Installation Guide
Data Synchronizer Mobility Pack 1.2

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Novell.

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About This Guide

The *Novell Data Synchronizer Mobility Pack Installation Guide* helps you to understand and set up a Data Synchronizer system by installing the Data Synchronizer Mobility Pack, which consists of the Data Synchronizer services, the GroupWise Connector, and the Mobility Connector. The guide is divided into these sections:

- 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 47
- Appendix B, "Documentation Updates," on page 51

Audience

This guide is intended for network administrators who install and administer Data Synchronizer 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).

- Mobility Pack Readme
- *Mobility Pack Installation Guide*
- *Data Synchronizer System Administration Guide*

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

- Connector Readmes
- Connector Quick Starts
- Connector installation and configuration guides

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

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

- Data Synchronization Cool Solutions (http://www.novell.com/communities/coolsolutions/datasynchronizer)
- Data Synchronizer Mobility Connector Devices Wiki (https://vibe.novell.com/vibe/groupwise_mobility_devices)
- Data Synchronizer Connector Marketplace (http://www.novell.com/products/data-synchronizer/connectors)

1 Mobility Pack Product Overview

1.1 Data Synchronizer vs. the Mobility Pack

Novell Data Synchronizer: Allows personal information management (PIM) data such as email, appointments, tasks, and contacts to synchronize between enterprise email and collaboration applications such as Novell GroupWise and other collaboration applications. It is a bi-directional and many-to-many synchronization solution that can connect multiple collaboration applications and mobile devices, providing real-time, event-driven synchronization.

The Data Synchronizer Mobility Pack: Allows PIM data to synchronize specifically between GroupWise and mobile devices.

1.1.1 Data Synchronizer Capabilities

The Data Synchronizer Mobility Pack installs a Synchronizer system, the GroupWise Connector, and the Mobility Connector. This configuration is the next generation of mobile device support for GroupWise users. Many popular mobile device operating systems are supported, including Android, Apple, Maemo, Palm, Symbian, and Windows Mobile.
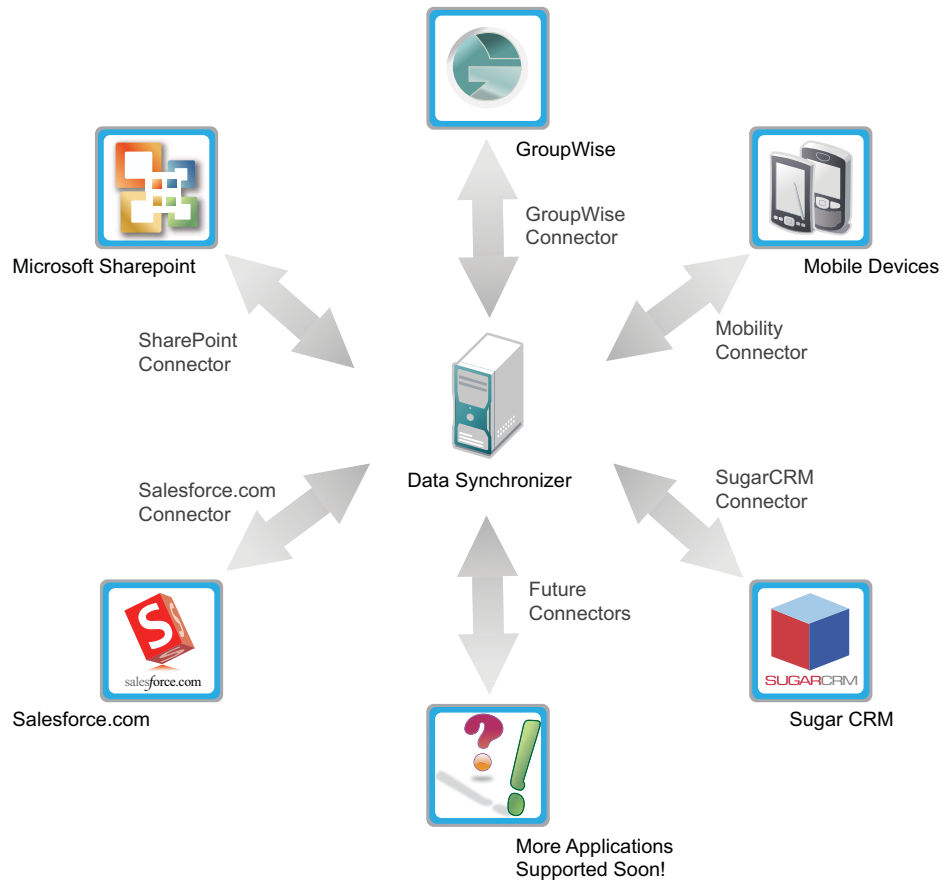
For information about other connectors, visit the Data Synchronizer Connector Marketplace (http://www.novell.com/products/data-synchronizer/connectors).

