, see Section 7.7, “Reinitializing a User,” on page 78.

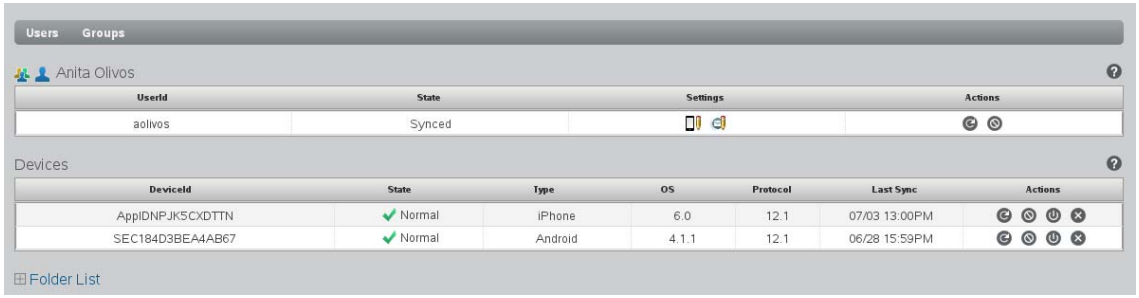
7.3 Blocking/Unblocking Specific Devices

As you monitor your Mobility system, you might notice that a device starts to consume an inappropriately large amount of system resources on your Mobility server. This can impact synchronization performance for all mobile device users. If this occurs, you can prevent the problem device from connecting to the Mobility system while you resolve the issue.

1 In the Mobility Admin console, click *Users*



2 Click the user name of the device owner to display the User/Device Actions page.



3 In the *Actions* column in the *Devices* section, click *Block Device* .

If you click *Block User* in the *User* column, it blocks all devices for the user. This is convenient when the user has multiple mobile devices, or when the user's mobile device has multiple device IDs.

You are prompted to confirm the action.

4 Click *Block Device* so that so that the device can no longer connect to your Mobility system.

5 Click *OK* to acknowledge completion of the action.

At this point, *Normal* changes to *Blocked* for the device ID, and *Block Device* changes to *Unblock Device* .

6 Resolve the problem with the mobile device.

7 To unblock the device so that it can connect to your Mobility system again, click *Unblock Device* .

You are prompted to confirm the action.

8 Click *Unblock Device* to allow the device to connect.

9 Click *OK* to acknowledge completion of the action.

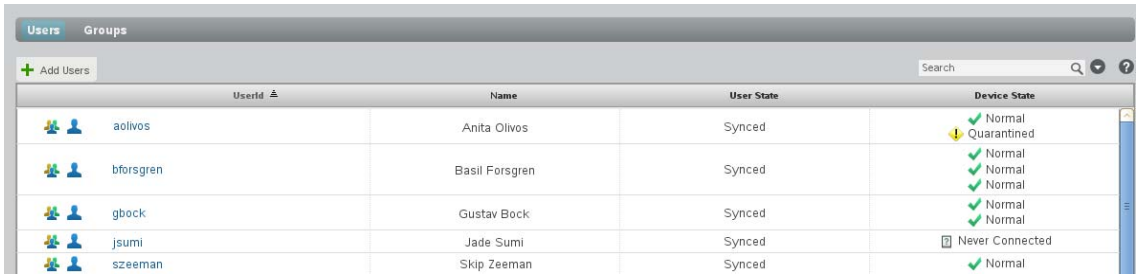
The user can again connect to the Mobility system.

7.4 Releasing a New Device from the Quarantine

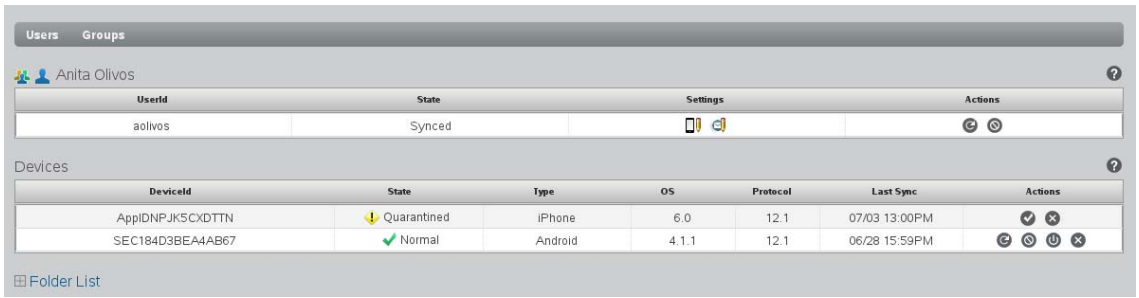
After you enable the device quarantine, new mobile devices cannot connect to your Mobility system until you release them from the quarantine. For background information, see Section 4.4, “Quarantining New Devices to Prevent Immediate Connection,” on page 44. You can configure the Mobility Service to notify you when users connect new devices. For instructions, see Section 5.2, “Enabling System and Service Notifications,” on page 51.

IMPORTANT: After you enable the quarantine, you must manually release quarantined devices in a timely manner.

1 In the Mobility Admin console, click *Users* .



2 Click the user name of the device owner to display the User/Device Actions page.



The user’s state displays as *Synced* because data has synchronized from the user’s GroupWise mailbox to the Device Sync Agent, but the data has not yet synchronized to the user’s mobile device.

