

Installation Guide

Data Synchronizer Mobility Pack 1.2.5

January 28, 2013

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About This Guide

The *Mobility Pack Installation Guide* helps you to understand and set up a Synchronizer system by installing the Data Synchronizer Mobility Pack, which consists of the Data Synchronizer services, the GroupWise Connector, and the Mobility Connector.

- ♦ Chapter 1, “Mobility Pack Product Overview,” on page 7
- ♦ Chapter 2, “Mobility Pack Installation,” on page 15
- ♦ Chapter 3, “Mobility Pack Update,” on page 43
- ♦ Appendix A, “Mobility Pack Installation Troubleshooting,” on page 49
- ♦ Appendix B, “Documentation Updates,” on page 53

Audience

This guide is intended for network administrators who install and administer a Synchronizer system to provide data synchronization between GroupWise and 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.

Additional Documentation

For additional Data Synchronizer Mobility Pack documentation, see the following documentation provided at the [Novell Data Synchronizer Documentation Web site \(http://www.novell.com/documentation/datasynchronizer1\)](http://www.novell.com/documentation/datasynchronizer1).

- ♦ Mobility Pack Readme
- ♦ *Mobility Pack Installation Guide*
- ♦ *Mobility Pack Administration Guide*

For Mobility Pack connector documentation, see the following documentation provided at the [Novell Data Synchronizer Connectors Documentation Web site \(http://www.novell.com/documentation/datasync_connectors1\)](http://www.novell.com/documentation/datasync_connectors1).

- ♦ Connector Readmes
- ♦ *Mobility Quick Start*
- ♦ *GroupWise Connector Configuration Guide*
- ♦ *Mobility Connector Configuration Guide*

In addition to the Data Synchronizer product documentation, the following resources provide additional information about the Mobility Pack:

- ♦ [Novell Support and Knowledgebase \(http://www.novell.com/support\)](http://www.novell.com/support)
- ♦ [Data Synchronizer Support Forum \(http://forums.novell.com/forumdisplay.php?f=939\)](http://forums.novell.com/forumdisplay.php?f=939)

- ◆ [Data Synchronization Cool Solutions \(http://www.novell.com/communities/cool solutions/datasynchronizer\)](http://www.novell.com/communities/cool solutions/datasynchronizer)
- ◆ [Data Synchronizer Mobility Connector Devices Wiki \(http://wiki.novell.com/index.php/Data_Synchronizer_Mobility_Connector_Devices\)](http://wiki.novell.com/index.php/Data_Synchronizer_Mobility_Connector_Devices)

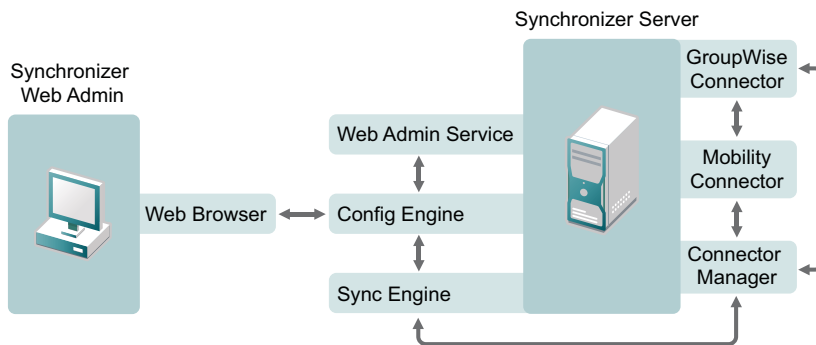
1 Mobility Pack Product Overview

The Data Synchronizer Mobility Pack installs a Synchronizer system, the [GroupWise Connector](#), and the [Mobility Connector](#).

- ♦ [Section 1.1, “Synchronizer Components,”](#) on page 7
- ♦ [Section 1.2, “Synchronizer Configurations,”](#) on page 9
- ♦ [Section 1.3, “Mobility Pack System Requirements,”](#) on page 11

1.1 Synchronizer Components

A Synchronizer system consists of several components that are installed together on one server when you install the Mobility Pack.



- ♦ [Section 1.1.1, “Synchronization Engine,”](#) on page 7
- ♦ [Section 1.1.2, “Web Administration Service,”](#) on page 8
- ♦ [Section 1.1.3, “Configuration Engine,”](#) on page 8
- ♦ [Section 1.1.4, “Connector Manager,”](#) on page 8
- ♦ [Section 1.1.5, “Connectors,”](#) on page 8

1.1.1 Synchronization Engine

The Synchronizer Sync Engine (`datasync-syncengine`) is a service that coordinates some aspects of data flow between the GroupWise Connector and the Mobility Connector. Other aspects of data flow are currently optimized by having the GroupWise Connector and the Mobility Connector communicate directly with each other.

1.1.2 Web Administration Service

The Synchronizer Web Admin service (`datasync-webadmin`) provides a Web-based interface called [Synchronizer Web Admin](#) for administration and management of your Synchronizer system. When you log in to Synchronizer Web Admin as the Synchronizer administrator, you can:

- ◆ Configure your Synchronizer system
- ◆ Configure the connectors
- ◆ Monitor the connectors
- ◆ Add and remove users, resources, and groups for synchronization

Users can log in to the Synchronizer Web Admin URL using their personal network login credentials to access the [Synchronizer User Options](#) page. Here, users can:

- ◆ Select which GroupWise personal address books to synchronize
- ◆ Select which types of GroupWise items to synchronize
- ◆ Select which GroupWise folders to synchronize

For more information about the User Options page of Synchronizer Web Admin, see the [Mobility Quick Start](#).

1.1.3 Configuration Engine

The Synchronizer Config Engine (`datasync-configengine`) provides communication between Synchronizer Web Admin and the Sync Engine. The Config Engine passes configuration information from the Sync Engine to Synchronizer Web Admin for viewing, and it passes your configuration changes back to the Sync Engine for implementation.

1.1.4 Connector Manager

The Synchronizer Connector Manager (`datasync-connectors`) provides communication between the Sync Engine and connectors.

1.1.5 Connectors

The Mobility Pack includes the GroupWise Connector, which communicates with the POA to obtain the contents of users' mailboxes, and the Mobility Connector, which synchronizes GroupWise data to mobile devices.

The following GroupWise items can be synchronized:

- ◆ Email messages
- ◆ Appointments
- ◆ Address books
- ◆ Contacts
- ◆ Reminder notes
- ◆ Discussion notes
- ◆ Tasks
- ◆ Folders

The [Synchronizer User Options](#) page lets you prevent selected item types from being synchronized.

Initially, existing GroupWise items are synchronized to mobile devices. As time passes, the following events can affect existing items in GroupWise and on mobile devices. The resulting changes in the items are also synchronized:

- ◆ Add
- ◆ Modify
- ◆ Move
- ◆ Delete

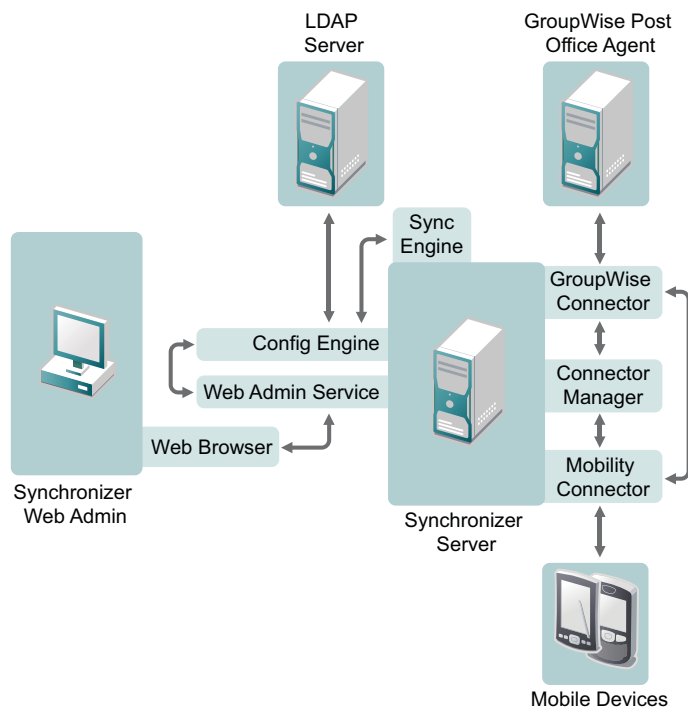
1.2 Synchronizer Configurations

The Synchronizer services, the GroupWise Connector, and the Mobility Connector are all installed on the same server when you install the Mobility Pack,

- ◆ [Section 1.2.1, “Synchronizer System Configuration,” on page 9](#)
- ◆ [Section 1.2.2, “Single Synchronizer Server System,” on page 10](#)
- ◆ [Section 1.2.3, “Multiple Synchronizer Server System,” on page 10](#)

1.2.1 Synchronizer System Configuration

The Synchronizer server must be able to communicate with other servers in your network, as well as mobile devices outside your firewall.



Component	Required Configuration
-----------	------------------------

Connectors	The Synchronizer server has one instance of each connector.
------------	---

Component	Required Configuration
LDAP Server	<p>The Synchronizer server must be able to communicate with an LDAP server on your network during installation.</p> <p>After installation, you can continue to use LDAP authentication for mobile device users, or you can configure the Mobility Connector to use GroupWise passwords instead of LDAP passwords when mobile devices authenticate to the system. LDAP authentication is always required for access to Synchronizer Web Admin and for managing users.</p> <p>If you need the Synchronizer server to communicate with multiple LDAP servers, additional setup is required, as described in LDAP Proxy Server to Multiple Sources (http://www.novell.com/communities/node/8637/ldap-proxy-server-multiple-sources).</p>
GroupWise POA	<p>The Synchronizer server must be able to communicate with one GroupWise POA during installation. That POA, as well as additional POAs where mobile device users' mailboxes are located, must be configured to support SOAP communication.</p> <p>The initial POA uses the native GroupWise redirection process to inform the GroupWise Connector how to communicate with the additional POAs throughout your Synchronizer system. Thereafter, the GroupWise Connector communicates directly with each POA where mobile device users' mailboxes are located.</p> <p>IMPORTANT: A Synchronizer server can be configured to communicate with one GroupWise system. If you have multiple GroupWise systems, you must set up a Synchronizer server for each GroupWise system.</p>

1.2.2 Single Synchronizer Server System

A Synchronizer system with a single Synchronizer server can meet the synchronization needs of approximately 750 devices. For more information, see [Section 1.3.6, "Recommended Number of Devices," on page 13](#).

In a single-server configuration, the GroupWise Connector communicates with one POA, which then communicates with other POAs throughout your GroupWise system by means of a GroupWise name server, as described in "[Simplifying Client/Server Access with a GroupWise Name Server](#)" in "[Post Office Agent](#)" in the *GroupWise 2012 Administration Guide*. After the GroupWise Connector has identified the POAs in post offices where mobile device users are located, it then communicates directly with those POAs.

1.2.3 Multiple Synchronizer Server System

You might need to set up a Synchronizer system that includes multiple Synchronizer servers for the following reasons:

- ◆ **Number of Devices:** You need to support synchronization for more than the [recommended number of devices](#).

Setting up multiple Synchronizer servers in virtual machines can be a convenient way to support a large number of devices.

- ◆ **Location of Users:** You need to support users that are located in distant geographical locations where synchronization performance could be adversely affected by the network connections between users and the Synchronizer system.
- ◆ **Location of Synchronized Applications:** GroupWise has meaningful organizational segments (domains and post offices). Having a Synchronizer server associated with each post office helps balance the synchronization load across all GroupWise users.

- ♦ **Quality of Service:** Certain segments of your user population, such as executives of your organization, might expect and require a higher level of synchronization performance than typical users. This higher quality of service can be accomplished by setting up a small Synchronizer system specifically for such high-profile users.