1.1.2 Data Synchronizer Components

A Synchronizer system consists of several components that are installed together on one server when you install the Data Synchronizer Mobility Pack.
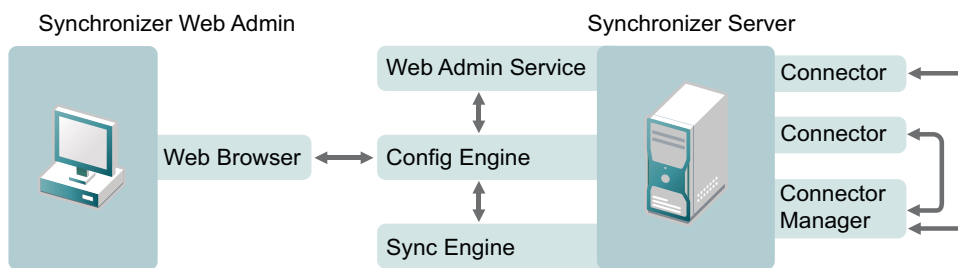
- ◆ "Synchronization Engine" on page 9
- ◆ "Web Administration Service" on page 9
- ◆ "Configuration Engine" on page 9
- ◆ "Connector Manager" on page 10
- ◆ "Connectors" on page 10

Synchronization Engine

The Synchronizer Sync Engine (`datasync-syncengine`) is a service that provides the hub of data flow between one or more pairs of application-specific connectors. The Sync Engine provides the common ground among various applications, so that data provided to the Sync Engine from one application through its connector can be passed to one or more different applications through their connectors.

Web Administration Service

The Synchronizer Web Administration service (`datasync-webadmin`) provides a Web-based interface called Synchronizer Web Admin for administration and management of your Synchronizer system. Synchronizer Web Admin allows you to add and remove connectors, as well add or remove users for specific connectors and configure their individual synchronization settings.

Users can log in to the Synchronizer Web Admin URL using their personal network login credentials to access the Data Synchronizer User Options page. Here, they can configure and control the synchronization settings for their applications. For more information, see the Quick Start (http://www.novell.com/documentation/datasync_connectors1) for each connector.

Configuration Engine

The Synchronizer Config Engine (`datasync-configengine`) is a service that 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.

Connector Manager

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

Connectors

Synchronizer Connectors transfer data between two or more applications. Each connector acts as a code converter and data filter to translate information between an application-specific format and an application-neutral format that can be consumed by other application-specific connectors. For example, when you install the Mobility Pack, which includes the GroupWise Connector and the Mobility Connector, GroupWise content can be synchronized to any mobile device that uses Microsoft ActiveSync.

Supported Applications

To find out about supported applications, see:

- Data Synchronizer Connectors Documentation Web site (http://www.novell.com/documentation/datasync_connectors1)
- Data Synchronizer Connector Marketplace (http://www.novell.com/products/data-synchronizer/connectors)

Application Items

Each application has its own types of data (often called "items") that would be useful to synchronize with other applications. Some common types of items that can be synchronized between applications include:

- Email messages
- Appointments
- Tasks
- Notes
- Address books
- Contacts
- Folders

Not all connectors support all of the same types of items.

Synchronization Events

Initially, existing items are synchronized between applications. Which items are initially synchronized varies from connector to connector.

As time passes, the following events can affect existing items, and the resulting changes in the items are also synchronized:

- Add
- Modify

- ◆ Move
   - ◆ Delete

Some connectors allow you to select which events you want to synchronize. With other connectors, you cannot customize which events are synchronized.

Events and the item data associated with them flows through your Synchronizer system in the form of XML files that are processed by the connectors and the Sync Engine in order to transfer data from one application to another. You do not need this conceptual understanding of connector functionality unless you need to troubleshoot a disruption to synchronization between two applications.

1.1.3　Data Synchronizer Configurations

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

Synchronizer System Configuration

The Synchronizer server must be able to communicate with other servers on your network, as well as mobile devices outside your firewall.
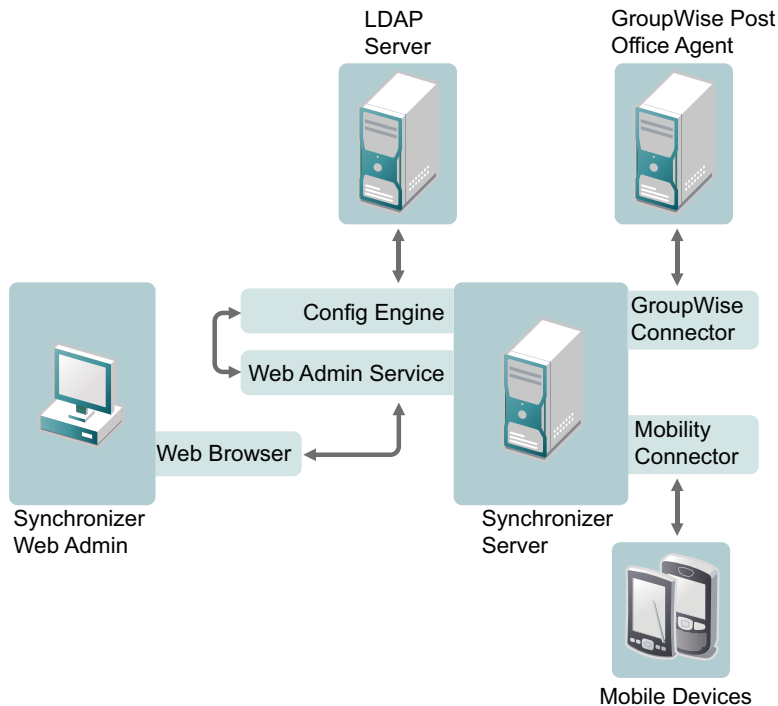
Component	Required Configuration
Connectors	The Synchronizer server can have one instance of each connector. **IMPORTANT**: Multiple instances of the same connector cannot be created on a single Synchronizer server.
LDAP Server	The Synchronizer server must be able to communicate with an LDAP server on your network during installation. 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 on connectors. 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).
GroupWise POA	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. 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. **IMPORTANT**: A Synchronizer system can be configured to communicate with one, and only one, GroupWise system.

