Scalix Migration Guide

Version 11

Revision 3

Scalix Migration Guide

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About This Guide

This guide outlines how to migrate Microsoft Exchange Server, Post Office Protocol (POP), and Internet Message Application Protocol (IMAP) users to the Scalix mail system.

Many of the screen captures in this guide are from Microsoft Exchange Server 5.5. If you are using Microsoft Exchange Server 2000, 2003, or 2007, your software can differ from that shown here, but the basic steps are the same. The Microsoft Exchange Server product name is shortened to Microsoft Exchange or Exchange in the rest of this guide.

How to Use This Guide

This guide uses the following typographical conventions.

Table 1: Conventions Used

Convention	Explanation
<Angle Brackets>	Values that you need to supply are sometimes shown using angle brackets. For example: http://<server_name>/webmail
Numbered and alphabetized lists versus bullets	Numbered and alphabetized lists denote steps to be followed while bullets provide information.
Buttons	The boldface font indicates a button, a link, a field, or other user interface element to click or press as well as a keyboard stroke. For example: Click **Finish** or type in the **Username** field.
`Code`	This smaller font indicates code to type or code that is returned as a response. For example: `./scalix-installer`
Italics	Indicates a document or section, a directory path, a file, or the name of a window. For example: Open the *var/opt/scalix* folder. Or: The *Reply* screen appears.

Related Documents

Scalix manuals include:

- *Scalix Release Notes*

- *Scalix Installation Guide*

- *Scalix Migration Guide*

- *Scalix Setup and Configuration Guide*

- *Scalix Client Deployment Guide*

- *Scalix Administration Guide*

- *Scalix API Guide*

In addition, there are online help systems in:

- Scalix Management Console

- Scalix Web Access

- Microsoft Outlook (when enabled for the Scalix connector)

Getting Help

For help with installation, contact technical support at **support@scalix.com**

For the latest documents, see
http://www.scalix.com/community/downloads/documentation.php

For documents, a knowledge base, and forums, see
http://www.scalix.com/community/resources/

Introduction to Scalix Migration Tool

This chapter introduces the Scalix migration tool.

Contents

This chapter includes the following information:

- "About the Scalix Migration Tool" on page 11
- "System Requirements" on page 12

About the Scalix Migration Tool

The Scalix Migration Tool (SMT) is a command-line Windows application that moves mailbox data from a Microsoft Exchange Server to a Scalix server. It enables the migration of user accounts, e-mail, contacts, and calendar data from Microsoft Exchange to Scalix. Using a batch script, it moves large numbers of users at once, simplifying and speeding the conversion from an existing Microsoft system to Scalix.

Microsoft Outlook rules are not preserved because Microsoft rules are incompatible with Scalix.

The Scalix Migration Tool is available for the Scalix Enterprise Edition and Scalix Small Business Editions. It is sold separately. Users accounts are migrated as Scalix Premium users.

Process

The tool uses a two-part process by which it:

- Moves users' mailbox contents from Microsoft Outlook to Scalix
- Corrects any internal addressing inconsistencies to ensure that replies reach their intended recipients

The migration tool does not change existing Microsoft Exchange data in any way. All procedures are done in "read only" mode and any changes to internal addressing are done on the Scalix system.

You can run the first and/or second part of the process; both parts work independently of one another.

The basic approach is:

- Install Scalix

- Synchronize the Scalix Lightweight Directory Access Protocol (LDAP) directory with the Microsoft Exchange directory. This creates the Microsoft user accounts in the Scalix directory so that their mailbox contents have a destination address to copy over to.

- Extract the Microsoft Exchange mailbox contents into a .pst file using ExMerge or another method

- Use the Scalix Migration Tool to migrate the contents from the .pst file in Scalix

Errors and Logging

The Scalix Migration Tool is designed to continue with migration even if it encounters errors, corrupt messages, or other problems. Rather than halt the migration entirely, the tool records a message in the log file.