3 In the *Actions* column in the *Devices* section, click *Allow Device* to free the device from the quarantine, and thereby allow the new device to connect to your Mobility system and receive the GroupWise mailbox data.

You are prompted to confirm the action.

4 Click *Allow Device*.

5 Click *OK* to acknowledge completion of the action.

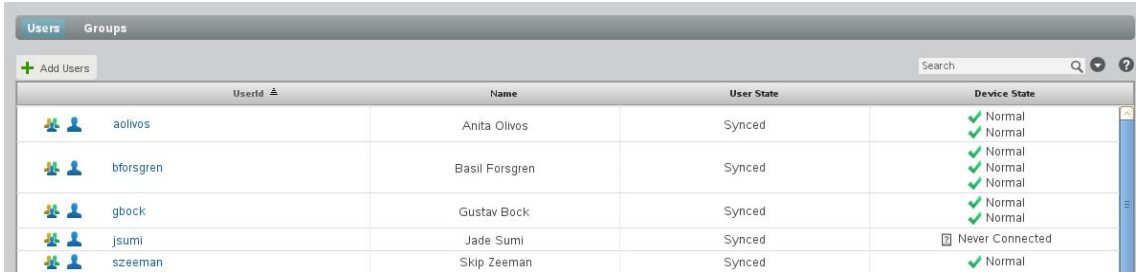
GroupWise data begins synchronizing to the user’s device.

7.5 Resetting a Device to Factory Default Settings

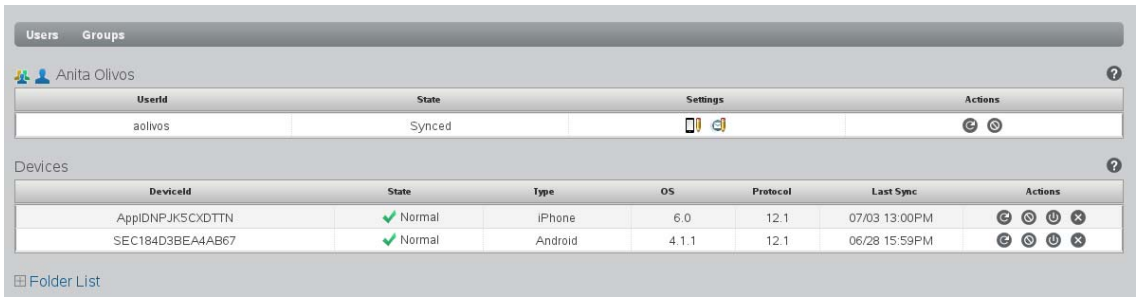
If a user loses a mobile device, it is important to wipe all data from the lost device as quickly as possible. If the device is recovered, it can be reset and used again.

WARNING: Because this action removes all data from the device, both business and personal, this is a very serious step to take with a mobile device

1 In the Mobility Admin console, click *Users* .



2 Click the user name of the device owner to display the User/Device Actions page.



3 In the *Actions* column in the *Devices* section, click *Reset Device* .

NOTE: Some devices do not respond to a Reset command unless a security policy has been set on the device. The Reset Device button does not display for a device if it will not respond to a Reset command. For more information, see Section 4.3, “Enabling a Device Password Security Policy,” on page 43.

You are prompted to confirm the action.

4 Click *Reset Device* to wipe the user’s personal data from the device and reset the device to factory default settings.

5 Click *OK* to acknowledge completion of the action.

At this point, the device ID turns yellow and is marked with the *Resetting* status. Regardless of how many times the mobile device tries to connect, it always receives the Reset command. However, *Reset Device* changes to *Reset Device Clear* , indicating that the *Resetting* status can be cleared.

6 (Conditional) If you want to put the device back into service:

6a In the *Actions* column in the *Devices* section, click *Reset Device Clear* .

You are prompted to confirm the action.

6b Click *Allow Device*.

6c Click *OK* to acknowledge completion of the action.

The user must now start over and reconfigure the device to connect to the Mobility system and start synchronizing data.

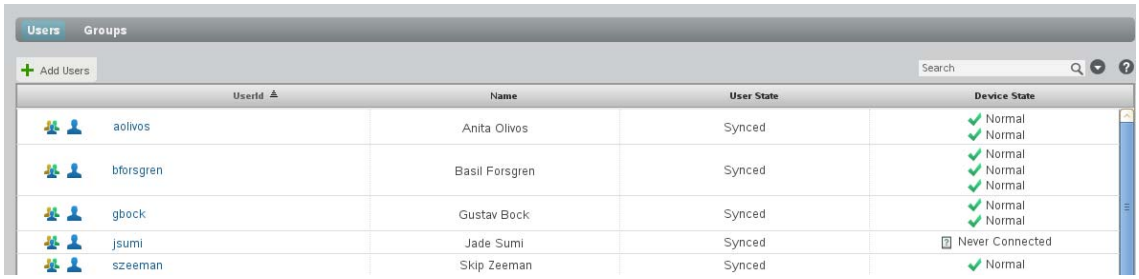
7.6 Deleting a Device

When a user is no longer using a device, you should promptly delete it from your Mobility system. Deleting the device does not delete the user from your Mobility system. If necessary, the user can again configure the device to connect to the Mobility system.