1.3 Mobility Pack System Requirements

Before you install the Mobility Pack, ensure that the Synchronizer server meets Synchronizer system requirements, so that your Synchronizer system can function successfully.

- ♦ [Section 1.3.1, “Data Synchronizer Server Requirements,” on page 11](#)
- ♦ [Section 1.3.2, “Directory Service Requirement,” on page 12](#)
- ♦ [Section 1.3.3, “Web Browser Requirements for Synchronizer Web Admin,” on page 12](#)
- ♦ [Section 1.3.4, “GroupWise Requirements,” on page 12](#)
- ♦ [Section 1.3.5, “Mobile Device Requirements,” on page 13](#)
- ♦ [Section 1.3.6, “Recommended Number of Devices,” on page 13](#)

1.3.1 Data Synchronizer Server Requirements

- ♦ Hardware requirements for the Synchronizer server:
 - ♦ x86-64 processor
 - ♦ 2.2 GHz processor; multi-processor system recommended
 - ♦ Adequate server memory depending on the number of devices supported by the Synchronizer server
 - ♦ 4 GB RAM to support approximately 300 devices
 - ♦ 8 GB RAM to support up to the maximum [recommended number of devices](#)
 - ♦ 45 MB of disk space for the Synchronizer software
 - ♦ 200 GB of disk space recommended for data storage during system operation

Data storage disk space varies widely depending on the amount of data being synchronized, the number of devices participating in synchronization, the logging level for Synchronizer log files, and other variables specific to your Synchronizer system implementation.

The largest consumers of disk space are the Synchronizer database (`/var/lib/pgsql`) and Synchronizer log files (`/var/log/datasync`). You might want to configure the Synchronizer server so that `/var` is on a separate partition to allow for convenient expansion.

Another large consumer of disk space is attachment storage in the `/var/lib/datasync/syncengine/attachments` directory.

NOTE: The 200 GB recommendation is appropriate for a large Synchronizer system that has the maximum [recommended number of devices](#). A Synchronizer system with substantially fewer devices requires substantially less disk space.

- ♦ Static IP address
- ♦ SUSE Linux Enterprise Server (SLES) 11 (64-bit), plus Service Pack 2
- ♦ PostgreSQL

If PostgreSQL is not already installed on the Synchronizer server, the Mobility Pack Installation program installs it for you.

- ♦ Time synchronization among servers

For the most reliable synchronization of time-sensitive items such as appointments, the Synchronizer server and GroupWise servers should have their time synchronized as closely as possible. This is especially important on virtual machines.

1.3.2 Directory Service Requirement

- ♦ Lightweight Directory Access Protocol (LDAP) v3

Any version of Novell eDirectory fills this requirement. Other LDAP directories are not currently supported.

1.3.3 Web Browser Requirements for Synchronizer Web Admin

Any of the following Web browsers:

- ♦ Mozilla FireFox 3 or later
- ♦ Microsoft Internet Explorer 7 or later
- ♦ Safari 3 or later
- ♦ Google Chrome

1.3.4 GroupWise Requirements

In order for the GroupWise Connector to interact successfully with your GroupWise system, your GroupWise system must meet the following requirements:

- ♦ In post offices that have mobile device users:
 - ♦ GroupWise 2012 or later
 - or
 - ♦ GroupWise 8 Support Pack 2 or later

For best synchronization performance, the latest version of GroupWise is strongly recommended.

- ♦ You must have at least a basic GroupWise system (one domain and one post office) set up and running, as described in “[Installing a Basic GroupWise System](#)” in the *GroupWise 2012 Installation Guide*.
- ♦ The GroupWise Post Office Agent (POA) that the GroupWise Connector communicates with must have SOAP enabled, as described in “[Supporting SOAP Clients](#)” in “[Post Office Agent](#)” in the *GroupWise 2012 Administration Guide*. It must also be configured with an HTTP user name and password on the Agent Settings property page of the POA object in ConsoleOne.
- ♦ A GroupWise trusted application key is required so that the GroupWise Connector can authenticate to GroupWise mailboxes without needing GroupWise users’ mailbox passwords, as described in “[Creating a Trusted Application and Key](#)” in “[System](#)” in the *GroupWise 2012 Administration Guide*.

1.3.5 Mobile Device Requirements

The Mobility Connector communicates with mobile devices by using the [Microsoft ActiveSync \(http://en.wikipedia.org/wiki/ActiveSync\)](http://en.wikipedia.org/wiki/ActiveSync) protocol version 2.5. If a mobile device uses a later version of ActiveSync, the device can still successfully communicate with the Mobility Connector because later versions of ActiveSync are backward compatible with version 2.5.

Supported mobile device operating systems include:

- ♦ Android 2.x, 3.x, and 4.1.x
- ♦ Apple iOS 4.x, 5.x, and 6.0
- ♦ Palm webOS
- ♦ Symbian 9.x
- ♦ Windows Mobile 6.x
- ♦ Windows Phone 7
- ♦ Windows 8 (Phone, Tablet, and Desktop)

Your mobile device communicates directly with the Mobility Connector to synchronize data. Some mobile devices require a data plan to accomplish this. Others work successfully with a Wi-Fi connection. Some mobile devices can be configured to use either method to communicate with the Mobility Connector. Your mobile device carrier is not involved in the synchronization process.

NOTE: The Mobility Connector does not work with POP, IMAP, SMTP, or other message transfer protocols. The Mobility Connector does not support BlackBerry devices. Instead, you must use BlackBerry Enterprise Server for GroupWise, as described in “[BlackBerry Enterprise Server](#)” in “[Mobile Devices](#)” in the *GroupWise 2012 Interoperability Guide*.

A user can synchronize data to multiple mobile devices as needed and can use multiple synchronization solutions as needed. For example, the Mobility Connector and BlackBerry Enterprise Server can both synchronize data from the same GroupWise mailbox without conflict.

For the latest information about supported mobile devices, see the [Data Synchronizer Mobility Connector Devices Wiki \(http://wiki.novell.com/index.php/Data_Synchronizer_Mobility_Connector_Devices\)](http://wiki.novell.com/index.php/Data_Synchronizer_Mobility_Connector_Devices).

1.3.6 Recommended Number of Devices

A single Synchronizer server can comfortably support approximately 750 devices.

The performance of your Synchronizer system depends on many variables including server configuration, system configuration, and the level of user activity, both in GroupWise and on their mobile devices. This statement of support is based on the following testing parameters:

Server Configuration

- ♦ Virtual machine
- ♦ 2.8 GHz processor
- ♦ 4 CPUs
- ♦ 8 GB RAM

Synchronizer System Configuration

- ◆ 500 users
- ◆ 750 devices

User/Device Traffic

- ◆ Average of 181 GroupWise events/minute
 - ◆ Email send / read/ move to folder / delete
 - ◆ Appointment send / accept / decline / delete
 - ◆ Folder create
- ◆ Average of 474 events/user in a 24-hour period
- ◆ Average of 165 device requests/minute
 - ◆ Email send / read
- ◆ Average of 427 emails from devices in a 24-hour period
- ◆ Average of 2479 KB/minute of attachment data transfer
 - ◆ 97% under 1MB
 - ◆ 2% between 1MB and 2 MB
 - ◆ 1% above 2 MB

NOTE: You can observe some of these statistics for your own Synchronizer system using the Global Status Monitor, as described in [“Monitoring Your Synchronizer System”](#) in [“Synchronizer System Management”](#) in the *Mobility Pack Administration Guide*.

Device Profile:

- ◆ 60% Apple devices
- ◆ 37% Android devices
- ◆ 10% Windows Mobile devices
- ◆ 3% Other

Hardware Performance for Four Days:

- ◆ 24% average CPU usage
- ◆ 17% average disk busy usage
- ◆ 26% average memory usage, with 32% maximum and 24% minimum

2 Mobility Pack Installation

The Data Synchronizer Mobility Pack Installation program available in YaST helps you install the Synchronizer services, the GroupWise Connector, and the Mobility Connector to set up your initial Synchronizer system.

- ♦ [Section 2.1, “Planning a Data Synchronizer System,” on page 15](#)
- ♦ [Section 2.2, “Preparing to Install the Mobility Pack Software,” on page 26](#)
- ♦ [Section 2.3, “Installing and Setting Up a Data Synchronizer System,” on page 29](#)
- ♦ [Section 2.4, “Integrating with Novell ZENworks Mobile Management,” on page 36](#)
- ♦ [Section 2.5, “What’s Next,” on page 38](#)
- ♦ [Section 2.6, “Mobility Pack Installation Summary Sheet,” on page 39](#)

2.1 Planning a Data Synchronizer System

You can use the [“Mobility Pack Installation Summary Sheet” on page 39](#) to gather the information you need so that you are prepared to provide the information requested by the Mobility Pack Installation program. The Summary Sheet organizes the information in the order in which you need it during the installation and configuration process.

- ♦ [Section 2.1.1, “Planning Your Synchronizer System Configuration,” on page 16](#)
- ♦ [Section 2.1.2, “Selecting Mobility Pack Servers,” on page 16](#)
- ♦ [Section 2.1.3, “Gathering LDAP Information,” on page 16](#)
- ♦ [Section 2.1.4, “Planning How to Add Users,” on page 19](#)
- ♦ [Section 2.1.5, “Planning How To Add Resources,” on page 20](#)
- ♦ [Section 2.1.6, “Gathering GroupWise System Information,” on page 21](#)
- ♦ [Section 2.1.7, “Gathering Mobile Device Information,” on page 23](#)
- ♦ [Section 2.1.8, “Planning the Data Synchronizer Database,” on page 25](#)
- ♦ [Section 2.1.9, “Establishing Data Synchronizer System Security,” on page 25](#)
- ♦ [Section 2.1.10, “Registering for Automatic Updates from the Novell Customer Center,” on page 26](#)

2.1.1 Planning Your Synchronizer System Configuration

A Synchronizer system can consist of a single Synchronizer server or multiple Synchronizer servers. For planning guidelines, review [Section 1.2, “Synchronizer Configurations,”](#) on page 9 and [Section 1.3.6, “Recommended Number of Devices,”](#) on page 13.

MOBILITY PACK INSTALLATION SUMMARY SHEET

Print one copy of the [Mobility Pack Installation Summary Sheet](#) for each Synchronizer server that you are planning for your Synchronizer system.

If you plan to install the Mobility Pack on multiple servers, you can proceed through the following planning sections server by server, or you can apply each planning section to all planned servers, then proceed to the next planning section.

IMPORTANT: For best security, plan to install the Mobility Pack software on servers inside your DMZ.

2.1.2 Selecting Mobility Pack Servers

Each server where you install the Mobility Pack must meet the system requirements listed in [Section 1.3, “Mobility Pack System Requirements,”](#) on page 11.

MOBILITY PACK INSTALLATION SUMMARY SHEET

Under *Mobility Pack Server Information*, specify the IP address or DNS hostname of the server where you plan to install the Mobility Pack software.

2.1.3 Gathering LDAP Information

The Mobility Pack Installation program needs access to an LDAP directory. The LDAP information that you provide during installation enables the Installation program to add users and groups to your Synchronizer system and provides you with access to Synchronizer Web Admin, the administrative tool used to manage your Synchronizer system after installation.

- ♦ [“LDAP Server Network Information”](#) on page 17
- ♦ [“LDAP Server Credentials”](#) on page 17
- ♦ [“LDAP User and Group Containers”](#) on page 17
- ♦ [“LDAP Passwords vs. GroupWise Passwords”](#) on page 18

LDAP Server Network Information

In order to communicate with your LDAP directory, the Mobility Pack Installation program needs the IP address or DNS hostname of your LDAP server. It also needs the port number that the LDAP server listens on. The LDAP port number depends on whether the LDAP server requires a secure SSL connection. The default secure port number is 636. The default non-secure LDAP port number is 389.