When you finish any migration procedure, you can check the log files to determine whether any important messages did not copy over. The omshowlog command displays event logs.

System Requirements

Scalix is compatible with the following versions of Microsoft Exchange Server, Microsoft Outlook, and Scalix. These are the requirements for running the Scalix Migration Tool.

Table 1: Approved Software and Client Components

Components	Requirements
Microsoft Exchange Server	• Microsoft Exchange Server 5.5 • Microsoft Exchange Server 2000 • Microsoft Exchange Server 2003 • Microsoft Exchange Server 2007
Microsoft Outlook	• Microsoft Outlook 2000 • Microsoft Outlook XP • Microsoft Outlook 2003 • Microsoft Outlook 2007
Windows OS (for client workstations)	• Windows 2000 • Windows XP All earlier versions of Windows are not supported, regardless of the version of Microsoft Outlook you have installed. Windows Vista is known to work with some limitations but is not officially supported.
Scalix	• Scalix 10.0.0 and above. Scalix 10.0.0 and its associated versions do not support internationalization, so English and German are supported but not other languages. • Scalix 11.0.0 and above
MAPI Connector	• Scalix Connect for Microsoft Outlook version 10.0.0 or above

Part 1

Migration Options

Planning the Migration

This section explains the options for migration.

Contents

This chapter includes the following information:

Options Introduction

There are two principal migration paths:

- **Flash migration** — For small to moderate numbers users and quantities of data. It transfers all user accounts and data to Scalix in a day or two, for example a weekend. Users are told not to use e-mail during the transition. Up to a thousand users can be migrated over a weekend.

- **Phased migration** — For large numbers of users with large quantities of data, moved in batches of users. You set up a state of coexistence in which Scalix and legacy mail servers work in tandem while batches of users are transferred to the new system at strategic intervals. The complexity of data is the deciding factor; if you are migrating mail, notes, scheduling, and more, phased migration can be the better choice.

The primary concerns are the number of users and how much data each user has.

With a Post Office Protocol (POP) server, the mail is stored on the user's computer, so you can either migrate the basic user data or create new records in Scalix.

With an Internet Message Application Protocol (IMAP) or Mail API (MAPI) based system, if you are not transferring user data or your users intend to copy their own data over, a "flash" migration can be used. If you have more than 100 users, all of whom expect their files and data to be accessible in Scalix, a phased migration is appropriate.

Decision: To Migrate User Data or Not

You must decide whether any or all of the user data needs to be migrated. Data migration is the most time-consuming task of the process, whether executed by administrators or end-users.

The alternative to migrate users to empty mailboxes offers the following benefits:

• Less work to migrate large groups of users to Scalix

• Eliminates the majority of time-consuming efforts by IT staff

• Reduces overall size of Scalix message store

• Streamlines backup efforts initially

• Enables implementation of new e-mail retention and mailbox quota policies

Moving users to Scalix mailboxes without any of their pre-existing data does not mean the data is lost or will never be transferred. Most e-mail clients have the ability to keep a locally stored copy of the legacy e-mail data.

Decision: Who Does the Migration?

Who actually completes the data migration is another consideration. There are two options:

• Users

• Administrators

Often organizations assume that all data must be migrated by Scalix or network administrators, when in fact an end-user-executed local data migration strategy can be ideal.

For a POP-based system, because mail has been downloaded to each user's computer, data migration options are limited and are best left to the user.

For an IMAP-based system, client users can copy the data to their local computers, or administrators can use a migration utility application to extract/import data from more than one user onto the Scalix system.

One approach is to coordinate the data-migration activities of both users and administrators. First, provide a time-frame and instructions for all users to execute the migration themselves. At the same time, have assistance available for those users who need help.

The following table summarizes migration options.