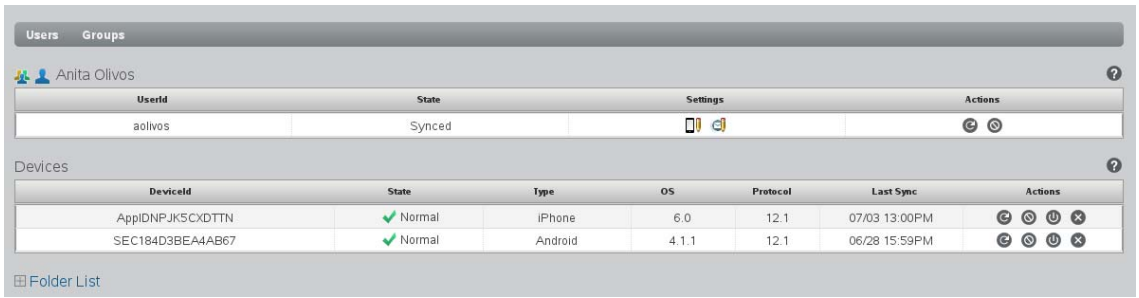
NOTE: By default, mobile devices that have not connected to your Mobility system for 30 days are automatically removed from your Mobility system. For more information about automatic deletion, see Section 4.6, “Removing Unused Devices Automatically,” on page 45.

To immediately remove a device from your Mobility system:

1 In the Mobility Admin console, click *Users*



2 Click the user name of the device owner to display the User/Device Actions page.



3 In the *Actions* column in the *Devices* section, click *Delete*.

You are prompted to confirm the action.

4 Click *Delete Device* to remove the device from the Mobility system.

5 Click *OK* to acknowledge completion of the action.

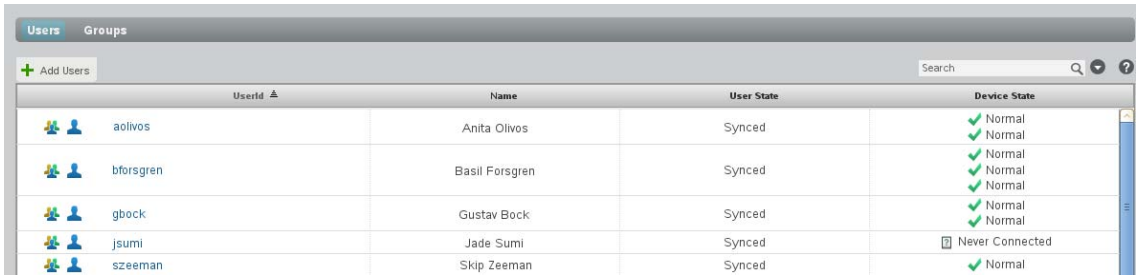
7.7 Reinitializing a User

If resynchronizing a device does not resolve discrepancies between data on a mobile device and data as displayed in GroupWise, you must reinitialize the user. For background information about resynchronizing, see Section 7.2, “Resynchronizing a Device,” on page 73,

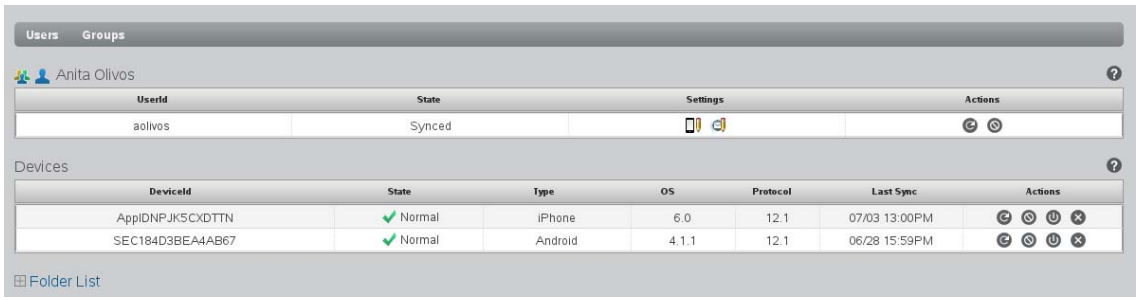
During reinitialization, the user’s GroupWise data is deleted from the Mobility system and is requested again from the GroupWise system. If the user has a large amount of GroupWise data and attachments, the reinitialization process might take a long time.

1 Have the user delete the GroupWise account from his or her mobile device.

2 In the Mobility Admin console, click *Users* .



3 Click the user name of the device owner to display the User/Device Actions page.



4 In the *Actions* column in the *User* section, click *Reinitialize User* .

You are prompted to confirm the action.

5 Click *Reinitialize User* to remove the user’s GroupWise data from the Mobility system and request it again from the GroupWise system.

6 Click *OK* to acknowledge completion of the action.

7 Have the user re-add the GroupWise account to the mobile device to complete the reinitialization process.

8 (Conditional) If reinitializing the user still does not resolve discrepancies between data on the device and data as displayed in GroupWise, delete the user from the Mobility system, and then re-add the user.

See Section 6.1, “Managing Mobile Device Users,” on page 61.

8 GroupWise Mobility System Security

Large amounts of personal and confidential information pass between GroupWise and mobile devices. Securing the synchronization process is a vital aspect of securing your GroupWise system.

8.1 Security Administration

It is vital to secure each stage in the communication path between GroupWise and mobile devices.

8.1.1 Securing Communication with the LDAP Server

If you are using LDAP as your user source, you must secure the communication between your Mobility system and the LDAP server.