Single Synchronizer Server System

A Synchronizer system with a single Synchronizer server can meet the synchronization needs of approximately 500 mobile device users, depending on the amount of synchronization traffic generated by those users. If it is common for users to be active on multiple mobile devices per user, consider the number of devices in use, rather than the number of users.

NOTE: Sizing recommendations vary depending on the specific connectors that are participating in the Synchronizer system. For example, the guideline of 500 users/devices pertains specifically to a Synchronizer system created by installing the Mobility Pack. This guideline meets the needs of mobile device users. Other connector combinations might support different numbers of users.

Multiple Synchronizer Server System

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

- **Number of Users:** You need to support synchronization for more than 500 users/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 applications that they want to synchronize data with.
- **Location of Synchronized Applications:** Applications for which data is being synchronized have meaningful organizational segments (for example, GroupWise domains and post offices). Having a Synchronizer server associated with each organizational segment helps balance the synchronization load across all users of the application.

- **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.

Connector-specific considerations for implementing a multi-server Synchronizer system are covered in each connector's *Installation and Configuration Guide* (http://www.novell.com/documentation/datasync_connectors1).

1.2 Data Synchronizer System Requirements

You, as a Synchronizer administrator, must ensure that the Synchronizer server meets Synchronizer system requirements, so that your Synchronizer system can function successfully.

- Section 1.2.1, "Data Synchronizer Server Requirements," on page 13
- Section 1.2.2, "Directory Service Requirement," on page 14
- Section 1.2.3, "Web Browser Requirements for Synchronizer Web Admin," on page 14
- Section 1.2.4, "Connector Requirements," on page 14

1.2.1 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 users/devices supported by the Synchronizer server
    - 4 GB RAM to support approximately 300 users/devices
    - 8 GB RAM to support approximately 500 users/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 users 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 of approximately 500 active mobile device users. A Synchronizer system with substantially fewer users requires substantially less disk space.

  - Static IP address
- SUSE Linux Enterprise Server (SLES) 11 (64-bit), plus Service Pack 1 or 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.

1.2.2 Directory Service Requirement

◆ Lightweight Directory Access Protocol (LDAP) v3

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

1.2.3 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

1.2.4 Connector Requirements

The system requirements for each Synchronizer connector are listed in the *Installation and Configuration Guide* (http://www.novell.com/documentation/datasync_connectors1) for each connector.

2 Mobility Pack Installation

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

2.1 Planning a Data Synchronizer System

You can use the "Mobility Pack Installation Summary Sheet" on page 38 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.

2.1.1 Planning Your Data Synchronizer System Configuration

A Synchronizer system can consist of a single Synchronizer server or multiple Synchronizer servers. A single Synchronizer server can handle approximately 500 users, depending on the amount of synchronization traffic generated by those users. If it is common for users to be active on multiple mobile devices per user, consider the number of devices in use, rather than the number of users. For planning guidelines, review Section 1.1.3, "Data Synchronizer Configurations," on page 11.

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 1.2, "Data Synchronizer System Requirements," on page 13.

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 16
- ◆ "LDAP Server Credentials" on page 17
- ◆ "LDAP User and Group Containers" on page 17
- ◆ "LDAP Passwords vs. GroupWise Passwords" on page 17

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 *Novell Data Synchronizer System 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).

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 System Management" in the *Novell Data Synchronizer System 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.

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.

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 Installation and 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	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.
	When you add users during installation, the following GroupWise data is automatically synchronized for each user:
	◆ 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 the folders until users request them by opening folders)
	Adding at least two users for testing purposes during installation is recommended.
After installation	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 using Synchronizer Web Admin.
	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 *GroupWise Connector Installation and Configuration Guide*, then add the users manually, as described in "Managing Users" in "Connector and User Management" in the *Novell Data Synchronizer System Administration Guide*.