Table 1: Strategies and their Benefits

	No Data Migration	Client-Side Data Migration	Server-Side Data Migration
Process	Data is left in the legacy message store and continues to be accessible through the legacy mail client.	Data is extracted from the legacy e-mail client in a format that can be imported into the new e-mail client. Or, the same legacy e-mail client is used to access the Scalix system.	Using Scalix migration tools, user data is transferred directly from the legacy mail store to the Scalix mail store.
Advantages	Dramatically streamlines overall project efforts. Clean start with empty Scalix mailboxes.	Legacy data is accessible within the e-mail client. If legacy system was POP or IMAP, the user retains full reply capabilities. Clean start with empty Scalix mailboxes.	All data remains accessible in the same server-side folders. Full reply capabilities. No end-user involvement.
Disadvantages	Accessing legacy data is somewhat cumbersome. Minimal capabilities with legacy mail data (copy and paste).	The same procedure must be manually executed at every client workstation, either by end-users or administrators.	Requires more work behind the scenes by administrators. Dedicated migration workstation required.

Decision: Migration Strategy

Next, decide on POP, IMAP, proprietary, flash, and/or phased migrations. The next chapter, "Migration Examples" on page 23, provides excellent information to understand how migration works.

Potential Migration Strategies for POP3 Server Data

Because mail has been downloaded to each user's computer in a POP-based system, data migration options are limited, and are best left to the user. If the same e-mail client that connected to the POP-based legacy system is used to connect to Scalix, then all legacy data remains fully accessible. If a new e-mail client is used to connect to Scalix, then determine if the old client's data can be exported in a format compatible with the new e-mail client (such as a .pst format for Microsoft Outlook clients).

As a minimum, users can leave their legacy e-mail client installed on their computers, providing access to the local POP mail archives. They can copy-and-paste the original content into any outgoing messages created and sent by means of their new e-mail client.

Potential Migration Strategies for IMAP Server Data

IMAP servers offer more migration options. Client users can copy the data to their local computers, or administrators can use a migration utility application to extract/import data from more than one user onto the Scalix system.

E-mail data is stored directly on the IMAP server, but because most IMAP servers also support POP3 access, most e-mail clients allow the user to download the data to a local store. This means that, at a minimum, the POP-specific options explained in the previous section are applicable to IMAP client users.

The E-Mail Shuttle application can be used for IMAP migration as described in a separate chapter.

Possible Migration Strategies for Proprietary Data Formats

Messaging systems, such as Groupwise, Microsoft Exchange, and Lotus Notes, typically provide support for IMAP and POP, and they also utilize remote procedure call (RPC)-based communication that enables extended capabilities or properties within the message data. This means much of the data is in a proprietary format. Although the POP and IMAP strategies discussed in the previous sections can be used to extract data from these systems, some loss of message fidelity or exclusion of some data types can occur.

These systems usually permit a user to save all server mail data in a local storage file, such as a Microsoft Outlook .pst file. If the original e-mail client can connect to Scalix, or a new e-mail client is used that can access or import the local storage file, then all the legacy data becomes available. But the message headers in the local archive cannot contain standards-based (RFC 822/823) address definitions because they are proprietary formats. As a result, replies to the messages may not route correctly, but forwarded copies are sent correctly.

After extracting data from the legacy mail system, you import that file into Scalix using either MAPI or IMAP. An IMAP extraction from the legacy environment and subsequent IMAP import into Scalix processes approximately 1 GB of data in one hour.

Flash Migration

A flash migration means that the entire user base is migrated from the legacy system to Scalix at one time. There is no interim period where some users use Scalix and others use the legacy system. A flash migration is an obvious choice for small organizations or organizations for which user-data migration requirements are minimal.

The typical flash migration process is as follows:

- Set up the needed Scalix mailboxes and directory entries

- Transfer the user accounts and their data to Scalix

- Change the mail exchanger (MX) record to the Scalix server

A flash migration is significantly less complex than the phased approach for several reasons:

- There is no need to configure auto-forwards on either server

- There is no need to continually synchronize directories on each server

- The migration process is simpler and can be executed more quickly

While this seems like a logical approach, due to its simplicity, it is often dismissed by organizations with a large number of users to migrate. Up to a thousand users can be migrated over a weekend.