MOBILITY PACK INSTALLATION SUMMARY SHEET

Under *LDAP Server Information*, specify the IP address or DNS hostname of your LDAP server, and mark whether a secure SSL connection is required.

If the LDAP server requires a secure connection, additional setup might be required. See “[Securing Communication with the LDAP Server](#)” in “[Synchronizer System Security](#)” in the *Mobility Pack Administration Guide*.

IMPORTANT: If there is a firewall between the Synchronizer server and the LDAP server, be sure to configure the firewall to allow communication on the selected LDAP port.

LDAP Server Credentials

In order to access the LDAP directory, the Mobility Pack Installation program needs the user name and password of an administrator user on the LDAP server who has sufficient rights to access the user and group information stored there. At least Read rights are required. You can use the `admin` LDAP user or an admin-equivalent user. For more information about the required rights for the user you choose, see TID 7006841 in the [Novell Support Knowledgebase \(http://www.novell.com/support\)](http://www.novell.com/support).

You need to provide the user name, along with its context in your LDAP directory tree, in the following format:

```
cn=user_name,ou=organizational_unit,o=organization
```

MOBILITY PACK INSTALLATION SUMMARY SHEET

Under *LDAP Server Credentials*, specify a fully qualified user name with sufficient rights to read the user and group information in your LDAP directory, along with the password for that user.

LDAP User and Group Containers

During installation, the Mobility Pack Installation program lets you add users and groups to your Synchronizer system from any location in the LDAP directory where you, as the LDAP administrator user, have rights to read the user and group information. The Installation program lets you browse for the user and group containers. It then displays the containers in the following LDAP format:

```
ou=container_name,ou=organizational_unit,o=organization
```

MOBILITY PACK INSTALLATION SUMMARY SHEET

Under *LDAP Containers*, specify a container object and its context in the LDAP directory tree where User objects are located. If Group objects are located in a different container, list that container as well.

After installation, you use Synchronizer Web Admin to add users and groups to your Synchronizer system. When Synchronizer Web Admin generates lists of users and groups, it searches the containers you specify, as well as subcontainers. If you want Synchronizer Web Admin to be able to search multiple, organizationally separate containers for users and groups, you can configure this functionality after you have installed the Mobility Pack, as described in [“Searching Multiple LDAP Contexts for Users and Groups”](#) in [“Synchronizer Web Admin”](#) in the *Mobility Pack Administration Guide*.

LDAP Passwords vs. GroupWise Passwords

Users use their LDAP (network) passwords to log in to the network. They might or might not use the same passwords to log in to their GroupWise mailboxes. The Mobility Pack Installation program configures your Synchronizer system to use LDAP (network) passwords for logging into GroupWise mailboxes. If users have different passwords for their GroupWise mailboxes, they can configure their mobile devices with their LDAP (network) passwords, rather than their GroupWise passwords, in order to synchronize data with their GroupWise mailboxes.

MOBILITY PACK INSTALLATION SUMMARY SHEET

Under *Mailbox Access*, mark whether users use LDAP (network) passwords or GroupWise (mailbox) passwords to access their GroupWise mailboxes.

For convenience when users have different GroupWise and LDAP passwords, you can configure the Mobility Connector to use GroupWise passwords for authentication. This approach can be more intuitive for users. It is especially convenient when users’ LDAP passwords are set to expire regularly, which requires reconfiguration of mobile devices each time the LDAP passwords expire. GroupWise passwords do not expire. Device reconfiguration becomes necessary only when users manually change their own GroupWise passwords.

MOBILITY PACK INSTALLATION SUMMARY SHEET

Under *Enable GroupWise Authentication?*, mark *Yes* if you plan to reconfigure the Mobility Connector to use GroupWise passwords to authenticate to mailboxes.

After you have installed the Mobility Pack, enable GroupWise authentication by following the instructions in [“Using GroupWise Authentication Instead of LDAP Authentication for Mobile Devices”](#) in [“Mobility Connector Configuration”](#) in the *Mobility Connector Configuration Guide*.

2.1.4 Planning How to Add Users

If you plan to use LDAP authentication, a number of variables affect how you add users to your Synchronizer system:

During installation	<p>During installation, you can add individual users and groups of users to your Synchronizer system from any context in your LDAP directory where the LDAP administrator user has rights to access the User and Group objects. For a small Synchronizer system, you might plan to add all users during installation.</p>
	<p>When you add users during installation, the following GroupWise data is automatically synchronized for each user:</p>
	<ul style="list-style-type: none">◆ Contacts from all personal address books, excluding the Frequent Contacts address book◆ Calendar items (appointments and reminder notes) from the last two weeks and all future items◆ Email messages in the Mailbox folder from the last three days◆ Standard folders (Sent Items, Work in Progress, Junk Mail, and Trash) and folders in the Cabinet (but not the items in these folders until users request them by opening the folders)
	<p>Adding at least two users for testing purposes during installation is recommended.</p>
After installation	<p>For a larger Synchronizer system, you might plan to add a subset of users during installation, get those users running smoothly, then add the rest of the users after installation in Synchronizer Web Admin.</p>
	<p>If you want to restrict the amount of data that is processed during initial synchronization, add the users after you have installed the Mobility Pack. Configure the GroupWise Connector to meet your synchronization preferences, as described in “GroupWise Connector Configuration” in the <i>GroupWise Connector Configuration Guide</i>, then add the users manually, as described in “Managing Users” in “User Management” in the <i>Mobility Pack Administration Guide</i>.</p>
Using LDAP groups	<p>The Mobility Pack Installation program lets you select individual users or LDAP groups of users to add to your Synchronizer system. You might already have existing LDAP groups that represent useful sets of users to add to your Synchronizer system. If your existing LDAP groups do not meet the needs of your Synchronizer system, you can organize your users into LDAP groups specifically to facilitate the Mobility Pack installation and the post-installation growth of your Synchronizer system.</p>
	<p>LDAP groups are a powerful tool for ongoing Synchronizer system management. When you add LDAP groups to your Synchronizer system, you can later add and delete users in the LDAP groups, rather than adding the users individually to your Synchronizer system.</p>
	<p>LDAP groups also make the installation process more convenient. The YaST functionality of the Mobility Pack Installation program does not allow you to use Ctrl+click to select multiple users. It is much easier to add multiple users to an LDAP group than it is to select them individually in the Mobility Pack Installation program.</p>
	<p>IMPORTANT: LDAP groups must include at least one user in order to be added to your Synchronizer system during installation.</p>
Setting application names	<p>If users’ LDAP user names are not the same as their GroupWise user IDs, you must set users’ application names in Synchronizer Web Admin to map from LDAP user names to GroupWise user IDs. This must be done regardless of whether you add the users during installation or after installation, and it applies to users who are added by being members of LDAP groups. To plan ahead for this process, review “Setting a User’s Application Name” in “User Management” in the <i>Mobility Pack Administration Guide</i>.</p>

Single-server installation	If you are planning a single-server Synchronizer system, you might already have or want to create LDAP groups based on departmental membership, organizational roles, geographic locations, or even the need to participate in data synchronization. For example, if only a few users have mobile devices and they are scattered throughout a number of existing LDAP groups, you might create a new LDAP group named <code>MobileDeviceUsers</code> so that you can easily add them as a group to your Synchronizer system.
Multi-server installation	If you are planning a multi-server Synchronizer system, you might already have or want to create LDAP groups on different Synchronizer servers. You might be planning several Synchronizer servers based on geographic location, so having an LDAP group of users for each geographic location facilitates adding users. If you want a separate Synchronizer server for executives, creating an LDAP group of executives allows you to add them as a group, rather than selecting each executive individually. If you have a very large number of groups with no particular distinguishing characteristics, you might want to create LDAP groups based on the first letter of users' last names or user names (for example, A-I, J-R, and S-Z).

Regardless of the variables involved in adding users to your Synchronizer system, effective planning can make the process of adding users easier and faster.

IMPORTANT: When you add users to your Synchronizer system, data is automatically synchronized from GroupWise to the GroupWise Connector before users connect their mobile devices to your Synchronizer system. Do not add users to your Synchronizer system who do not have mobile devices. Extraneous users create unnecessary synchronization traffic in your Synchronizer system.

MOBILITY PACK INSTALLATION SUMMARY SHEET

Under *Add Groups*, specify LDAP groups of users to add to your Synchronizer system. If the LDAP groups do not already exist, create them in your LDAP directory before you run the Mobility Pack Installation program.

Under *Add Users*, specify any individual users that are not part of LDAP groups that you want to add to your Synchronizer system.

IMPORTANT: Be sure to add yourself to the Synchronizer system for testing purposes.

2.1.5 Planning How To Add Resources

You can add resources to your Synchronizer system as if they are users. GroupWise users with rights to the synchronized resource mailboxes can then configure their mobile devices to log in to resource mailboxes just as they can log in to their own mailboxes. This enables GroupWise users to monitor the contents of resource mailboxes from their mobile devices.

Work with GroupWise users to see what resources they want to synchronize to their mobile devices.

MOBILITY PACK INSTALLATION SUMMARY SHEET

Under *Add Groups*, specify LDAP groups of resources to add to your Synchronizer system. If the LDAP groups do not already exist, create them in your LDAP directory before you run the Mobility Pack Installation program.

Under *Add Users*, specify any individual resources that are not part of LDAP groups that you want to add to your Synchronizer system.

2.1.6 Gathering GroupWise System Information

In order to configure the GroupWise Connector as you run the Mobility Pack Installation program, you need to gather certain information about the GroupWise system where users want to synchronize data.

- ♦ [“GroupWise Trusted Application” on page 21](#)
- ♦ [“GroupWise Post Office Agent” on page 22](#)
- ♦ [“GroupWise Address Book User” on page 22](#)

GroupWise Trusted Application

A GroupWise trusted application can log into a GroupWise Post Office Agent (POA) in order to access GroupWise mailboxes without needing personal user passwords. The GroupWise Connector requires such mailbox access in order to synchronize GroupWise data with mobile devices. In addition, the Mobility Connector uses trusted application authentication through the GroupWise Connector in order to access the GroupWise Address Book to provide contact lookup beyond the contacts that are downloaded to users’ devices from personal address books.

Before you install the Mobility Pack, you must use ConsoleOne to configure the GroupWise Connector as a GroupWise trusted application. You might name the trusted application `MobilityPack` or `GroupWiseConnector`.

A trusted application uses a key that consists of a long string of letters and numbers to provide authentication to the GroupWise POA. ConsoleOne creates the key in a file in a specified location that is accessible to ConsoleOne.

You need to create only one trusted application key for the GroupWise Connector, regardless of the number of servers where you install the Mobility Pack, and regardless of the number of domains and post offices in your GroupWise system.

When you set up the GroupWise Connector as a trusted application, you only need to fill in three fields in the Create Trusted Application dialog box in ConsoleOne:

- ♦ *Name*
- ♦ *Location for Key File*
- ♦ *Name of Key File*

Do not fill in any other fields.

Follow the instructions in [“Creating a Trusted Application and Key”](#) in *“System”* in the [GroupWise 2012 Administration Guide](#) to set up a trusted application and obtain a trusted application key for the GroupWise Connector. Copy the key file to a convenient location on the Synchronizer server. The Installation program automatically transfers the trusted application key from the key file into the configuration of the GroupWise Connector.

IMPORTANT: Do not use an existing trusted application key that is already in use by another application.

MOBILITY PACK INSTALLATION SUMMARY SHEET

Under *GroupWise Trusted Application*, specify the name of the trusted application that you created in ConsoleOne and the location where the Mobility Pack Installation program can access the trusted application key file.

NOTE: If your GroupWise system connects to any external GroupWise domains, the external GroupWise system needs its own Mobility Pack installation on an additional Synchronizer server, along with its own separate trusted application key.