If your GroupWise system is configured to use LDAP authentication when users access their GroupWise mailboxes, your LDAP server is already set up for a secure SSL LDAP connection with your Mobility system. For more information, see the documentation for your version of GroupWise:

- GroupWise 2014: “Trusted Root Certificates and LDAP Authentication” in the *GroupWise 2014 Administration Guide*
- GroupWise 2012: “Trusted Root Certificates and LDAP Authentication” in the *GroupWise 2012 Administration Guide*

You can enable and disable SSL for the LDAP connection in the LDAP section of the User Source page in the Mobility Admin console. For instructions, see “Enabling and Disabling SSL for the Mobility Service LDAP Connection” on page 16.

8.1.2 Securing Communication between the GroupWise Sync Agent and the GroupWise POA

The GroupWise Sync Agent communicates with the GroupWise POA as a SOAP client. In order to secure communication between the GroupWise Sync Agent and the GroupWise POA, the POA must be configured for secure SSL SOAP. For more information, see the documentation for your version of GroupWise:

- GroupWise 2014: SOAP is enabled by default.
- GroupWise 2012: “Supporting SOAP Clients” in the *GroupWise 2012 Administration Guide*

You can enable and disable SSL for the POA SOAP connections on the GroupWise Sync Agent Configuration page in the Mobility Admin console. For instructions, see Section 3.8, “Enabling and Disabling SSL for POA SOAP Connections,” on page 38.

8.1.3 Securing Communication between the Device Sync Agent and Mobile Devices

In order to provide a secure SSL connection between the Device Sync Agent and mobile devices, you must provide a server certificate on the Mobility server.

For issues with specific types of certificates, see GroupWise Mobility Device Sync Agent SSL Issues (http://wiki.novell.com/index.php/Data_Synchronizer_Mobility_Connector_SSL_Issues).

For SSL issues with specific types of devices, see GroupWise Mobility Devices (http://wiki.novell.com/index.php/Data_Synchronizer_Mobility_Connector_Devices).

Using a Self-Signed Certificate on the Mobility Server

IMPORTANT: You should obtain a commercially signed certificate for use with your Mobility system as quickly as possible.

When you have the Mobility Service Installation program create a self-signed certificate for you, two certificate files are created in the `/var/lib/datasync/device` directory:

```
mobility.pem
mobility.cer
```

When a mobile device connects to the Device Sync Agent, the Device Sync Agent passes the self-signed certificate file (`mobility.pem`) to the mobile device. In most cases, the mobile device accepts the self-signed certificate and connects successfully.

Some mobile devices do not automatically accept self-signed certificates in PEM format. If you choose to use a self-signed certificate and if users encounter connection problems with particular mobile devices, explain the procedure in “Manually Downloading a Certificate to a Mobile Device” on page 84 to the users who are encountering connection problems. This procedure enables users to use the `mobility.cer` file instead of the `mobility.pem` file on their mobile devices.

The self-signed certificate generated by the Installation program is issued to “DataSync Web Admin” rather than to a specific hostname. Some mobile devices require that a self-signed certificate be associated with a specific hostname. For more information, see the documentation for your version of GroupWise:

- GroupWise 2014: “Using a Self-Signed Certificate from the GroupWise Certificate Authority” in the *GroupWise 2014 Administration Guide*
- GroupWise 2012: “Generating a Self-Signed Certificate” in the *GroupWise 2012 Administration Guide*. Complete Step 1 through Step 4 in “Using YaST on Linux.” Do not complete Step 5. By default, YaST generates a single self-signed certificate file as required for use with your Mobility system.

Using a Commercially Signed Certificate on the Mobility Server

IMPORTANT: You should obtain a commercially signed certificate for use with your Mobility system as quickly as possible.

For more detailed instructions, see TID 7006904, “How to Configure Certificates from a Trusted CA for the Device Sync Agent” in the Novell Support Knowledgebase (http://www.novell.com/support).

Selecting a Certificate Authority (CA)

Choose a certificate authority (CA) from the many available on the Internet. If you do not want to immediately purchase a certificate, free temporary certificates are available from several websites, including:

- FreeSSL (http://www.freessl.com)
- Instant SSL (http://www.instantssl.com/ssl-certificate-products/free-ssl-certificate.html)
- GlobalSign (http://www.globalsign.com/free-trial/free-ssl-certificate)

Obtaining the Certificate

When you have selected a certificate authority, request a certificate in PEM format. If necessary, you can use a chained certificate or a wildcard certificate with your Mobility system. However, these more complex types of certificates are not recommended.

In order to obtain a certificate, you need to send the certificate authority a certificate signing request (CSR). For example, you can use OpenSSL to generate the CSR. For background information, see HOWTO Certificates (http://www.openssl.org/docs/HOWTO/certificates.txt).

1. In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.
2. Change to a convenient directory where you want to create the CSR.
3. Create the key file:
   - **3a** Enter the following command:

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

Replace *key_file_name.key* with a convenient name for the private key file, such as gw.key.

3b Enter and verify a pass phrase for the key file.

4 Create the CSR:

4a Enter the following command:

```
openssl req -new -key key_file_name.key -out csr_file_name.csr
```

Replace *key_file_name.key* with the key file that you created in Step 3.

4b Enter the pass phrase for the key file.