There are drawbacks to a flash migration:

- There can be too much data to migrate over a weekend, for example

- There can be a spike in end-user requests for assistance if they are unfamiliar with the new system

You can minimize these drawbacks:

- Spend time in advance to create instructions for users so that they do not contact you

- Maximize Domain Name System (DNS) use. You can inform users that the switch to the new mail system is scheduled for 6:00 pm on a Friday. Switching MX records or C-names to the new systems can occur at 6:00 pm, but all mailboxes are set up in advance. Users have full mail capabilities and any new mail that arrives after 6:00 pm from the Scalix environment. Legacy mail becomes available later during the weekend, for example Monday morning.

- Optional: Employ an end-user-executed data migration strategy for either all or a significant portion of the users. This minimizes the amount of server-side data to migrate.

- Retain user access to the legacy data on the legacy server until the data is fully migrated

Phased Migration

A phased migration is when a partial number of user accounts are migrated at a time. The two messaging environments must coexist until the transfer is complete. Coexistence requires careful setup procedures, but can be transparent to system users who have no idea that their mail and data are moving from one system to another.

The typical phased migration has the following process:

- Set up message routing:

  - Configure routing between Scalix and the legacy system
  - Make the DNS changes, adding any needed MX records

- Synchronize and provision the Scalix system:

  - Load all mailboxes and/or directory entries
  - Configure the forwarding mechanism on mailboxes (for coexistence)

- Set up coexistence processes on the legacy system:

  - Load custom recipient/contact entries

- Transfer the first subgroup (users and their data):

- Migrate legacy data to the local store, then to the Scalix message store

- Activate just-migrated mailboxes on Scalix

- Configure migrated mailbox auto-forwarding on the legacy system

- Repeat the previous step at strategic intervals, until all groups of users and their data are transferred to Scalix

- Make the MX record changes, redirecting inbound Internet mail to Scalix

- Leave the legacy server in place for a period of time, and eventually decommission it

Decision: Mailbox and Directory Provisioning Method

Having chosen the data to be migrated and the migration method, decide how to set up the needed directory entries and mailboxes on the Scalix server. There are two ways to set up (or "provision") these items, before transferring users and data from the legacy mail system:

- The Scalix Management Console is adequate but inefficient because it restricts your work to only one directory entry/mailbox at a time. This is unsuitable to load hundreds of users in as short a time as possible.

- Scalix command-line tools can be utilized. Each offers multiple options that can be used to bulk-load hundreds or thousands of names into a Scalix server.

In most cases you simply need to make sure the appropriate mailboxes or directory entries are provided, either through ready-formatted text files or through some means of accessing the records on the legacy mail system.

The commands for mailbox and directory provisioning (omldapsync, omaddent, and omaddu) are outlined in the following sections.

Synchronization Command omldapsync

Any legacy messaging environment that provides Lightweight Directory Access Protocol (LDAP) support can take advantage of the omldapsync tool. This tool not only assists in provisioning Scalix mailboxes with auto-forwards, but it also provides the ability to load directory objects in the legacy environment, such as Contacts or Custom Recipients in Microsoft Exchange environments.

The step-by-step use of omldapsync is detailed at the appropriate place in this guide.

Commands omaddent and omaddu

The omaddent and omaddu commands are for adding directory entries and users to Scalix. These can be integrated into scripts and customized for bulk data loading. Additionally the ability to load mailboxes with auto-forwards is provided by means of the sxaa utility.