GroupWise Post Office Agent

The GroupWise Connector accesses your GroupWise system by communicating with a Post Office Agent (POA). The selected POA must be configured for SOAP, as described in “[Supporting SOAP Clients](#)” in “[Post Office Agent](#)” in the *GroupWise 2012 Administration Guide*.

The selected POA can obtain information about all users in all post offices in your GroupWise system, if your GroupWise system has a GroupWise name server, as described in “[Simplifying Client/Server Access with a GroupWise Name Server](#)” in “[Post Office Agent](#)” in the *GroupWise 2012 Administration Guide*.

The Mobility Pack Installation program and the GroupWise Connector need the IP address or DNS hostname of the server where the POA is running. In addition, they need the POA SOAP port, which is 7191 by default. Typically, the same port number is used regardless of whether the POA is configured for a secure SSL SOAP connection. The Mobility Pack Installation program and the GroupWise Connector need to know whether or not the connection is secure, because they use one of the following URLs to communicate with the POA:

Non-Secure SOAP URL: `http://poa_server_address:soap_port/soap`

Secure SOAP URL: `https://poa_server_address:soap_port/soap`

MOBILITY PACK INSTALLATION SUMMARY SHEET

Under *GroupWise Post Office Agent*, specify the IP address or DNS hostname of the server where a POA configured for SOAP is running. Specify the SOAP port, and whether or not the POA requires a secure SSL SOAP connection.

IMPORTANT: By default, the POA communicates with the GroupWise Connector using port 4500 on the Synchronizer server. If there is a firewall between the Synchronizer server and the POA server, be sure to configure the firewall on the Synchronizer server to allow communication on port 4500 from the POA server. If necessary, you can configure the GroupWise Connector to listen on a different port number after installation, as described in “[Changing the GroupWise Connector Listening Port](#)” in “[GroupWise Connector Configuration](#)” in the *GroupWise Connector Configuration Guide*.

GroupWise Address Book User

The Mobility Connector needs to be able to access the GroupWise Address Book to obtain user information. The Mobility Connector establishes this access through the GroupWise Connector.

The Mobility Connector needs Address Book access that is equivalent to a typical user. You control what users see in the GroupWise Address Book by controlling object visibility. You want the Mobility Connector to access the GroupWise Address Book with the same visibility as a typical GroupWise user has when viewing the GroupWise Address Book.

Therefore, you need to select a user whose view of the GroupWise Address Book matches what you want the Mobility Connector to be able to access. You do not need to provide the password for the GroupWise user because the Mobility Connector accesses the GroupWise Address Book through the GroupWise Connector, which has trusted application status.

As an example, you might have a group of mobile device users who need access to Address Book information about upper-level management in your company and another group of mobile device users who should not have this Address Book information. To meet such needs, you would set up two Synchronizer systems, one with Address Book visibility that includes upper-level management and a second one where such Address Book visibility is not included. You would achieve this by setting up each Synchronizer system with an Address Book user whose Address Book visibility provides the visibility appropriate for all users of that Synchronizer system.

MOBILITY PACK INSTALLATION SUMMARY SHEET

Under *GroupWise Address Book User*, specify a valid GroupWise user ID that the Mobility Connector can use to access the GroupWise Address Book to obtain contact information.

For more information about GroupWise Address Book visibility, see “[Controlling Object Visibility](#)” in “[System](#)” in the *GroupWise 2012 Administration Guide*.

2.1.7 Gathering Mobile Device Information

The Mobility Connector needs certain configuration information about the mobile devices that it synchronizes GroupWise data with.

- ♦ “[Mobile Device Port](#)” on page 23
- ♦ “[Server Certificate](#)” on page 24
- ♦ “[Incoming Devices](#)” on page 24

For device-specific information, see the [Data Synchronizer Mobility Connector Devices Wiki \(http://wiki.novell.com/index.php/Data_Synchronizer_Mobility_Connector_Devices\)](http://wiki.novell.com/index.php/Data_Synchronizer_Mobility_Connector_Devices).

Mobile Device Port

By default, the Mobility Connector uses all available IP addresses on the server where you install the Mobility Pack. You can bind the Mobility Connector to a specific IP address after installation, as described in “[Binding to a Specific IP Address](#)” in “[Mobility Connector Configuration](#)” in the *Mobility Connector Configuration Guide*.

Typically, the Mobility Connector uses port 443 for secure SSL HTTP connections with mobile devices and port 80 for non-secure HTTP connections. If mobile devices connect directly to the Mobility Connector, a secure HTTP connection is strongly recommended. If mobile devices connect to the Mobility Connector through a security application such as Novell Access Manager, the Mobility Connector can appropriately be configured with a non-secure HTTP connection.

MOBILITY PACK INSTALLATION SUMMARY SHEET

Under *Mobile Device Port*, mark whether you want to configure the Mobility Connector to use a secure or non-secure HTTP port to communicate with mobile devices. Specify the port number used by the mobile devices that your Synchronizer system supports.

IMPORTANT: If there is a firewall between the Synchronizer server and users' mobile devices, be sure to configure the firewall to allow communication on the selected HTTP port.

Server Certificate

In order to use a secure SSL HTTP connection between the Mobility Connector and mobile devices, a server certificate is required. If you do not already have a certificate signed by a certificate authority (CA) for the Synchronizer server, the Mobility Pack Installation program can create one for you. However, you should obtain a valid signed certificate as soon after installation as possible.

MOBILITY PACK INSTALLATION SUMMARY SHEET

Under *Mobile Device Port*, mark whether you want the Mobility Pack Installation program to create a self-signed certificate for you. If you already have a commercially signed certificate, specify the location of the certificate file. Make sure that the location is accessible to the Mobility Pack Installation program on the Synchronizer server.

For more information about certificates, see [“Securing Communication between the Mobility Connector and Mobile Devices”](#) in [“Synchronizer System Security”](#) in the *Mobility Pack Administration Guide*.

Incoming Devices

By default, users can configure their mobile devices to connect to your Synchronizer server as soon as they know that it is available and they have the necessary information to configure their mobile devices to connect to it. However, the initial synchronization of GroupWise data to the Mobility Connector can be a time-consuming process and can significantly increase the load on the Synchronizer server.

If users connect their mobile devices to your Synchronizer system before the initial GroupWise data synchronization is complete, users might not receive all of the expected GroupWise data when they first connect. As a result, they might think that there is a synchronization problem, when in reality, all they need to do is wait a while for all of their data to arrive.

To prevent users from experiencing partial synchronizations of GroupWise data, you can block devices from connecting to your Synchronizer system until you are certain that all GroupWise data has synchronized to the Mobility Connector and it is ready for access by mobile device users. If you block device connections until you are ready, initial synchronization for users proceeds more smoothly.

IMPORTANT: Blocking incoming devices is highly recommended, especially for larger Synchronizer systems.

MOBILITY PACK INSTALLATION SUMMARY SHEET

Under *Block Incoming Devices*, mark whether you want to block incoming devices from connecting to your Synchronizer system until all GroupWise data has synchronized to the Mobility Connector. If you mark *Yes*, you must manually release the block before users can connect, as described in [“Blocking/Unblocking Incoming Devices before Initial Synchronization”](#) in [“Mobility Connector Configuration”](#) in the *Mobility Connector Configuration Guide*.

2.1.8 Planning the Data Synchronizer Database

When you run the Mobility Pack Installation program, it creates a PostgreSQL database that is used to store the Synchronizer system configuration information that you see in Synchronizer Web Admin. It also stores pending events when synchronization is interrupted.

The Synchronizer database is named `datasync`, and the user that has access is named `datasync_user`. You must supply the password for the Synchronizer database user.

MOBILITY PACK INSTALLATION SUMMARY SHEET

Under *Synchronizer Database*, specify the password that you want to use for the Synchronizer database.

The Mobility Connector uses a secondary database named `mobility` to store events when synchronization between the Mobility Connector and mobile devices is interrupted. This includes the email, contacts, appointments, calendars, and attachments that are synchronizing to and from mobile devices. The `mobility` database initially uses the same user name and password as the `datasync` database.

If you need to change the password on either of these databases after you have installed the Mobility Pack, see:

- ◆ [“Changing the Synchronizer Database Password”](#) in [“Synchronizer System Management”](#) in the *Mobility Pack Administration Guide*
- ◆ [“Changing the Mobility Connector Database Password”](#) in [“Mobility Connector Configuration”](#) in the *Mobility Connector Configuration Guide*

2.1.9 Establishing Data Synchronizer System Security

Configuration and administration of your Synchronizer system is performed through Synchronizer Web Admin. From Synchronizer Web Admin, you can:

- ◆ Add users, resources, and groups to your Synchronizer system
- ◆ Start, stop, configure, and monitor the connectors
- ◆ Reconfigure the connection to your LDAP server

To protect your Synchronizer system operation and configuration, you must choose one LDAP administrator user to access Synchronizer Web Admin. This LDAP user becomes the initial Synchronizer administrator. For simplest administration, use the LDAP Admin user or an admin-equivalent user.

If you prefer to establish a Synchronizer administrator user with fewer rights than the LDAP Admin user, make sure the user has sufficient rights to read the User and Group objects that you need to access as you add users to connectors in Synchronizer Web Admin.

Make sure that you know this administrator user’s password.

MOBILITY PACK INSTALLATION SUMMARY SHEET

Under *Synchronizer Web Admin*, specify the LDAP administrator user name and password that you want to grant access to Synchronizer Web Admin.

You can add more users as Synchronizer administrators after installation, as described in “[Setting Up Multiple Synchronizer Administrator Users](#)” in “[Synchronizer System Management](#)” in the *Mobility Pack Administration Guide*.

2.1.10 Registering for Automatic Updates from the Novell Customer Center

When you create a new Synchronizer system, the Mobility Pack Installation program can help you register to receive automatic Mobility Pack software updates from the Novell Customer Center.

Before you run the Installation program, you need to know the email address that is associated with your Novell Login account for the Novell Customer Center. You also need to log in to the Customer Center and obtain that activation code necessary to register for automatic software updates.

To obtain your Mobility Pack activation code:

- 1 Log in to the [Novell Customer Center](http://www.novell.com/customercenter) (<http://www.novell.com/customercenter>).
- 2 In the *Select an Organization to Manage* drop-down list, select your organization that is entitled to the Mobility Pack.
- 3 Under *My Products*, select *Novell Data Synchronizer Mobility Pack version_number*.
Replace *version_number* is the current Mobility Pack version number.
- 4 Locate the Mobility Pack activation code and save it for future reference.

MOBILITY PACK INSTALLATION SUMMARY SHEET

Under *Novell Customer Center Registration*, specify the email address that you used to log in with and the activation code you obtained from the Novell Customer Center.

With this information, the Mobility Pack Installation program registers you to receive future Mobility Pack updates through the Mobility-1.2-Updates channel.

2.2 Preparing to Install the Mobility Pack Software

The Mobility Pack Installation program cannot run successfully unless you have properly prepared the environment where you run it.

- ♦ [Section 2.2.1, “Preparing the Linux Server,” on page 26](#)
- ♦ [Section 2.2.2, “Preparing the Network,” on page 27](#)
- ♦ [Section 2.2.3, “Disabling an Existing Web Server,” on page 28](#)
- ♦ [Section 2.2.4, “Verifying GroupWise System Availability,” on page 28](#)
- ♦ [Section 2.2.5, “Verifying Certificate Availability,” on page 28](#)

2.2.1 Preparing the Linux Server

- 1 For best security, select a Linux server that is inside your DMZ as the location for your Synchronizer system.
- 2 Make sure that the Linux server where you plan to install the Mobility Pack meets the system requirements listed in [Section 1.3, “Mobility Pack System Requirements,” on page 11](#).
- 3 Make sure that the Synchronizer server has a static IP address.
- 4 Make sure that the Linux operating system media is available.