Using LDAP groups	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. 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, and the users are automatically added or deleted for all connectors that are configured with those groups. This saves you from the repetitive work of manually adding or deleting users for two or more connectors using Synchronizer Web Admin. When you add or delete the users in the LDAP group, Synchronizer Web Admin automatically adds or deletes the users for all connectors that are configured with the group. LDAP groups also make the installation process more convenient. The YaST functionality of the Mobility Pack Installation program does not allow for 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. **IMPORTANT**: LDAP groups must include at least one user in order to be added to your Synchronizer system during installation.
Setting application names	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 "Changing a User's Application Name (Mobility Pack Only)" in "Connector and User Management" in the *Novell Data Synchronizer System Administration Guide*.
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 MobileDeviceUsers 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 that would be set up 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 would facilitate adding users to connectors. If you want a separate Synchronizer server for executives, creating an LDAP group of executives would allow 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.

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 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

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 and with other applications. 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 Installation and Configuration Guide*.

GroupWise Address Book User

The Mobility Connector needs to be able to access the Address Book associated with the application with which it is synchronizing data. The Mobility Connector establishes this access through an application connector. For example, if you are synchronizing data between GroupWise and mobile devices, the Mobility Connector obtains user information from the GroupWise Address Book through the GroupWise Connector.

The Mobility Connector needs Address Book access that is equivalent to a typical application user. For example, a GroupWise administrator can control what users see in the GroupWise Address Book by controlling object visibility. A GroupWise administrator who is setting up the Mobility Connector to synchronize GroupWise data would want the Mobility Connector to access the GroupWise Address Book with the same visibility as a typical GroupWise user would have when viewing the GroupWise Address Book.

Therefore, you need to select a user whose view of the application 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*.

2.1.6 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 23
- "Incoming Devices" on page 23

For device-specific information, see the Data Synchronizer Mobility Connector Devices Wiki (https://vibe.novell.com/vibe/groupwise_mobility_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 Installation and 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 (Mobility Pack Only)" in "Synchronizer System Security" in the *Novell Data Synchronizer System 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 configuration their mobile devices to connect to it. However, the initial synchronization of GroupWise data to the Mobility Connector can be a time-consuming process. 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 Installation and Configuration Guide*.

2.1.7 Planning the Data Synchronizer Database

When you run the Mobility Pack Installation program, it creates a PostgreSQL database that is used to store Synchronizer system configuration information that you see in Synchronizer Web Admin. It also stores pending events when synchronization between the Sync Engine and connectors 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 *Novell Data Synchronizer System Administration Guide*
- "Changing the Mobility Connector Database Password" in "Mobility Connector Configuration" in the *Mobility Connector Installation and Configuration Guide*

2.1.8 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 connectors to your Synchronizer system
- Add users to connectors
- Start, stop, and configure connectors
- Reconfigure the connection to your LDAP server
- Reconfigure the Sync Engine

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 *Novell Data Synchronizer System Administration Guide*.

2.1.9 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 received 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).
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.

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 26
- Section 2.2.3, "Disabling an Existing Web Server," on page 27
- 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 1.2, "Data Synchronizer System Requirements," on page 13.

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
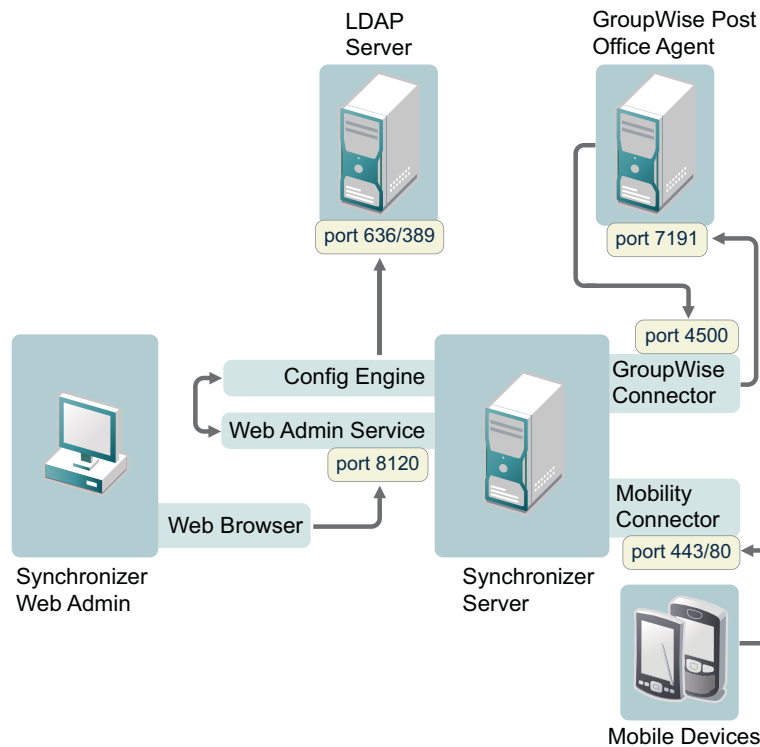
The GroupWise Connector initially communicates with the POA that you specify during Mobility Pack installation on the SOAP port that you specify. As users connect their mobile devices, the GroupWise Connector determines from the initial POA the IP addresses and port numbers of all POAs where mobile device 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, 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 20.

2 Make sure that the GroupWise POA that the GroupWise Connector will communicate with is currently running.

3 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.