Add Directory Entries With omaddent

In most cases, mail server directory entries (as contrasted with mailbox entries) provide an easy way for the users to send mail to destinations external to Scalix (Internet recipients). You create a text file of the current directory entries as follows:

```
CN=Smith, John/OU1=Internet/IA=john.smith@company.com
CN=Jones, Fred (Pager)/OU1=Internet/IA=216.2725566@mobile.att.net
CN=Catering Orders/OU1=Internet/IA=Creighton.Catering@sbcglobal.net
```

Then import the file into Scalix:

```
omaddent -f <filename.txt>
```

This allows Scalix users to select or search for "Smith, John", "Jones, Fred", and "Catering Orders" in the Scalix address books, as well as for messages to route to the destination Internet address as specified in the input file (*filename.txt*).

Add Users Accounts With omaddu

In preparation for migrating user data, you must create mailboxes on your Scalix system with the same parameters as those on the legacy system. New mailboxes on Scalix can be efficiently provisioned by means of omaddu, utilizing the bulk option of the omaddu command and using the name of an input file that contains most if not all of the necessary information for a user.

A simple way to do this is to take advantage of the automatic generators for the display name, Internet addresses, and authentication ID, thus simplifying the contents of the input file to be passed to omaddu.

To prepare your Scalix system for bulk mailbox provisioning with omaddu and Scalix Management Console

1   Log in to your Scalix server as the root user.

2   Log in to Scalix Management Console.

3   Click **Settings**.

4   Set the appropriate mail address settings for generating the following:

- Internet address

- Display Name Rule, which determines how the users names are displayed in the system address book. It is the "friendly" name, not the e-mail address. An example is First Last

- Authentication ID Rule, which is the name or identification used to log in to the system. An example is First.Last

The Default Domain is appended to the Authentication ID Rule to form the entire Authentication ID for each Scalix account.

Once this has been established, test the provisioning process by creating a single mailbox on Scalix through omaddu. Following this, use omshowu to verify all values were correctly transferred to Scalix.

```
omaddu -n "Test User/mailnode" -p pass
```

Verify that the Internet address and authentication ID are created correctly and the common name (cn=) value is what is wanted for the system address book.

To load all users, create a simple text file with their names. The format of the text file looks like:

```
@ Firstname Lastname
@ Firstname Lastname
@ Firstname M. Lastname
@ Firstname Lastname Jr.
```

To verify the transfer of values

1   Run this command:

```
omshowu –n "Test User/mailnode"
```

To format the text file

1   Enter a last name (family name), up to 40 characters. This is called Surname (or "S") in the X.400 syntax.

2   Enter an optional first name (given name, "G"), up to 16 characters.

3   Add any optional initials (for example "K"), up to five. Each initial must be followed by a period (.) when you define or use the name. They are automatically capitalized.

4   Enter an optional suffix (generation qualifier, "Q"), such as Jr, up to three characters.

5   Next, the file (named *dirload.txt* in the example here) can be used to bulk load all users with the following command:

```
omaddu –bulk –p pass mailnode dirload.txt
```

The -e switch can also be passed in the same omaddu command to set each mailbox to the "pre-expired" state and force users to replace the existing password with a new password when they first log in to the Scalix server.

If you want deeper control, you can specify exactly what you want for each user in the input file and it overrides the settings in Scalix Management Console. For example, in the input file shown as follows, for the first three users the authentication ID is specified, followed by the user's name, then the display name, then primary Internet address (with friendly name) and in the case of "Ed Ott" even a second Internet address. Notice however the mailbox "Room 22" has everything but the user name automatically generated.

```
jdoe@SRV.LOCAL Joe Doe/CN=Doe, Joe/IA="Joe Doe" <joe.doe@corp.com>
```

```
eott@SRV.LOCAL Ed Ott/CN=Ott, Ed/IA="Ott, Ed"
ed.ott@corp.com=eott@corp.com
```

```
tfjones@SRV.LOCAL Ty F. Jones/CN=Jones, Ty F/IA="Jones, Ty F"
<ty.f.jones@corp.com>
```

```
@ Room 22
```

Migration Examples

This chapter offers three case studies to help you understand how migration works.

Contents

This chapter includes the following information:

The examples illustrate basic strategies for mail migration used by actual Scalix customers.