4c Enter the two-letter code for your country, such as US for the United States, DE for Germany, and so on.

4d Enter your state or province.

4e Enter your city.

4f Enter the name of your company or organization.

4g Enter your department or other organizational unit.

4h Enter your name.

4i Enter your email address.

4j (Optional) Enter a password for the CSR, or simply press Enter.

4k (Optional) Enter a secondary name for your company or organization, or simply press Enter.

NOTE: Depending on the method that you use to generate the CSR, you might be prompted for the type of web server where you plan to install the certificate. The Mobility Service uses the CherryPy web server.

The certificate authority returns one or more files to you. Save the files to a convenient location. These files might require modification for use in your Mobility system.

- If the certificate authority included a password, remove the password. For instructions, see "Removing a Password from a Key File" on page 82.
- If the certificate authority provided multiple files, combine them into a single file. For instructions, see "Combining Files Received from a Certificate Authority" on page 83.

Removing a Password from a Key File

If the key file provided by the certificate authority includes a password, you need to remove the password in order to use the key file in your Mobility system.

1 Check to see if the key file includes a password.

A password-protected key file includes the following line:

```
Proc-Type: 4,ENCRYPTED
```

2 Use the following command to remove the password:

```
openssl rsa -in original_file_name.key -out passwordless_file_name.key
```

Combining Files Received from a Certificate Authority

If you receive more than one file from the certificate authority, such as a certificate file and a key file, you must combine the contents into a single file with the following format:

```
-----BEGIN RSA PRIVATE KEY----- several_lines_of_private_key_text
-----END RSA PRIVATE KEY-----
-----BEGIN CERTIFICATE----- several_lines_of_server_certificate_text
-----END CERTIFICATE-----
```

If the certificate authority provided an intermediate certificate, place it at the end of the file after the private key and the actual certificate.

Installing a Commercially Signed Certificate on the Mobility Server

1. (Conditional) If you have been using a self-signed certificate, rename the existing `/var/lib/datasync/device/mobility.pem` file.
2. Copy the certificate file received from the certificate authority to `/var/lib/datasync/device`.
3. Rename it to `mobility.pem`.
4. Restart the Mobility Service.
5. (Conditional) If a particular mobile device does not automatically accept the commercially signed certificate in PEM format, follow the instructions in "Manually Converting a Certificate to DER Format for Use on Mobile Devices" on page 83.

IMPORTANT: If you uninstall the Mobility Service, the certificate files associated with your Mobility system are also deleted. Back up commercially signed certificates in a location outside of `/var/lib/datasync`.

Manually Converting a Certificate to DER Format for Use on Mobile Devices

Some mobile devices do not automatically accept certificates in PEM format. If users encounter connection problems with particular mobile devices, you can convert the PEM file that you received from the certificate authority into DER format to resolve these connection problems.

1. Change to the `/var/lib/datasync/device` directory.
2. Execute the following command:

   ```
   openssl x509 -in mobility.pem -inform PEM -out mobility.cer -outform DER
   ```

   IMPORTANT: The output file name with the `.cer` extension must be in DER (Distinguished Encoding Rules) format.

   ---

3. Have users with connection problems follow the instructions in "Manually Downloading a Certificate to a Mobile Device" on page 84 to use the `mobility.cer` file instead of the `mobility.pem` file.

Manually Downloading a Certificate to a Mobile Device

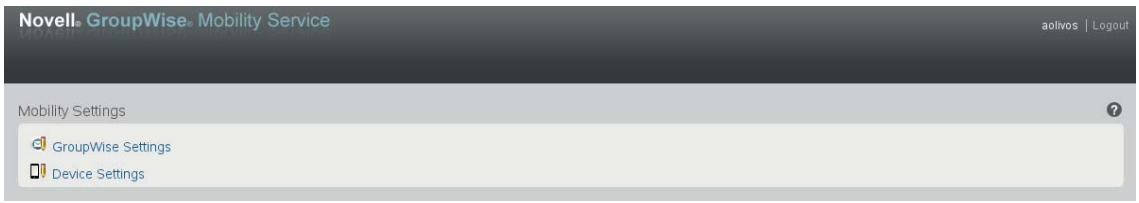
For background information, see "Using a Self-Signed Certificate on the Mobility Server" on page 80 and "Manually Converting a Certificate to DER Format for Use on Mobile Devices" on page 83.

1 Access the Mobility Settings page of the Mobility Admin console on your mobile device at the following URL:

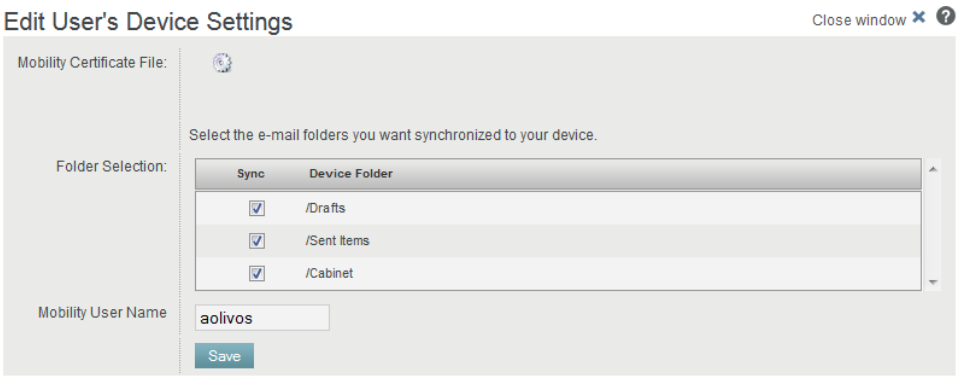
`https://mobility_server:8120`

Replace *`mobility_server`* with the IP address or DNS hostname of the server where you installed the Mobility Service.