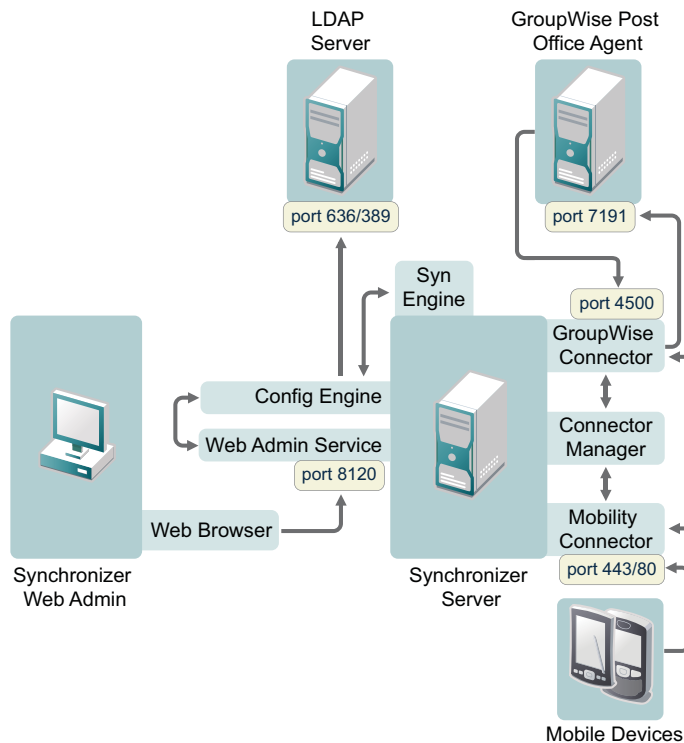
The Mobility Pack Installation program might need to install additional operating system RPMs that are required by the Mobility Pack. The Mobility Pack Installation program can access the operating system files on a DVD or in a repository that is available from an FTP site or a Web server.

- 5 Continue with [Preparing the Network](#).

2.2.2 Preparing the Network

- 1 Make sure that any firewalls between the Synchronizer server and other applications have been configured to allow communication on the following ports:

Port Number	On Server	Description
636/389	LDAP	LDAP server secure or non-secure port
7191	POA	GroupWise Post Office Agent (POA) SOAP port
4500	Synchronizer	GroupWise Connector listening port for event notifications
443/80	Synchronizer	Mobile device secure or non-secure port
8120	Synchronizer	Synchronizer Web Admin port



The GroupWise Connector initially communicates with the POA that you specify during Mobility Pack installation on the SOAP port that you specify. As users connect their mobile devices, the GroupWise Connector determines from the initial POA the IP addresses and port numbers of all POAs where mobile device users have their mailboxes. Therefore, the GroupWise Connector can communicate with multiple POAs throughout your GroupWise system.

- 2 Continue with [Disabling an Existing Web Server](#).

2.2.3 Disabling an Existing Web Server

If necessary, stop and disable any existing Web server that is currently running on the Synchronizer server.

For example, to stop the Apache Web server and its associated instance of Tomcat:

- 1 In a terminal window on the Synchronizer server, become root by entering `su -` and the root password.
- 2 Enter the following commands to stop Apache and Tomcat:

```
/etc/init.d/tomcat6 stop  
/etc/init.d/apache2 stop
```

- 3 Enter the following commands to make sure that Apache and Tomcat do not start again when you reboot the Synchronizer server:

```
chkconfig --del apache2  
chkconfig --del tomcat6
```

- 4 Continue with [Verifying GroupWise System Availability](#).

2.2.4 Verifying GroupWise System Availability

- 1 Make sure that the GroupWise trusted application key for the GroupWise Connector is accessible to the Mobility Pack Installation program on the Synchronizer server.

For more information, see [“GroupWise Trusted Application” on page 21](#).

- 2 Make sure that the GroupWise POA that the GroupWise Connector will communicate with is configured for SOAP.

For more information, see [“Supporting SOAP Clients” in “Post Office Agent” in the *GroupWise 2012 Administration Guide*](#).

- 3 Make sure that the GroupWise POA is currently running.
- 4 Continue with [Verifying Certificate Availability](#).

2.2.5 Verifying Certificate Availability

- 1 (Conditional) If you have a signed certificate from a certificate authority (CA) as required for configuring secure HTTP connections with mobile devices:

- 1a Make sure that the certificate file is accessible to the Mobility Pack Installation program on the Synchronizer server.
- 1b (Conditional) If the key file that you received with the certificate included a password, make sure that the password has been removed.
- 1c (Conditional) If you received the certificate as multiple files, make sure that you have combined the files into one certificate file.

For more information, see [“Securing Communication between the Mobility Connector and Mobile Devices” in “Synchronizer System Security” in the *Mobility Pack Administration Guide*](#).

- 2 (Conditional) If you chose to use YaST to generate a self-signed certificate, make sure that it was created to include the specific DNS hostname of the Synchronizer server.
- 3 If possible, do not use a wildcard certificate.

For best results, use a certificate that is created specifically for the Synchronizer server.

- 4 Continue with [Installing and Setting Up a Data Synchronizer System](#).

For device-specific certificate issues, see [Data Synchronizer Mobility Connector SSL Issues \(http://wiki.novell.com/index.php/Data_Synchronizer_Mobility_Connector_SSL_Issues\)](http://wiki.novell.com/index.php/Data_Synchronizer_Mobility_Connector_SSL_Issues).

2.3 Installing and Setting Up a Data Synchronizer System

You should already have reviewed [Chapter 2.1, “Planning a Data Synchronizer System,”](#) on page 15, filled out the [Mobility Pack Installation Summary Sheet](#), and completed the tasks in [Section 2.2, “Preparing to Install the Mobility Pack Software,”](#) on page 26.

NOTE: If you are setting up a multi-server Synchronizer system, you should have a Summary Sheet for each Synchronizer server. Each Synchronizer server is independent of other Synchronizer servers, so you can set them up in whatever order is convenient given the overall configuration of your Synchronizer system.

The following sections step you through the process of installing the Mobility Pack and configuring a Synchronizer server.

- ♦ [Section 2.3.1, “Obtaining the Mobility Pack ISO,”](#) on page 29
- ♦ [Section 2.3.2, “Running the Mobility Pack Installation Program,”](#) on page 29
- ♦ [Section 2.3.3, “Checking the Status of the Data Synchronizer Services,”](#) on page 32
- ♦ [Section 2.3.4, “Checking the Status of the Connectors,”](#) on page 32
- ♦ [Section 2.3.5, “Managing Initial Device Synchronization,”](#) on page 34
- ♦ [Section 2.3.6, “Helping Mobile Device Users Understand Synchronization,”](#) on page 35
- ♦ [Section 2.3.7, “Testing Your Synchronizer System,”](#) on page 35
- ♦ [Section 2.3.8, “Uninstalling the Mobility Pack,”](#) on page 35

2.3.1 Obtaining the Mobility Pack ISO

- 1 On [Novell Downloads \(http://download.novell.com\)](http://download.novell.com), click *Search Patches* to display Novell Patch Finder.

IMPORTANT: The Mobility Pack software is located in the *Patches* list, not the *Products* list.

- 2 Select *Data Synchronizer*, then click *Search*.
- 3 Under the current release of the Mobility Pack, click the current patch.
- 4 Click *Proceed to Download*, then follow the online instructions to download the Mobility Pack ISO to a convenient temporary directory on the Synchronizer server.
- 5 Continue with [Running the Mobility Pack Installation Program](#).

2.3.2 Running the Mobility Pack Installation Program

- 1 Make sure that you know the location where the Mobility Pack ISO was downloaded on the Synchronizer server:

```
novell-data-synchronizer-mobility-pack-x86_64-build_number.iso
```

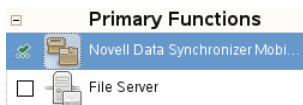
- 2 On your Linux desktop, click *Computer > YaST*.

- 3 Enter the root password.
- 4 Under *Groups*, click *Software*, then click *Add-On Products*.
- 5 On the Installed Add-On Products page, click *Add*, select *Local ISO Image*, then click *Next*.

- 6 In the *Repository Name* field, specify a name for the repository that will hold the Mobility Pack software, such as *Mobility Pack*.
- 7 In the *Path to ISO Image* field, specify the full path name of the ISO file from [Step 1](#), then click *Next*.

IMPORTANT: Do not try to browse to the ISO file on SUSE Linux Enterprise Server 11 SP1.

- 8 Accept the License Agreement, then click *Next*.
- 9 Under *Primary Functions*, select *Novell Data Synchronizer Mobility Pack*.



- 10 Click *Accept* to start the installation.
- 11 Click *Continue* to acknowledge the automatic changes to other aspects of your system that will be made as the Mobility Pack software is installed.

IMPORTANT: Do not click *Next* at this point.

- 12 After the software has been installed, click *Change > Mobility Pack Configuration* to configure your Synchronizer system.
- 13 Use the information that you have gathered on the [Mobility Pack Installation Summary Sheet](#) to provide the information that the Mobility Pack Installation program prompts you for, clicking *Next* to move from page to page.

LDAP Server Settings:

[LDAP Server IP Address or Hostname](#)

[LDAP Port](#)

[Secure](#)

[LDAP Admin DN](#)

[LDAP Admin Password](#)

Data Synchronizer Settings:

[LDAP User Container](#)

[LDAP Group Container](#)

[Data Synchronizer Admin DN](#)

[Data Synchronizer Database Password](#)

GroupWise Connector Settings:

[Trusted Application Name](#)

[Trusted Application Key File](#)

[GroupWise Post Office Agent IP Address or Hostname](#)

[SOAP Port](#)

[Secure](#)

Mobility Connector Settings:

[Device Port](#)

[Secure](#)

[Generate Self-Signed Certificate](#)

[Enter Certificate File](#)

[Block Incoming Devices](#)

[GroupWise Address Book User](#)

Add Users and Groups:

[Users](#)

[Groups](#)

Novell Customer Center Registration:

[Customer Center Email Login](#)

[Mobility Pack Activation Code](#)

- 14 On the Mobility Pack Configuration page, click *Next* to save the configuration settings and set up your Synchronizer system.
You see the Novell Data Synchronizer Mobility Pack listed on the Installed Add-on Products page.
- 15 Click *OK* to return to the main YaST page.

If you encounter any problems during the installation, check the Mobility Pack Installation program log file for information about the problem:

```
/var/log/datasync/install.log
```

For additional assistance, see [Appendix A, “Mobility Pack Installation Troubleshooting,”](#) on page 49.

The Mobility Pack Installation program creates the following directories and files:

```
/opt/novell/datasync
/etc/datasync
/etc/init.d/datasync*
/usr/sbin/rcdatasync*
/var/lib/datasync
/var/log/datasync
/var/run/datasync
```

IMPORTANT: Although you use the YaST Add-On Products installer to install the Mobility Pack, you must use the `uninstall.sh` script to uninstall it. For instructions, see [Section 2.3.8, “Uninstalling the Mobility Pack,”](#) on page 35. If you do not uninstall the Mobility Pack correctly, you cannot install the next version.

2.3.3 Checking the Status of the Data Synchronizer Services

The Mobility Pack Installation program should start the Synchronizer services for you.

- 1 In a terminal window on the Synchronizer server, become root by entering `su -` and the root password.
- 2 Check the status of the Synchronizer services:

```
rcdatasync status
```

If the installation proceeded normally, the four Synchronizer services should be running.

Use the following commands as root to manually start and stop all the Synchronizer services:

```
rcdatasync start
rcdatasync restart
rcdatasync stop
```

The Synchronizer services can also be managed independently, as described in [“Synchronizer Services”](#) in the *Mobility Pack Administration Guide*.

2.3.4 Checking the Status of the Connectors

The Mobility Pack Installation program starts the GroupWise Connector and the Mobility Connector for you. Use Synchronizer Web Admin to check connector status.