Company A: 1000 Users, Uniform Environment

Pre-Migration Environment — 1000 users on Microsoft Exchange 5.5, all using Microsoft Outlook (MAPI)

Post-Migration Environment — 1000 users on Scalix 9.2, all using Microsoft Outlook (MAPI)

Table 1: Company With 1000 Users

Decision	Details	Results
Architecture	Single server (dual P4, 4 GB RAM, RAID 5, 400 GB, SCSI)	Provided approximately 300+ MB of storage per mailbox, plus room for LVM snapshots, suitable CPU, disk and memory for Microsoft Outlook (MAPI) or Scalix Web Access with excellent performance.
Migration Strategy	Flash migration, no coexistence required. An initial load of a few mailboxes and testing occurred, then all mailboxes were loaded into Scalix. MX records were then redirected to Scalix server.	Flash migration dramatically shortened the overall project length. Post-migration results included an initial spike in help desk requests due to minor end-user issues, mostly educational in nature. No directory synchronization was required.

Table 1: Company With 1000 Users

Decision	Details	Results
Data Migration Strategy	Deployed four migration workstations to accomplish full transfer over one weekend. Pace — 125 mailboxes per day, per workstation in a 12 hour period. Users installed Scalix Connect on Monday morning.	All users accessed legacy data (mail, contacts, calendar, and so on) from their Scalix mailbox on Monday and had full reply capability. Required an intensive weekend for the IT staff.
Provisioning Method	Used omaddu with the bulk option, and preset automatic generators in the Scalix Management Console for display name and Internet addresses.	Extremely fast way to create all mailboxes on Scalix, and automatically have standards for the display name and Internet addresses. Required a simple flat file created in advance based on Microsoft Exchange users.

Notes

- The installation of Scalix Connect and subsequent generation of Scalix profiles was executed by users on Monday morning as a first step, followed by the entry of their username and password. This took about two minutes per user, with a few taking up to five minutes. Once the users successfully logged in to their Scalix mailboxes, all mail data was available.

- Instructions for using Scalix Web Access were provided for users who were not able to access Microsoft Outlook through Scalix Connect. The IT team later helped each of these users attain the files to install Scalix Connect and generate the Scalix profile.

- By the close of business on Monday, approximately 90 help-desk queries were logged:

  - Approximately 65 were resolved in five minutes or less

  - 40 queries were attributed to users not reading the instructions for installing Scalix Connect

  - 25 queries were from users entering invalid usernames or passwords

  - 12 were pre-scheduled incidents for remote users who required extra assistance

  - The remaining queries were miscellaneous issues, such as not understanding how to link .pst files, enabling off-line synchronization

  - On Tuesday there were 16 help-desk queries relating to e-mail

Company B: 1800 Users, Mixed Environment

Pre-Migration Environment — 1800 users on IMAP server with various IMAP clients
Post-Migration Environment — 1600 on Scalix Web Access, 200 on Microsoft Outlook (MAPI)

Table 2: Company With 1800 Users

Decision	Details	Results
Architecture	Single server (dual P4, 6 GB RAM, RAID 1+0, 250 GB, SCSI)	Provided approximately 50+ MB of storage per mailbox for Scalix Web Access users (mailbox limits enforced), 500+MB for Microsoft Outlook users, and room for LVM snapshots, suitable CPU, disk and memory for Scalix Web Access with snappy performance. Peak Scalix Web Access logins were less than 300 in a 30-minute time period.
Migration Strategy	Flash migration, no coexistence required. All mailboxes were loaded into Scalix; inbound MX records were then modified at 9:00 pm on Friday evening.	Lack of coexistence dramatically shortened the overall project length. IT staffers saw an initial spike in help desk requests due to minor end-user issues, mostly educational in nature.
Data Migration Strategy	Used four migration workstations to migrate approximately 250 mailboxes per day, per workstation in a 12-hour period. Completed the entire migration over the weekend. 200 users installed Scalix Connect on Monday morning.	All users accessed their legacy data (mail, contacts) from their new Scalix mailboxes on Monday with full reply capability. Required an intensive weekend for the IT staff.
Provisioning Method	Used omaddu with the bulk option, but because no standard Internet address were used, specified all values in the bulk input file.	Extremely fast way to create all mailboxes on Scalix while accounting for lack of standard Internet addresses, but apply standards to display names.