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 more information, see "Securing Communication between the Mobility Connector and Mobile Devices (Mobility Pack Only)" in "Synchronizer System Security" in the *Novell Data Synchronizer System Administration Guide*.

For device-specific certificate issues, see 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 31

2.3.1 Obtaining the Mobility Pack ISO

1 On Novell Downloads (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*, then enter the `root` password.

3 Under *Groups*, click *Software*, then click *Add-On Products*.

4 On the Installed Add-On Products page, click *Add*, select *Local ISO Image*, then click *Next*.

Repository Name

[   ]

Path to ISO Image

[   ] [Browse...]

5 In the *Repository Name* field, specify a name for the repository that will hold the Mobility Pack software, such as `Mobility Pack`.

6 In the *Path to ISO Image* field, specify the full path name of the ISO file from Step 1, then click *Next*.

7 Accept the License Agreement, then click *Next*.

8 Under *Primary Functions* in the *Pattern* list, select *Novell Data Synchronizer Mobility Pack*.

Primary Functions
- ☑ Novell Data Synchronizer Mobi...
- ☐ File Server
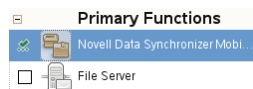
9 Click *Accept* to start the installation.

10 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.

11 After the software has been installed, click *Change > Mobility Pack Configuration* to configure your Synchronizer system.

12 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

13 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.

14 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 47.

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 2.3.7, "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 Open a terminal window, then log in as `root`.

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 *Novell Data Synchronizer System 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.
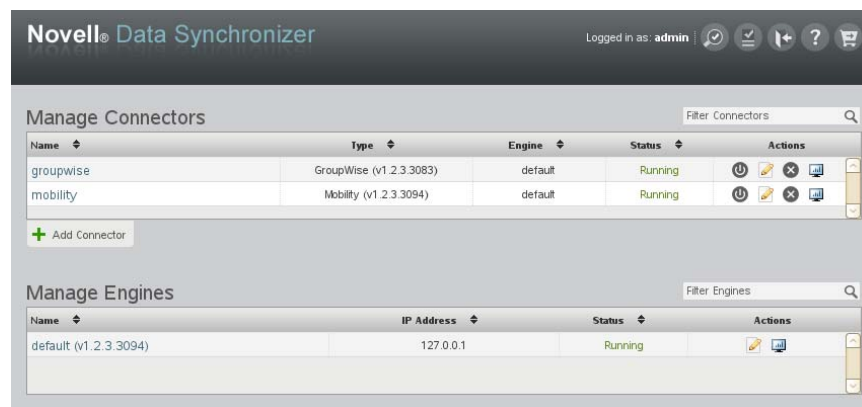
3 (Conditional) If one or both connectors are not yet running:

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 47

See also "Working with Synchronizer Log Files" in "Synchronizer System Management" in the *Novell Data Synchronizer System Administration Guide*.

4 Verify that the users and groups that you selected during installation have been added to the GroupWise Connector:

    4a Click the GroupWise Connector, then 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 users and groups that you selected during installation have been added to the Mobility Connector:

    5a Click the Mobility Connector, then click *Users*.
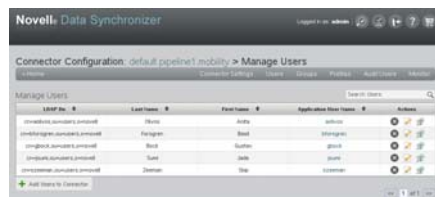
    5b Verify that all users have been successfully added.

    5c Click *Home* to return to the main Synchronizer Web Admin page.

6 (Conditional) If any users 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 47 for instructions

2.3.5 Managing Initial Device Synchronization

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 "Changing a User's Application Name (Mobility Pack Only)" in "Connector and User Management" in the *Novell Data Synchronizer System 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 "Connector and User Management" in the *Novell Data Synchronizer System 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

  If shared calendars are 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 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).

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 Installation and Configuration Guide*.

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 Installation and Configuration Guide*.

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 Novell Data Synchronizer Connector for Mobility Quick Start (http://www.novell.com/documentation/datasync_connectors1/mobilityconnect11_qs/data/mobilityconnect11_qs.html).

- For device-specific information, see the Data Synchronizer Mobility Connector Devices Wiki (https://vibe.novell.com/vibe/groupwise_mobility_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.

2.3.6 Testing Your Data 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 37.

2.3.7 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 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*.
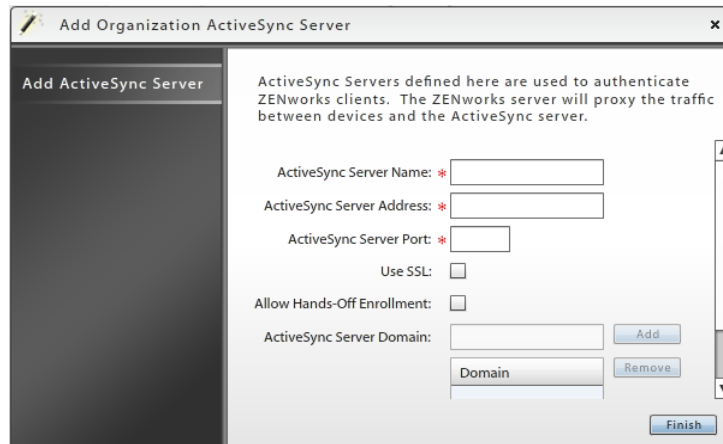
2.4 Integrating with Novell ZENworks Mobile Management

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).