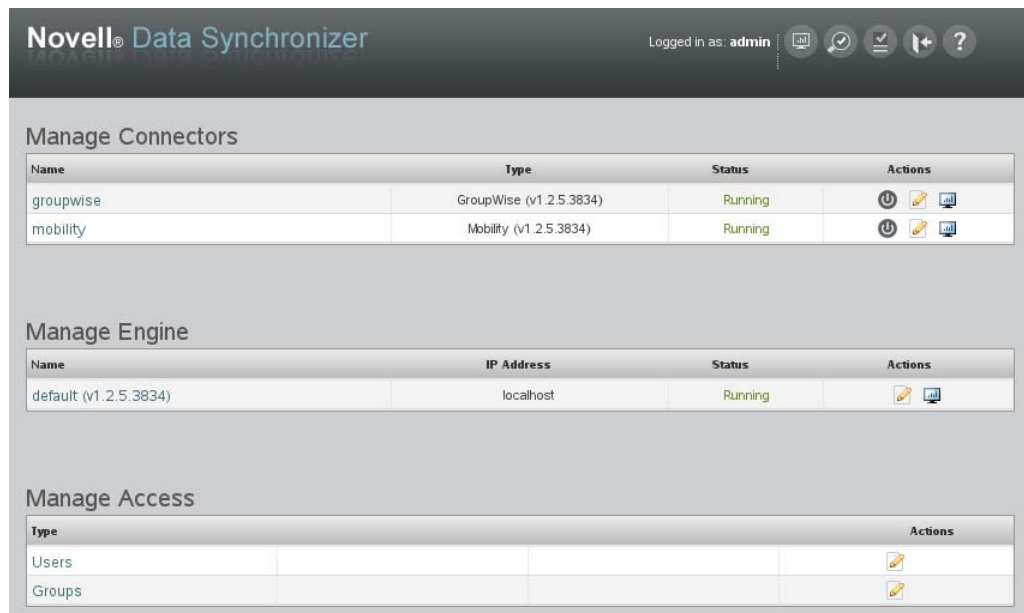
- 1 In a Web browser, display Synchronizer Web Admin:

```
https://data_synchronizer_server:8120
```

Replace `data_synchronizer_server` with the IP address or DNS hostname of the server where you installed the Mobility Pack.

- 2 Log in as the Synchronizer administrator that you set up during installation.

If the installation proceeded normally, the GroupWise Connector and the Mobility Connector should be running.



- 3 (Conditional) If one or both connectors are not yet running:
 - 3a Start the GroupWise Connector first.
 - 3b Start the Mobility Connector second.
 - 3c (Conditional) If you encounter problems starting the connectors, see [Appendix A, "Mobility Pack Installation Troubleshooting,"](#) on page 49.
See also ["Working with Log Files"](#) in ["Synchronizer System Management"](#) in the *Mobility Pack Administration Guide*.
- 4 Verify that the users that you selected during installation have been added to your Synchronizer system:
 - 4a Under *Manage Access*, click *Users*.
 - 4b Verify that all users have been successfully added.
 - 4c Click *Home* to return to the main Synchronizer Web Admin page.
- 5 Verify that the groups that you selected during installation have been added to your Synchronizer System:
 - 5a Under *Manage Access*, click *Groups*.
 - 5b Verify that all groups have been successfully added.
 - 5c Click *Home* to return to the main Synchronizer Web Admin page.
- 6 (Conditional) If any users or groups were not successfully added during installation, you can add them manually afterwards and then verify that they have been added.
See [Appendix A, "Mobility Pack Installation Troubleshooting,"](#) on page 49 for instructions.

2.3.5 Managing Initial Device Synchronization

From your point of view as the Synchronizer administrator, initial synchronization means that GroupWise data has been synchronized from the GroupWise Connector to the Mobility Connector and is ready to be synchronized to users' mobile devices as soon as users configure their mobile devices to connect to the Synchronizer system.

IMPORTANT: If users' LDAP user names are not the same as their GroupWise user IDs, you must update their application names in Synchronizer Web Admin before initial device synchronization can succeed. For instructions, see "[Setting a User's Application Name](#)" in "[User Management](#)" in the *Mobility Pack Administration Guide*.

Initial device synchronization provides the following synchronization of GroupWise items:

- ◆ **Contacts** from all personal address books, excluding the Frequent Contacts address book

You can change this personal address book selection setting for users after installation in Synchronizer Web Admin, as described in "[Customizing a User's Synchronization Settings](#)" in "[User Management](#)" in the *Mobility Pack Administration Guide*. Users can also change their own synchronization settings on the [User Options](#) page in Synchronizer Web Admin.

The GroupWise Address Book cannot be synchronized to mobile devices. However, users can still access individual contacts in the GroupWise Address Book, if their mobile devices can do a Global Address List (GAL) lookup. As an alternative, users can create a personal address book that is a subset of the GroupWise Address Book to synchronize to their mobile devices.

- ◆ **Calendar items** (appointments and reminder notes) from the last two weeks and all future items

Shared calendars are synchronized only for the owners of the shared calendars. If shared calendars are very important to users, shared calendar owners can post them to the Internet using the GroupWise Calendar Publishing Host, as described in "[Publishing Personal Calendars on the Internet](#)" in "[Calendar](#)" in the *GroupWise 2012 Windows Client User Guide*. After the owner publishes the calendar, other users can view the calendar URL in the Web browser on their mobile devices. For Calendar Publishing Host setup instructions, see "[Installing the GroupWise Calendar Publishing Host](#)" in the *GroupWise 2012 Installation Guide*.

- ◆ **Email messages** in the Mailbox folder for the last three days

If users want to receive more existing email messages on their devices, they can configure their mobile devices to request additional existing email messages.

- ◆ **Folders** in the Cabinet (but not items in folders until users request them by opening folders on their mobile devices)

When you add several users to the Mobility Connector at the same time, the Mobility Connector performs initial synchronization for four users at once. When it finishes with one of the four users, it starts on another user.

In Synchronizer Web Admin, you can monitor the progress of data synchronization from GroupWise to the Mobility Connector, as described in "[Monitoring Mobility Connector Synchronization Status](#)" in "[Synchronization Monitoring and Management](#)" in the *Mobility Connector Configuration Guide*.

You should complete this initial synchronization before you notify users to configure their mobile devices. Initial synchronization can take a substantial amount of time, depending on the amount of data to synchronize. Occasionally, initial synchronization fails, and troubleshooting is required.

IMPORTANT: If you selected *Block Incoming Devices* during Mobility Pack installation, you must unblock incoming devices in Synchronizer Web Admin after all GroupWise data has synchronized to the Mobility Connector. Follow the instructions in “[Blocking/Unblocking Incoming Devices before Initial Synchronization](#)” in “[Mobility Connector Configuration](#)” in the *Mobility Connector Configuration Guide*.

2.3.6 Helping Mobile Device Users Understand Synchronization

To help your mobile device users get started efficiently, notify them of the following information:

- ♦ Users must configure their mobile devices to connect to the Synchronizer system, as described in the [Mobility Quick Start for Mobile Device Users](http://www.novell.com/documentation/datasync_connectors1/pdfdoc/mobilityconnect12_qs/mobilityconnect12_qs.pdf) (http://www.novell.com/documentation/datasync_connectors1/pdfdoc/mobilityconnect12_qs/mobilityconnect12_qs.pdf).
- ♦ For device-specific information, see the [Data Synchronizer Mobility Connector Devices Wiki](http://wiki.novell.com/index.php/Data_Synchronizer_Mobility_Connector_Devices) (http://wiki.novell.com/index.php/Data_Synchronizer_Mobility_Connector_Devices).

IMPORTANT: These two sources of information can help eliminate the need for mobile device users to contact you with functional and device-specific questions as they start synchronizing GroupWise data to their mobile devices.

2.3.7 Testing Your Synchronizer System

- 1 Test your Synchronizer system by logging into the GroupWise client and sending yourself an email message
- 2 Reply to the message from your mobile device.
If the message synchronizes to your mobile device and the reply on your mobile device synchronizes back to GroupWise, your basic Synchronizer system is up and running.
- 3 To customize and expand your Synchronizer system, see [Chapter 2.5, “What’s Next,” on page 38](#).

2.3.8 Uninstalling the Mobility Pack

IMPORTANT: When you uninstall the Mobility Pack software, certificate files are also deleted. If you have obtained commercially signed certificates for use in your Synchronizer system, back them up before you uninstall the Mobility Pack software.

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

```
/opt/novell/datasync
```
- 3 Run the Synchronizer Uninstallation script:

```
./uninstall.sh
```

The Uninstallation script stops the Synchronizer services and the PostgreSQL database server, uninstalls all Synchronizer and connector RPMs, drops the Synchronizer and Mobility Connector PostgreSQL databases, and deletes the following directories and files from the Synchronizer server:

```
/opt/novell/datasync
/etc/datasync
/etc/init.d/datasync*
/var/lib/datasync
/var/log/datasync
/var/run/datasync
/var/lib/pgsql
```

- 4 Remove the Mobility Pack repository from the Linux server.



IMPORTANT: If you do not remove the existing Mobility Pack repository, you cannot successfully install the next version of the Mobility Pack software.

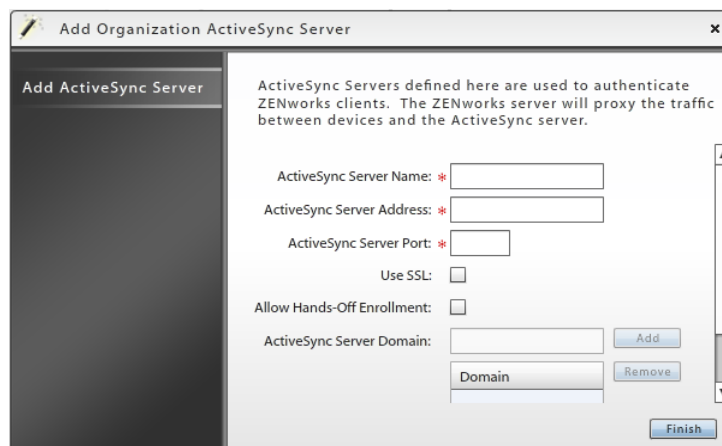
- 4a In YaST, click *Software > Software Repositories*.
- 4b Select the Mobility Pack repository, then click *Delete*.

2.4 Integrating with Novell ZENworks Mobile Management

ZENworks Mobile Management is a mobile device management solution that provides centralized management and control of mobile devices throughout your enterprise network. For complete information, see [the ZENworks Mobile Management Documentation Web site \(http://www.novell.com/documentation/zenworksmobile2\)](http://www.novell.com/documentation/zenworksmobile2).

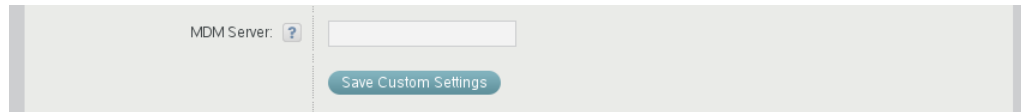
You can configure ZENworks Mobile Management to work with your Synchronizer system, so that all the powerful features of ZENworks Mobile Management are available for managing the mobile devices of your GroupWise users.




- 1 Configure ZENworks Mobile Management with information about your Synchronizer server:
 - 1a Log in to the ZENworks Mobile Management dashboard.
 - 1b Click *Organization*  > *ActiveSync Servers*  to list your existing ActiveSync servers.
 - 1c Click *Add ActiveSync Server*.



- 1d In the *ActiveSync Server Name* field, specify the DNS hostname of your Synchronizer server, such as `gwsync`.