2 Log in using your network user name and password to display the Mobility Settings page on your mobile device.



3 Tap *Device Settings*.



4 In the *Mobility Certificate File* field, tap *Download Certificate File* .

NOTE: If you are the Mobility administrator and have associated your mobile device with the Mobility administrator account, you must navigate from the main Mobility Admin console page to the *Mobility Certificate File* field.

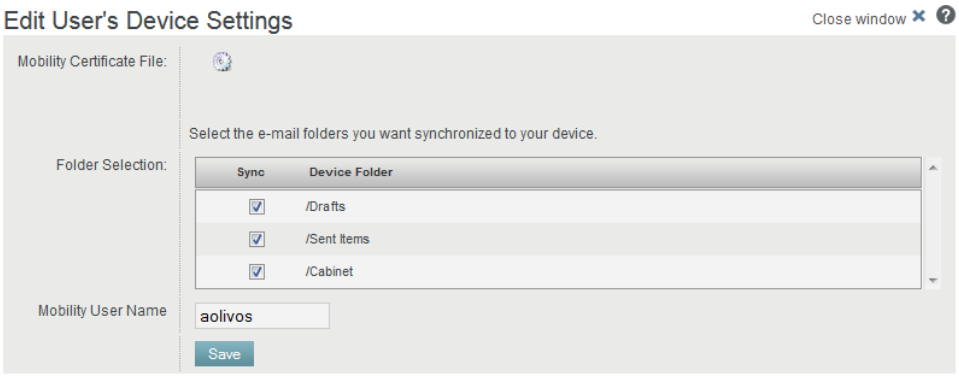
5 Save the `mobility.cer` file to a convenient location on your mobile device.

6 Import the certificate file into the certificate store on your mobile device.

For device-specific instructions, see the GroupWise Mobility Service Devices Wiki (http://wiki.novell.com/index.php/GroupWise_Mobility_Devices).

7 (Conditional) If you are not able to access the Mobility Settings page from your particular mobile device:

7a Access the Mobility Settings page in a web browser on your Windows or Linux desktop, then click *Device Settings*.



7b Click *Download Certificate File*.

7c Save the `mobility.cer` file on your Windows or Linux workstation.

7d Set up an IMAP email account on your mobile device, then email the `mobility.cer` file from your workstation to your mobile device.

or

Physically connect your mobile device to your workstation so that it appears as a drive on your workstation, then copy the `mobility.cer` file from your workstation to your device.

8 Import the certificate file into the certificate store on your mobile device.

Enabling and Disabling SSL for Device Connections

For instructions, see Section 4.9, “Enabling and Disabling SSL for Device Connections,” on page 47.

Enabling a Password Security Policy for Device Connections

For instructions, see Section 4.3, “Enabling a Device Password Security Policy,” on page 43.

8.2 Security Policies

Appropriate security policies help you keep users’ personal GroupWise data and Mobility system information secure.

8.2.1 Securing Your Mobility Data

Your Mobility server must be kept secure.

Limiting Physical Access to Mobility Servers

Servers where Mobility data resides should be kept physically secure, in locations where unauthorized persons cannot gain access to the server consoles.

Securing File System Access

Encrypted file systems should be used on all Mobility servers. Only Mobility administrators should have direct access to Mobility data.

8.2.2 Securing Your Mobility System

Locations where GroupWise users' personal data and Mobility system information might be obtained must be kept secure.

Setting Up SSL Connections

Secure SSL connections should be used between your Mobility system and the following external components:

- LDAP server (if you are using LDAP as your user source)
- GroupWise Post Office Agent (POA)
- Browser connection for the Mobility Admin console
- Mobile devices

For instructions, see Section 8.1, "Security Administration," on page 79.

Setting Up a Device Password Security Policy

To increase your control over mobile device access to your Mobility system, you should establish a device password security policy to ensure that users set up secure passwords on their mobile devices. For instructions, see Section 4.3, "Enabling a Device Password Security Policy," on page 43.

Securing the Mobility Admin Console

During installation of the Mobility Service, you selected the source (LDAP or GroupWise) from which users and groups of users can be added to your Mobility system. For background information, see "Selecting the User Source for Your Mobility System" in the *GroupWise Mobility Service 2.1 Installation Guide*.

One Mobility administrator is established when you install the GroupWise Mobility Service. If you are using LDAP as the user source, you selected one LDAP user as the Mobility system administrator and you can designate additional Mobility administrators, as described in "Setting Up Multiple Mobility Administrator Users" on page 14. If you are using GroupWise as the user source, the `root` user on the Mobility server is the Mobility administrator user.

IMPORTANT: The number of people who know how to log in to the Mobility Admin console should be kept to a minimum.

The Mobility Admin console can be integrated with a single sign-on solution. For more information, see Section 1.4.2, “Using the Mobility Admin Console with a Single Sign-On Solution,” on page 13.