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*, 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*.
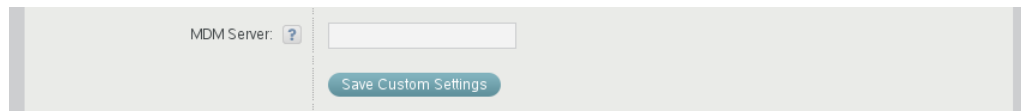
1i Click *Finish* to save the information about your Synchronizer server.

1j (Optional) Configure additional ZENworks Mobile Management servers with information about your Synchronizer server.

2 Configure your Synchronizer system with information about ZENworks Mobile Management:

2a Log in to Synchronizer Web Admin.

2b Click the Mobility Connector, then scroll down to the *MDM Server* field.

2c Specify the IP address of the ZENworks Mobile Management server where you provided information about your Synchronizer server.

2d (Conditional) If you configured multiple ZENworks Mobile Management servers with information about your Synchronizer server, specify the IP addresses in a comma-delimited list.

2e Click *Save Custom Settings*.

2f Click *Home* on the menu bar to return to the main Synchronizer Web Admin page.

2g In the *Actions* column for the Mobility Connector, click ⏻ (*Stop*) to stop the Mobility Connector, then click ▶ (*Start*) to start the Mobility Connector.

The Mobility Connector now allows communication from the specified servers.

3 View your GroupWise mobile device users in ZENworks Mobile Management:

    3a From the ZENworks Mobile Management dashboard, click *Users*.

    3b 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

2.5 What's Next

2.5.1 Managing Your Data Synchronizer System

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

- "Synchronizer Services"
- "Synchronizer Web Admin"
- "Synchronizer System Management"
- "Synchronizer System Security"

Some aspects of connector management are common to all connectors and are covered in "Connector and User Management" in the *Novell Data Synchronizer System Administration Guide*.

- "Managing User Profiles"
- "Managing Users"
- "Managing LDAP Groups"
- "Auditing User Synchronization Activity"
- "Customizing General Connector Configuration Settings"
- "Synchronization Monitoring and Management"

2.5.2 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 Installation and Configuration Guide* for instructions on maintaining and customizing the GroupWise Connector:

- "Adding Users to the GroupWise Connector"
- "Selecting GroupWise Items to Synchronize"
- "Controlling Maximum Attachment Size"
- "Increasing GroupWise Connector Reliability or Performance"

- ◆ "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"
- ◆ "Enabling the SOAP/SUDS Debug Log"
- ◆ "Customizing General Connector Configuration Settings for the GroupWise Connector"
- ◆ "GroupWise Connector Monitoring"

2.5.3 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 Installation and Configuration Guide* for instructions on maintaining and customizing the Mobility Connector:

- ◆ "Adding Users to the Mobility Connector"
- ◆ "Blocking/Unblocking Incoming Devices before Initial Synchronization"
- ◆ "Using GroupWise Authentication Instead of LDAP Authentication for Mobile Devices"
- ◆ "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"
- ◆ "Customizing General Connector Configuration Settings for the Mobility Connector"
- ◆ "Maintaining the Mobility Connector Database"

2.6 Mobility Pack Installation Summary Sheet

Installation Script Field	Value for Your Synchronizer System	Explanation
Mobility Pack Server Information:		Section 2.1.2, "Selecting Mobility Pack Servers," on page 16.
◆ IP address:		
◆ Hostname:		

Installation Script Field	Value for Your Synchronizer System	Explanation

LDAP Server Information:
 	
◆ IP address:
 	
◆ Hostname:
 	
◆ Secure LDAP Port?
 	
  ◆ Yes
 	
  Default port: 636
 	
  ◆ No
 	
  Default port: 389
		"LDAP Server Network Information" on page 16.

LDAP Server Credentials: ◆ LDAP administrator DN: ◆ LDAP administrator password:		"LDAP Server Credentials" on page 17.
LDAP Containers: ◆ Users: ◆ Groups:		"LDAP User and Group Containers" on page 17.
Synchronizer Web Admin: ◆ Web Admin login DN: ◆ Web Admin password:		Section 2.1.8, "Establishing Data Synchronizer System Security," on page 25.
Synchronizer Database: ◆ Database name: `datasync` ◆ Database user: `datasync_user` ◆ Database password:		Section 2.1.7, "Planning the Data Synchronizer Database," on page 24.
GroupWise Trusted Application: ◆ Trusted application name: ◆ Trusted application key file:		"GroupWise Trusted Application" on page 20.
GroupWise Post Office Agent: ◆ POA IP address or DNS hostname: ◆ POA SOAP port: Default port: 7191 ◆ Secure: Yes / No		"GroupWise Post Office Agent" on page 21.