- 1e In the *ActiveSyncServer Address* field, specify the fully qualified hostname of your Synchronizer server, such as `gwsync.provo.novell.com`.
 - 1f In the *ActiveSync Server Port* field, specify 443 for a secure connection.
 - 1g Select *Use SSL*.
 - 1h In the *Domain* field, specify the Internet domain where the your Synchronizer server is located, such as `novell.com`, then click *Add*.
 - 1i Click *Finish* to save the information about your Synchronizer server.
 - 1j (Optional) Configure additional ZENworks Mobile Management servers with information about your Synchronizer server.
- 2 Make sure that your GroupWise mobile device users have been added to ZENworks Mobile Management.
 - 3 Configure your Synchronizer system with information about ZENworks Mobile Management:
 - 3a Log in to [Synchronizer Web Admin](#).
 - 3b Click the Mobility Connector, then scroll down to the *MDM Server* field.



- 3c Specify the IP address of the ZENworks Mobile Management server where you provided information about your Synchronizer server.
 - 3d (Conditional) If you configured multiple ZENworks Mobile Management servers with information about your Synchronizer server, specify the IP addresses in a comma-delimited list.
 - 3e Click *Save Custom Settings*.
 - 3f Click *Home* on the menu bar to return to the main Synchronizer Web Admin page.
 - 3g In the *Actions* column for the connector, click *Stop*  to stop the connector, then click *Start*  to start the connector with the new setting.
- 4 View the GroupWise mobile device users that have been added to ZENworks Mobile Management:
 - 4a From the ZENworks Mobile Management dashboard, click *Users*.
 - 4b Scroll horizontally to view various types of information about GroupWise users and their mobile devices, including:
 - ♦ Time of last synchronization
 - ♦ Phone number
 - ♦ Mobile device model
 - ♦ Mobile device operating system and version
 - 5 Verify that the configuration is successful:
 - 5a In [Synchronizer Web Admin](#), click *Monitoring*  in the *Actions* column for the Mobility Connector to display the Connector Monitoring Information page.
 - 5b Add a new device through ZENworks Mobile Management.
 - 5c When the device appears on the Connector Monitoring Information page, verify that it has `_zmm` appended to the device ID.

The `_zmm` on the device ID shows that the user connected the device to your Synchronizer system through ZENworks Mobile Management.

If you require existing mobile device users to re-add their devices through ZENworks Mobile Management, they initially have two device IDs, one with `_zmm` and one without. This prevents ZENworks Mobile Management requests from conflicting with regular device requests. The old device ID disappears from the Connector Monitoring Information page in about a month.

2.5 What's Next

- ♦ [Section 2.5.1, "Managing Your Synchronizer System," on page 38](#)
- ♦ [Section 2.5.2, "Managing the Mobility Connector," on page 38](#)
- ♦ [Section 2.5.3, "Managing the GroupWise Connector," on page 39](#)

2.5.1 Managing Your Synchronizer System

After your Synchronizer system is fully installed and running, you can refer to sections in the *Mobility Pack Administration Guide* for instructions on maintaining your Synchronizer system:

- ♦ ["Synchronizer Services"](#)
- ♦ ["Synchronizer Web Admin"](#)
- ♦ ["Synchronizer System Management"](#)
- ♦ ["User Management"](#)

See also ["Monitoring Your Synchronizer System"](#).

2.5.2 Managing the Mobility Connector

After the Mobility Connector is successfully synchronizing data for the initial set of mobile device users, you can refer to sections in the *Mobility Connector Configuration Guide* for instructions on maintaining and customizing the Mobility Connector:

- ♦ ["Synchronization Monitoring and Management"](#)
- ♦ ["Blocking/Unblocking Incoming Devices before Initial Synchronization"](#)
- ♦ ["Using GroupWise Authentication Instead of LDAP Authentication for Mobile Devices"](#)
- ♦ ["Enabling a Device Password Security Policy"](#)
- ♦ ["Preventing New Devices from Connecting Automatically"](#)
- ♦ ["Controlling the Maximum Number of Devices per User"](#)
- ♦ ["Removing Unused Devices"](#)
- ♦ ["Controlling Maximum Item Synchronization"](#)
- ♦ ["Controlling Maximum Attachment Size"](#)
- ♦ ["Binding to a Specific IP Address"](#)
- ♦ ["Enabling and Disabling SSL for Device Connections"](#)
- ♦ ["Changing the Address Book User"](#)
- ♦ ["Changing the Mobility Connector Database Password"](#)
- ♦ ["Maintaining the Mobility Connector Database"](#)

2.5.3 Managing the GroupWise Connector

After the GroupWise Connector is successfully synchronizing data for the initial set of GroupWise users, you can refer to sections in the [GroupWise Connector Configuration Guide](#) for instructions on maintaining and customizing the GroupWise Connector:

- ◆ [“GroupWise Connector Monitoring”](#)
- ◆ [“Selecting GroupWise Items to Synchronize”](#)
- ◆ [“Controlling Maximum Attachment Size”](#)
- ◆ [“Increasing GroupWise Connector Reliability or Performance”](#)
- ◆ [“Ignoring Old GroupWise Items”](#)
- ◆ [“Clearing Accumulated GroupWise Events”](#)
- ◆ [“Blocking/Unblocking Hidden Attachments”](#)
- ◆ [“Changing the GroupWise Connector Listening Port”](#)
- ◆ [“Enabling and Disabling SSL for POA SOAP Connections”](#)
- ◆ [“Matching GroupWise Configuration Changes”](#)
- ◆ [“Configuring the GroupWise Connector with an External IP Address and Port”](#)
- ◆ [“Preventing Synchronization of Archived Items”](#)
- ◆ [“Modifying or Preventing Synchronization of Specified Items”](#)
- ◆ [“Enabling the SOAP/SUDS Debug Log”](#)

2.6 Mobility Pack Installation Summary Sheet

Installation Script Field	Value for Your Synchronizer System	Explanation
Mobility Pack Server Information: <ul style="list-style-type: none">◆ IP address:◆ Hostname:		Section 2.1.2, “Selecting Mobility Pack Servers,” on page 16.
LDAP Server Information: <ul style="list-style-type: none">◆ IP address:◆ Hostname:◆ Secure LDAP Port?<ul style="list-style-type: none">◆ Yes Default port: 636◆ No Default port: 389		“LDAP Server Network Information” on page 17.
LDAP Server Credentials: <ul style="list-style-type: none">◆ LDAP administrator DN:◆ LDAP administrator password:		“LDAP Server Credentials” on page 17.

Installation Script Field	Value for Your Synchronizer System	Explanation
LDAP Containers:	<ul style="list-style-type: none"> ◆ Users: ◆ Groups: 	“LDAP User and Group Containers” on page 17.
Synchronizer Web Admin:	<ul style="list-style-type: none"> ◆ Web Admin login DN: ◆ Web Admin password: 	Section 2.1.9, “Establishing Data Synchronizer System Security,” on page 25.
Synchronizer Database:	<ul style="list-style-type: none"> ◆ Database name: <code>datasync</code> ◆ Database user: <code>datasync_user</code> ◆ Database password: 	Section 2.1.8, “Planning the Data Synchronizer Database,” on page 25.
GroupWise Trusted Application:	<ul style="list-style-type: none"> ◆ Trusted application name: ◆ Trusted application key file: 	“GroupWise Trusted Application” on page 21.
GroupWise Post Office Agent:	<ul style="list-style-type: none"> ◆ POA IP address or DNS hostname: ◆ POA SOAP port: Default port: 7191 ◆ Secure: Yes / No 	“GroupWise Post Office Agent” on page 22.
Mobile Device Port:	<ul style="list-style-type: none"> ◆ Secure LDAP port: Yes Default port: 443 <ul style="list-style-type: none"> ◆ Generate self-signed certificate? <ul style="list-style-type: none"> ◆ Yes ◆ No Certificate file: ◆ Secure LDAP port: No Default port: 80 	“Mobile Device Port” on page 23 and “Server Certificate” on page 24.
Block Incoming Devices:	<ul style="list-style-type: none"> ◆ Yes ◆ No 	“Incoming Devices” on page 24.
GroupWise Address Book User:		“GroupWise Address Book User” on page 22.

Installation Script Field	Value for Your Synchronizer System	Explanation
Add Users:	<ul style="list-style-type: none"> ◆ ◆ ◆ ◆ ◆ 	Section 2.1.4, "Planning How to Add Users," on page 19.
Add Groups:	<ul style="list-style-type: none"> ◆ ◆ ◆ ◆ ◆ 	Section 2.1.4, "Planning How to Add Users," on page 19.
Novell Customer Center Registration:	<ul style="list-style-type: none"> ◆ Register later ◆ Register now <ul style="list-style-type: none"> ◆ Email address ◆ Activation code 	Section 2.1.10, "Registering for Automatic Updates from the Novell Customer Center," on page 26.
Mailbox Access:	<ul style="list-style-type: none"> ◆ LDAP (network) passwords ◆ GroupWise (mailbox) passwords 	"LDAP Passwords vs. GroupWise Passwords" on page 18.
Enable GroupWise Authentication?	<ul style="list-style-type: none"> ◆ Yes ◆ No 	"LDAP Passwords vs. GroupWise Passwords" on page 18.

3 Mobility Pack Update

Updates to the Mobility Pack are released regularly. Some updates are major version updates, such as Mobility Pack 1.1 to Mobility Pack 1.2. Other updates are minor updates to an existing version, such as Mobility Pack 1.2 to Mobility Pack 1.2.x. All Mobility Pack updates can be installed using the same procedure.

- ♦ [Section 3.1, “Obtaining the Latest Mobility Pack 1.2 ISO,” on page 43](#)
- ♦ [Section 3.2, “Installing the Mobility Pack Update,” on page 44](#)

3.1 Obtaining the Latest Mobility Pack 1.2 ISO

The latest Mobility Pack 1.2 ISO can be obtained from either of two locations:

- ♦ [Section 3.1.1, “Novell Customer Center,” on page 43](#)
- ♦ [Section 3.1.2, “Novell Downloads Web Site,” on page 43](#)

3.1.1 Novell Customer Center

- 1 Log in to the [Novell Customer Center \(http://www.novell.com/customercenter\)](http://www.novell.com/customercenter).
- 2 In the *Change Organization* drop-down list, select your organization that is entitled to the Mobility Pack.
- 3 Click *My Products*, then click *Novell Data Synchronizer*.
- 4 Under *Novell Data Synchronizer*, locate *Novell Data Synchronizer Mobility Pack 1.2*, then click *Patches/Updates* to display Novell Patch Finder.
- 5 Expand *Data Synchronizer Mobility Pack 1.2*, then click *Novell Data Synchronizer Mobility Pack 1.2.x*.
- 6 Click *Proceed to Download*, then follow the online instructions to download the latest Mobility Pack 1.2 ISO to a convenient temporary directory on the Synchronizer server.
- 7 Skip to [“Installing the Mobility Pack Update” on page 44](#).

3.1.2 Novell Downloads Web Site

- 1 On [Novell Downloads \(http://download.novell.com\)](http://download.novell.com), click *Search Patches* to display Novell Patch Finder.

IMPORTANT: The Mobility Pack 1.2 software is located in the *Patches* list, not the *Products* list.

- 2 Select *Data Synchronizer*, then click *Search*.
- 3 Under *Data Synchronizer Mobility Pack 1.2*, click *Novell Data Synchronizer Mobility Pack 1.2.x*.

- 4 Click *Proceed to Download*, then follow the online instructions to download the latest Mobility Pack 1.2.x ISO to a convenient temporary directory on the Synchronizer server.
- 5 Continue with [Installing the Mobility Pack Update](#).