Protecting Mobility Configuration Files

The configuration files for all internal Mobility components should be protected from tampering. Configuration files are found in the following default locations:

Internal Mobility Component	Configuration File
Sync Engine	`/etc/datasync/syncengine/engine.xml`
Web Admin	`/etc/datasync/webadmin/server.xml`
Config Engine	`/etc/datasync/configengine/configengine.xml`
Connector Manager	`/etc/datasync/syncengine/connectors.xml`

Protecting Mobility Log Files

The log files for all internal Mobility components should be protected against unauthorized access. Some log files contain very detailed information about your Mobility system and users. Mobility log files are found in the following locations:

Internal Mobility Service Component	Log File Subdirectory under /var/log/datasync	Log File Name
Sync Engine	`syncengine`	`engine.log`
Config Engine	`configengine`	`configengine.log`
Web Admin	`webadmin`	`server.log`
Connector Manager	`syncengine`	`connectorManager.log`

Sync Agents	`connectors`	`groupwise-agent.log`
		`groupwise.log`
		`mobility-agent.log`
		`mobility.log`

If you set the Mobility Service log level to Debug, Subject lines are included in log files for troubleshooting purposes. This information identifies items that are experiencing synchronization problems.

If you use the Debug log level, ensure that log files are kept secure to protect users’ personal information. The Info log level is strongly recommended for a smoothly functioning Mobility system.

No text about recipients or from message bodies is included in log files.

A GroupWise Mobility System Troubleshooting

A.1 Device Troubleshooting

Initial synchronization fails

Possible Cause: The Device Sync Agent is not getting the information it needs from the GroupWise Sync Agent.

Action: Ensure that the user has a valid GroupWise account.

Possible Cause: You are using LDAP as your user source, and the user’s GroupWise user name is different from the user’s LDAP user name.

Action: Set the user’s user name to the GroupWise user name. For instructions, see Section 6.1.4, “Setting GroupWise User Names for LDAP Users (Optional),” on page 65.

Possible Cause: Varied.

Action: Remove the user from the Mobility system, then add the user again.

The user’s mobile device cannot connect to the Mobility System

Possible Cause: The user has not configured the mobile device correctly.

Action: Refer the user to the *GroupWise Mobility User Quick Start*, and provide the user with the details specific to your Mobility system.

Possible Cause: You have configured the Mobility Service for a secure SSL connection and the certificate is not working properly.

Action: Try using a non-secure connection. If a non-secure connection works and a secure connection does not work, ensure that the certificate is correctly set up. For setup instructions, see Section 8.1.3, “Securing Communication between the Device Sync Agent and Mobile Devices,” on page 80.

Action: For more detailed information, see GroupWise Mobility Service Device Sync Agent SSL Issues (http://wiki.novell.com/index.php/Data_Synchronizer_Mobility_Connector_SSL_Issues).

Possible Cause: The user’s device is not accepting the self-signed certificate created by the Mobility Service Installation program.

Action: See “Manually Downloading a Certificate to a Mobile Device” on page 84 for assistance.

The user’s mobile device has stopped synchronizing

Possible Cause: Varied.

Action: Resynchronize the device. For instructions, see Section 7.2, “Resynchronizing a Device,” on page 73. This removes the GroupWise data that is currently on the device and replaces it with the GroupWise data that is currently available in the Mobility system

The data on the user’s mobile device does not match what displays in GroupWise

Possible Cause: Varied.

Action: Resynchronize the device. For instructions, see Section 7.2, “Resynchronizing a Device,” on page 73. This removes the GroupWise data that is currently on the device and replaces it with the GroupWise data that is currently available in the Mobility system

Action: Have the user remove the account from the device, and then re-add the account. This is a manual way of resynchronizing the device.

Action: If reinitializing the device does not resolve the problem, have the user remove the account from the device. Then reinitialize the user. For instructions, see Section 7.7, “Reinitializing a User,” on page 78. This removes the GroupWise data that is currently in the Mobility system and requests current data from GroupWise. The process of deleting the data in the Mobility system and requesting current GroupWise data can take a long time.

After you reinitialize the user, have the user re-add the account so that the current GroupWise data in the Mobility system transfers to the device.

Action: If reinitializing the user does not resolve the problem, delete the user from the Mobility system, and then re-add the user. See Section 6.1, “Managing Mobile Device Users,” on page 61.

The timestamps on calendar items do not match between a user’s mobile device and the GroupWise mailbox

Possible Cause: The date and time on the Mobility server does not match the date and time on the GroupWise server.

Action: Reset the time on the Mobility server to match the time on the GroupWise server. This Mobility system requirement is listed in "Mobility Server Requirements" in the *GroupWise Mobility Service 2.1 Installation Guide*.

Some items never synchronize to the mobile device

Possible Cause: Some events automatically synchronize to mobile devices. Other events do not synchronize to mobile devices unless users request them. The user has not yet requested the optional events.

Action: None. This is normal. The unsynchronized events eventually expire.

Possible Cause: The Device Sync Agent might not be transferring the events to the mobile device.

Action: Check the user's synchronized items in the Dashboard. Observe the *Pending* column and the *Synced* column to see if progress is still being made.

If events are still transferring to the device, wait while the process completes.

If events are not transferring to the device, restart the Device Sync Agent.

Possible Cause: The user's GroupWise mailbox contains a damaged message, or the user's mailbox is damaged. Mailbox damage can cause the GroupWise Sync Agent to synchronize unusable data to the Device Sync Agent.