Installation Script Field	Value for Your Synchronizer System	Explanation

Mobile Device Port:
 	
 ◆ Secure LDAP port: Yes
 	
    Default port: 443
 	
    ◆ Generate self-signed certificate?
 	
      ◆ Yes
 	
      ◆ No
 	
      Certificate file:
 	
 ◆ Secure LDAP port: No
 	
    Default port: 80
		"Mobile Device Port" on page 23 and "Server Certificate" on page 23.

Block Incoming Devices: ◆ Yes ◆ No		"Incoming Devices" on page 23.
GroupWise Address Book User:		"GroupWise Address Book User" on page 22.
Add Users: ◆ ◆ ◆ ◆ ◆		Section 2.1.4, "Planning How to Add Users," on page 18.
Add Groups: ◆ ◆ ◆ ◆ ◆		Section 2.1.4, "Planning How to Add Users," on page 18.

Novell Customer Center Registration:
 	
 ◆ Register later
 	
 ◆ Register now
 	
    ◆ Email address
 	
    ◆ Activation code
		Section 2.1.9, "Registering for Automatic Updates from the Novell Customer Center," on page 25.

Installation Script Field	Value for Your Synchronizer System	Explanation

Mailbox Access:
 	
  ◆ LDAP (network) passwords
 	
  ◆ GroupWise (mailbox) passwords
		"LDAP Passwords vs. GroupWise Passwords" on page 17.

Enable GroupWise Authentication?
 	
  ◆ Yes
 	
  ◆ No
		"LDAP Passwords vs. GroupWise Passwords" on page 17.

3 Mobility Pack Update

Updates to the Mobility Pack are released regularly. Some updates are major version updates, such as Mobility Pack 1.1.*x* to Mobility Pack 1.2.*x*. 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).
2 In the *Select an Organization to Manage* 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), 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 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

3.2.1 Using Patch CD Update in YaST

1 Under *Groups*, click *Software*, then click *Patch CD Update*.

2 Click *Next* to start the update.

3 Select *Local ISO Image*, then click *Next*.

4 In the *Repository Name* field, specify a name for the repository for the Mobility Pack update software.

5 In the *Path to ISO Image* field, specify the full path name to the Mobility Pack update ISO file, then click *Next*.

6 Click *Yes* to accept the License Agreement, then click *Next*.

7 On the Distribution Upgrade Settings page, click *Next*.

8 In the Confirm Update dialog box, click *Start Update*.

9 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 would 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 3.2.4, "Registering for Automatic Updates Later," on page 45.

10 On the Installation Completed page, click *Finish*.

11 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 Execute the Update script:

```
./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.

4 Continue with Restarting the Synchronizer Services.

3.2.3 Restarting the Synchronizer Services

1 Stop the Synchronizer services:

```
rcdatasync stop
```

2 Verify that all Synchronizer services have stopped:

```
ps -eaf | grep datasync
```

3 Restart PostgreSQL:

```
rcpostgresql restart
```

4 Start the Synchronizer services:

```
rcdatasync start
```

5 Verify that update has been installed:

The version number is displayed at the bottom of the main Synchronizer Web Admin page.

3.2.4 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.

1 Obtain the Mobility Pack Activation Code from the Novell Customer Center:

   1a Log in to the Novell Customer Center (http://www.novell.com/customercenter).

   1b In the *Select an Organization to Manage* drop-down list, select your organization that is entitled to the Mobility Pack.

   1c Click *My Products*, then click *Novell Data Synchronizer*.

   1d Under *Novell Data Synchronizer*, locate *Novell Data Synchronizer Mobility Pack 1.2*, then make a note of the activation code in the *Code* field.

2 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 Step 2. 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.

3 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

4 When you are notified that the next update is available:

  4a 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.

  4b Enter YES to start the update process.

A Mobility Pack Installation Troubleshooting

- "The Mobility Pack Installation program does not behave as documented." on page 47
- "The Mobility Pack Installation program cannot communicate with the LDAP server" on page 47
- "You cannot add an LDAP group during Mobility Pack installation" on page 48
- "The Mobility Pack Installation program cannot communicate with a needed application." on page 48
- "The Mobility Pack Installation program cannot communicate with the GroupWise POA" on page 48
- "The Synchronizer services do not start" on page 49
- "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 49

See also:

- "Mobility Connector Troubleshooting" in the *Mobility Connector Installation and Configuration Guide*
- "GroupWise Connector Troubleshooting" in the *GroupWise Connector Installation and Configuration Guide*
- "Working with Synchronizer Log Files" in "Synchronizer System Management" in the *Novell Data Synchronizer System 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 1.2.1, "Data Synchronizer Server Requirements," on page 13.

Possible Cause: You are installing the Mobility Pack on SLES 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, the group must have at least one user in it.

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 26.

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 *Novell Data Synchronizer System Administration Guide*.

B ## Documentation Updates

This section lists updates to the *Novell Data Synchronizer Mobility Pack Installation Guide* that have been made since the initial release of the Mobility Pack. The information helps you to keep current on documentation updates and software updates.

The information is grouped according to the date when the *Novell Data Synchronizer Mobility Pack Installation Guide* was republished. Within each dated section, the updates are listed by the section title.

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

- Section B.1, "August 22, 2012 (Mobility Pack 1.2.4)," on page 51
- Section B.2, "February 28, 2012 (Mobility Pack 1.2.2)," on page 52
- Section B.3, "August 4, 2011 (Mobility Pack 1.2)," on page 52
- Section B.4, "June 2, 2011 (Mobility Pack 1.1.2)," on page 52
- Section B.5, "March 25, 2011 (Mobility Pack 1.1.1)," on page 52
- Section B.6, "March 2, 2011 (Mobility Pack 1.1)," on page 53

B.1 August 22, 2012 (Mobility Pack 1.2.4)

Location	Change
Mobility Pack Product Overview	
Section 1.2.1, "Data Synchronizer Server Requirements," on page 13	Stated that SLES 11 SP 2 is now supported.
Section 1.2.3, "Web Browser Requirements for Synchronizer Web Admin," on page 14	Updated the supported browser list.
Section 2.3.1, "Obtaining the Mobility Pack ISO," on page 29	Clarified where to get the Mobility Pack ISO.
Mobility Pack Installation	
Section 2.4, "Integrating with Novell ZENworks Mobile Management," on page 35	Added instructions for using ZENworks Mobile Management to manage mobile devices used by GroupWise users.

B.2 February 28, 2012 (Mobility Pack 1.2.2)

Location	Change
Mobility Pack Product Overview	
Section 1.2.1, "Data Synchronizer Server Requirements," on page 13	Clarified that Service Pack 2 is not yet supported.
Section 1.2.2, "Directory Service Requirement," on page 14	Clarified that eDirectory is the only currently supported LDAP directory.

B.3 August 4, 2011 (Mobility Pack 1.2)

Location	Change
Mobility Pack Installation	
Section 2.1.1, "Planning Your Data Synchronizer System Configuration," on page 15	Increased the number of supported users on a Synchronizer server to 500.
Section 2.3.4, "Checking the Status of the Connectors," on page 32	Updated the Synchronizer Web Admin URL.

B.4 June 2, 2011 (Mobility Pack 1.1.2)

Location	Change
Mobility Pack Installation	
"GroupWise Trusted Application" on page 20	Clarified that if your GroupWise system connects to an external GroupWise system, the external GroupWise system needs its own separate Synchronizer server.
Section 2.3.4, "Checking the Status of the Connectors," on page 32	Updated the Synchronizer Web Admin URL.

B.5 March 25, 2011 (Mobility Pack 1.1.1)

Location	Change
Mobility Pack Installation	
Section 2.1.9, "Registering for Automatic Updates from the Novell Customer Center," on page 25	Explained how the Mobility Pack Installation program now helps you register for automatic updates through the Novell Update channel of the Novell Customer Center.

Location	Change
Section 3.2.4, "Registering for Automatic Updates Later," on page 45	Added instructions for updating from a major version, such as Mobility Pack 1.1, to a minor version, such as Mobility Pack 1.1.*x*.

B.6 March 2, 2011 (Mobility Pack 1.1)

Location	Change
Product Overview	
Section 1.1.1, "Data Synchronizer Capabilities," on page 8	Added an illustration of the Synchronizer hub-and-spoke architecture.
Section 1.1.2, "Data Synchronizer Components," on page 9	Added an illustration of the Synchronizer components.
Section 1.1.3, "Data Synchronizer Configurations," on page 11	Added an illustration of the servers with which the Synchronizer server must communicate.
"Single Synchronizer Server System" on page 12	Added attachments as a significant consumer of disk space. Recommended considering the number of devices as well as the number of users. Increased the number of users on a single Synchronizer server to 300.
Section 1.2.1, "Data Synchronizer Server Requirements," on page 13	Increased the memory requirement from 4 GB to 8 GB. Emphasized the importance of time synchronization among servers in a Synchronizer system.
Mobility Pack Installation	
"Planning Your Data Synchronizer System Configuration" on page 15	Recommended considering the number of devices as well as the number of users. Increased the number of users on a single Synchronizer server to 300.
Section 2.1.3, "Gathering LDAP Information," on page 16	Clarified the purpose of the LDAP information that is gathered during Mobility Pack Installation.
"LDAP Passwords vs. GroupWise Passwords" on page 17	Introduced the new GroupWise authentication functionality.
"GroupWise Trusted Application" on page 20	Clarified that you need only one trusted application key 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.
"GroupWise Address Book User" on page 22	Expanded on the explanation of the GroupWise Address Book user.
Section 2.2, "Preparing to Install the Mobility Pack Software," on page 26	Provided additional instructions to help the installation process go more smoothly, including a system diagram clarifying which ports need to be open on which servers.
Section 2.3.7, "Uninstalling the Mobility Pack," on page 35	Changed the name of the Synchronizer Uninstallation script from `ds_uninstall.sh` to `uninstall.sh`.

Location	Change
Section 3, "Mobility Pack Update," on page 43	Added instructions for updating an existing Synchronizer system to version 1.1, including the command to check the current software version.