3.2 Installing the Mobility Pack Update

The following sections help you install and run the Mobility Pack update:

- [Section 3.2.1, “Using Patch CD Update in YaST,” on page 44](#)
- [Section 3.2.2, “Running the Mobility Pack Update Script,” on page 45](#)
- [Section 3.2.3, “Registering for Automatic Updates Later,” on page 46](#)

3.2.1 Using Patch CD Update in YaST

- 1 On your Linux desktop, click *Computer > YaST*.
- 2 Enter the root password.
- 3 Under *Groups*, click *Software*, then click *Patch CD Update*.
- 4 Click *Next* to start the update.
- 5 Select *Local ISO Image*, then click *Next*.
- 6 In the *Repository Name* field, specify a name for the repository for the Mobility Pack update software.
- 7 In the *Path to ISO Image* field, specify the full path name to the Mobility Pack update ISO file, then click *Next*.
- 8 Select *Yes* to accept the License Agreement, then click *Next*.
- 9 On the Migration Repositories page, click *Next*.
- 10 On the Distribution Upgrade Settings page, click *Next*.
- 11 In the Confirm Update dialog box, click *Start Update*.
- 12 On the Novell Customer Center Configuration page, select *Configure Now*, click *Next*, wait while the configuration takes place, then click *OK* when the configuration is complete.
This creates and enables the Mobility-1.2-Updates channel.
or
If you prefer not to configure the Synchronizer server for automatic updates now, click *Configure Later*, then click *Next*.
When you want to start receiving automatic updates, follow the instructions in [Section 3.2.3, “Registering for Automatic Updates Later,” on page 46](#).
- 13 On the Installation Completed page, click *Finish*.
- 14 Reboot the Synchronizer server.
- 15 Continue with [Running the Mobility Pack Update Script](#).

3.2.2 Running the Mobility Pack Update Script

Running the Update script updates the Synchronizer database (`datasync`) and the Mobility database (`mobility`) for use with the updated software.

- 1 Change to the following directory:

```
/opt/novell/datasync
```

- 2 Make sure that PostgreSQL is running:

```
rcpostgresql status
```

- 3 Run the Update script:

- 3a Enter the following command:

```
./update.sh
```

For some version updates, the update process finishes quickly. However, when the version update includes database schema modifications, the update process can be lengthy for a large database. You are prompted for confirmation to update:

```
The update process may take some time and the Novell Data Synchronizer
services will be shut down during this process. Are you sure you want to
update Novell Data Synchronizer?
```

- 3b Enter `yes` to start the update.

Starting in Mobility Pack 1.2.5, the logging levels have been improved, so that the Info logging level provides sufficient logging for a typical Synchronizer system. If you have set the logging level to Debug in an earlier version, you can now set it to Info and still get the logging you need to manage your Synchronizer system.

IMPORTANT: Info is the default logging 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 Synchronizer system.

For more information about logging levels, see [“Working with Log Files”](#) in [“Synchronizer System Management”](#) in the *Mobility Pack Administration Guide*.

The Update script prompts you:

```
Reset logging level for all Mobility Pack Services to Info?
```

- 3c Enter `yes` to reset the logging level to *Info* for all Synchronizer components.

Starting in Mobility Pack 1.2.5, you can contribute to the gathering of anonymous usage data about your Synchronizer system to help improve the Data Synchronizer product. For more information, see [“Managing Anonymous Feedback”](#) in [“Synchronizer System Management”](#) in the *Mobility Pack Administration Guide*.

The Update script prompts you:

```
Enable anonymous information to be automatically sent to Novell to improve
your GroupWise mobile experience?
```

- 3d Enter `yes` to participate in the gathering of anonymous feedback.

The Update script now shuts down the Synchronizer services, updates the Synchronizer database, then restarts the Synchronizer services.

For some version updates, the update process finishes quickly. However, the update process can take longer for a large database.

IMPORTANT: Do not cancel this process, even if it takes a very long time. Cancelling the process before it finishes can cause damage to the Mobility database.

When the Update script finishes, your updated Synchronizer system is ready for use.

3.2.3 Registering for Automatic Updates Later

If you choose not to configure the Synchronizer server to receive automatic updates when you update from Mobility Pack 1.1.x to Mobility Pack 1.2.x, you can perform the configuration at your convenience at a later time, perhaps when the next update becomes available.

- ♦ [“Obtaining the Mobility Pack Activation Code” on page 46](#)
- ♦ [“Registering to Receive the Update” on page 46](#)
- ♦ [“Installing the Update” on page 47](#)

Obtaining the Mobility Pack Activation Code

- 1 Log in to the [Novell Customer Center \(http://www.novell.com/customercenter\)](http://www.novell.com/customercenter).
- 2 In the *Select an Organization to Manage* drop-down list, select your organization that is entitled to the Mobility Pack.
- 3 Under *My Products*, select *Novell Data Synchronizer Mobility Pack version_number*.
Replace *version_number* is the current Mobility Pack version number.
- 4 Locate the Mobility Pack activation code and save it for future reference.

Registering to Receive the Update

- 1 In a terminal window on the Synchronizer server, enter the following command:

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

Replace *registration_code* with the Mobility Pack activation code that you obtained from the Novell Customer Center in [“Obtaining the Mobility Pack Activation Code” on page 46](#).

Replace *email_address* with the email address that you used to log in to the Novell Customer Center.

Notifications about future Mobility Pack updates will be sent to this email address. You can then choose when to install each update.

- 2 Enter the following command to verify that the Novell Update channel for the Mobility Pack has been added on your Synchronizer server:

```
zypper ca
```

This command lists all product-specific channels where you are registered to receive updates. The following Mobility Pack update channel should be listed:

Alias	Name
nu_novell_com:Mobility-1.2-Updates	Mobility-1.2-Updates

Installing the Update

When you are notified that the next update is available:

- 1 Enter the following command:

```
zypper up -r nu_novell_com:Mobility-1.2-Updates
```

Several Mobility Pack packages are listed for update through the channel.

- 2 Enter `yes` to start the update process.

A Mobility Pack Installation Troubleshooting

- ♦ [“The Mobility Pack Installation program does not behave as documented” on page 49](#)
- ♦ [“The Mobility Pack Installation program cannot communicate with the LDAP server” on page 49](#)
- ♦ [“You cannot add an LDAP group during Mobility Pack installation” on page 50](#)
- ♦ [“The Mobility Pack Installation program cannot communicate with a needed application” on page 50](#)
- ♦ [“The Mobility Pack Installation program cannot communicate with the GroupWise POA” on page 50](#)
- ♦ [“The Synchronizer services do not start” on page 51](#)
- ♦ [“Users added as part of an LDAP group during installation are not successfully added to both the GroupWise Connector and the Mobility Connector” on page 51](#)

See also:

- ♦ [“Mobility Connector Troubleshooting”](#) in the *Mobility Connector Configuration Guide*
- ♦ [“GroupWise Connector Troubleshooting”](#) in the *GroupWise Connector Configuration Guide*
- ♦ [“Working with Log Files”](#) in [“Synchronizer System Management”](#) in the *Mobility Pack Administration Guide*.

The Mobility Pack Installation program does not behave as documented

Possible Cause: You are trying to install the Mobility Pack on 32-bit hardware.

Action: Install the Mobility Pack on 64-bit hardware that meets the system requirements described in [Section 1.3.1, “Data Synchronizer Server Requirements,” on page 11](#).

Possible Cause: You are installing the Mobility Pack on SUSE Linux Enterprise Server 11 SP1, and you tried to browse to and select a file, such as the Mobility Pack ISO, the GroupWise trusted application key file, or a certificate file.

Action: Type the full path name to the file. A problem in SLES 11 SP1 prevents browsing to and selecting files during installation.

The Mobility Pack Installation program cannot communicate with the LDAP server

Possible Cause: A firewall is blocking communication between the Installation program and the LDAP server.

Action: Make sure 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.

Possible Cause: You specified the LDAP server settings incorrectly.

Action: Double-check the LDAP server settings you entered in the Installation program.

You cannot add an LDAP group during Mobility Pack installation

Possible Cause: The LDAP group is empty.

Action: In order to add an LDAP group during installation, you must add at least one user to the group.

The Mobility Pack Installation program cannot communicate with a needed application

Possible Cause: The required port number is not open.

Action: Review the list of required port numbers in [Section 2.2.2, "Preparing the Network," on page 27](#).

Action: Use `telnet` to test whether ports are open.

- 1 Enter the following command in a terminal window:

```
telnet application_host port_number
```

Replace *application_host* with the IP address or DNS hostname of the server where the application is running.

Replace *port_number* with the port number on which the Installation program is attempting to communicate with the application.

- 2 (Conditional) If the terminal windows blanks, with the cursor in the upper left corner, enter `quit` to exit the telnet session.

The port is open. The Installation program should be able to communicate with the application.

- 3 (Conditional) If a `Connection failed` message displays, open the port through the firewall to enable the Installation program to communicate with the application.

The Mobility Pack Installation program cannot communicate with the GroupWise POA

Possible Cause: A firewall is blocking communication between the Installation program and the POA server.

Action: Make sure that communication through the firewall is allowed on port 4500.

Possible Cause: The POA is not running.

Action: Start the POA.

Possible Cause: You specified the POA server settings incorrectly.

Action: Double-check the POA server settings you entered in the Installation program.

Possible Cause: There is a problem with the GroupWise trusted application key file.

Action: Re-create the GroupWise trusted application key file. You only need to fill in three fields in the Create Trusted Application dialog box in ConsoleOne: *Name*, *Location for Key File*, and *Name of Key File*. Do not fill in any other fields.

The Synchronizer services do not start

Possible Cause: PostgreSQL is not running on the Synchronizer server.

Action: Check the status of PostgreSQL on the Synchronizer server, and start it manually if necessary.

```
rcpostgresql status  
rcpostgresql start
```

Users added as part of an LDAP group during installation are not successfully added to both the GroupWise Connector and the Mobility Connector

Explanation: Under certain circumstances, a timing issue prevents users in an LDAP group from being successfully added to both connectors during installation.

Possible Cause: Varied.

Action: When users are not successfully added to your Synchronizer system during installation, you can add them after installation by using a phased approach that avoids occasional timing issues. Follow the instructions in [“The process of adding users does not proceed as expected”](#) in [“Synchronizer System Troubleshooting”](#) in the *Mobility Pack Administration Guide*.

B Documentation Updates

This section lists updates to the *Mobility Pack Installation Guide* that have been made for Mobility Pack 1.2.5. The information helps you to keep current on documentation updates and software updates.

The *Mobility Pack Installation Guide* has been updated on the following dates:

- ♦ [Section B.1, “January 28, 2013 \(Mobility Pack 1.2.5\),” on page 53](#)

B.1 January 28, 2013 (Mobility Pack 1.2.5)

Location	Change
Throughout the guide	Removed references to using other Data Synchronizer connectors with a Synchronizer system that is created by installing the Mobility Pack.
Mobility Pack Product Overview	
Section 1.1, “Synchronizer Components,” on page 7	Updated the system diagrams to show that the GroupWise Connector and the Mobility Connector now communicate directly with each other for improved performance.
Section 1.2.3, “Multiple Synchronizer Server System,” on page 10	Suggested using virtual machines when you need to support more users than a single Synchronizer server can accommodate.
Section 1.3.1, “Data Synchronizer Server Requirements,” on page 11	Removed SLES 11 Service Pack 1 from the list of supported operating systems.
Section 1.3.5, “Mobile Device Requirements,” on page 13	Added Windows 8 as a supported operating system.
Section 1.3.6, “Recommended Number of Devices,” on page 13	Increased the recommended number of devices for a Synchronizer server from 500 to 750.
Mobility Pack Installation	
Section 2.1.5, “Planning How To Add Resources,” on page 20	Introduced synchronizing resource mailboxes.
Section 2.4, “Integrating with Novell ZENworks Mobile Management,” on page 36	Improved the instructions for using ZENworks Mobile Management to manage mobile devices used by GroupWise users.
Mobility Update	
Section 3.2.2, “Running the Mobility Pack Update Script,” on page 45	Explained the new prompts that the Update script provides for changing the default logging level and for submitting anonymous feedback about your Synchronizer system to Novell.