Action: Repair the user's mailbox. For more information, see the documentation for your version of GroupWise:

- GroupWise 2014: "Maintaining User/Resource and Message Databases" in the *GroupWise 2014 Administration Guide*
- GroupWise 2012: "Maintaining User/Resource and Message Databases" in the *GroupWise 2012 Administration Guide*

Possible Cause: Varied.

Action: Remove the user from the Mobility system, and then add the user again.

The specific actions suggested above have not resolved a synchronization problem

Possible Cause: Varied.

Action: Perform the following procedure to start over for a particular mobile device user, similar to rebooting a computer:

1. Remove the user's account from the mobile device.
2. Remove the user from the Mobility system.
3. Restart the Mobility Service.
4. Add the user to the Mobility system.
5. Add the user's account to the mobile device.

A.2 Mobility Service Troubleshooting

See also:

- Section 5.6, "Working with Log Files," on page 56

You cannot access the Mobility Admin console after installation

Possible Cause: The date and time on your workstation does not match the date and time on the Mobility server.

Action: Reset the time as needed so that the workstation and the Mobility server match. This Mobility system requirement is listed in "Mobility Server Requirements" in the *GroupWise Mobility Service 2.1 Installation Guide*.

The Mobility Admin Console cannot communicate with the LDAP server

Explanation: When you use LDAP as your user source, the Mobility Admin console must be able to communicate with your LDAP server in order to list users to add to your Mobility system. If the Admin console cannot list users, it cannot communicate with your LDAP server.

Possible Cause: A firewall is blocking communication between the Mobility Service and the LDAP server.

Action: Ensure that communication through the firewall is allowed on port 636 for a secure LDAP connection or port 389 for a non-secure LDAP connection.

Possible Cause: The LDAP server is not functioning correctly.

Action: Reboot the LDAP server.

The process of adding users does not proceed as expected

Explanation: When you add a large number of users to the Mobility Service in a group, the Admin console might not display progress as expected. Refreshing the page might give an invalid server error.

Possible Cause: A timing issue between the Add User process and the display of the Admin console page occasionally causes this problem.

Action: Wait for a while, and then refresh your browser.

A.3 GroupWise Sync Agent Troubleshooting

- "The GroupWise Post Office Agent (POA) shows errors communicating with the GroupWise Sync Agent" on page 93
- "The GroupWise Sync Agent takes a long time to start" on page 93
- "The GroupWise Sync Agent fails to start after working successfully" on page 94

See also:

- Section 5.6, "Working with Log Files," on page 56

The GroupWise Sync Agent cannot communicate with the GroupWise Post Office Agent (POA)

Explanation: The GroupWise Sync Agent must be able to communicate with a POA in order to synchronize mailbox data. The GroupWise Sync Agent is unable to establish the connection.

Possible Cause: The POA is not running.

Action: Start the POA.

Data does not transfer between GroupWise and the GroupWise Sync Agent

Possible Cause: Varied.

Action: Ensure that the required ports are open on the GroupWise POA server and the GroupWise Sync Agent server. For instructions, see "Opening Required Ports" in the *GroupWise Mobility Service 2.1 Installation Guide*.

Action: Check the GroupWise Sync Agent log file. For instructions, see Section 5.6, "Working with Log Files," on page 56.

The GroupWise Post Office Agent (POA) shows errors communicating with the GroupWise Sync Agent

Explanation: As you monitor the POA, you might see 890F and 8910 error codes.

Possible Cause: The connection between the GroupWise Sync Agent and the POA has temporarily closed.

Action: None. The connection is re-established automatically. These error codes are benign and can be ignored.

The GroupWise Sync Agent takes a long time to start

Possible Cause: The GroupWise Sync Agent services users that are scattered throughout your GroupWise system. Therefore, POA-to-POA communication is required in order to gather the events from the GroupWise users and return them to the GroupWise Sync Agent.

Action: None. When all GroupWise user events have been received, the status changes to *Running*.

The GroupWise Sync Agent fails to start after working successfully

Possible Cause: Another application that communicates with the POA using SOAP has created SOAP event configurations that are causing a problem for the GroupWise Sync Agent.

Action: Delete residual SOAP event configurations:

1. Stop the GroupWise Sync Agent.
2. In the POA web console, click *Configuration*.
3. In the *Internet Protocol Agent Settings* section, click *Event Configuration List*.
4. Click each user, select *Delete Event Configuration*, then click *Submit*.
5. After all event configurations have been cleared, start the GroupWise Sync Agent.

A.4 Device Sync Agent Troubleshooting

- "The Device Sync Agent does not start" on page 94

See also:

- Section 5.6, "Working with Log Files," on page 56

The Device Sync Agent does not start

Possible Cause: The GroupWise Sync Agent is not running.

Action: Start the GroupWise Sync Agent.

Possible Cause: The Mobility Service is not running.

Action: Check the current status of the Mobility Service. If needed, start or restart the Mobility Service. For instructions, see Section 2.1, "Starting and Stopping the GroupWise Mobility Service," on page 21. Then start the Device Sync Agent in the Mobility Admin console.

Possible Cause: An application on the Mobility server is using ports 80 and 443. These ports need to be available for use by the Device Sync Agent for communicating with mobile devices.

Action: Stop and disable the other application that is using ports 80 and 443 on the Mobility server.