Notes

- This organization declared an e-mail outage from 9:00 pm Friday evening until 6:00 am Monday morning, and let mail queue on the perimeter mail relay during that time. This provided an effective back out strategy. If the migration process had issues during the weekend, they had the option to let the mail route to the legacy server and try again another weekend and users would not lose any mail. If all was successful then the queued mail would be routed to the new Scalix server on Sunday night.

- No client software deployment was necessary for 1600 of the 1800 users who used Scalix Web Access; the other 200 on Microsoft Outlook (MAPI) were provided the instructions for installing Scalix Connect, creating the profile, and accessing their mailbox.

- All Scalix users authenticated against a corporate LDAP server through Scalix Web Access and Microsoft Outlook. Authentication IDs were pre-loaded on all mailboxes through bulk load process and PAM-based authentication configuration completed with the help of Scalix-ready documentation.

Company C: 3000 Users, Mixed Environment

Pre-Migration Environment — 3000 users on a POP server with various POP and IMAP-supporting clients

Post-Migration Environment — 2800 users on Scalix Web Access, 200 on Microsoft Outlook (MAPI)

Table 3: Company With 3000 Users

Decision	Details	Results
Architecture	Dual-server (dual P4, 6 GB RAM, SCSI, RAID 5, 1 TB)	Provided approximately 250+ MB of storage per mailbox for all users and room for LVM snapshots, suitable CPU, disk and memory for Scalix Web Access with snappy performance. Peak Scalix Web Access logins were less than 300 in a 30-minute time period.
Migration Strategy	Phased migration, three phases. Loaded 200 mailboxes on the first Scalix server in phase 1, then 1300 three weeks later. Loaded the final 1500 on the second Scalix server four weeks later.	Enabled large groups of users to be migrated, but not too many that it overwhelmed the support group. Did have to script the loading of forwards for the first 1500 mailboxes during coexistence (Phase 1 and 2).
Data Migration Strategy	Legacy data was left locally in the legacy POP store for most users; some data was migrated using a client-to-server method.	End-users did not have legacy mail data inside the Scalix mailbox, but had access through the legacy client. Administrators benefited from a fresh start with empty mailboxes.
Provisioning Method	Used omaddu with the bulk option and the preset automatic generators in the Scalix Management Console for display name and Internet addresses. Also used the Scalix Management Console to manually add extra Internet addresses for some users.	Fast way to create all mailboxes on Scalix, and automatically have standards for the display name and Internet addresses applied, and account for users who had been receiving mail on non-standard Internet addresses.

Notes

- Outbound SMTP server setting in each legacy POP client pointed to a C-Name DNS entry that was then redirected to the Scalix server. This provided the users an option of accessing their legacy mail by means of their old POP client and simply replying.

- Many of executive-level team required their legacy mail data migrated to their Scalix mailbox. For these users, the Netscape client used for POP access to the legacy server was configured with an additional IMAP service that connected to the Scalix server. Once connected, this data was simply dragged and dropped into the server-side Scalix folders.

- The */etc/opt/scalix/webmail/partner.xml* file was configured to provide LDAP searches against the legacy POP server in addition to Scalix system address book and each user's local contacts. Because addressing in Scalix Web Access is primarily performed through the Search Names functionality (which then uses the LDAP settings in the partner.xml file), this enables full address book capabilities for all Scalix Web Access users but with

only a partial amount of the mailbox actually loaded on Scalix. Even though there was a coexistence period, no forwards or extra directory entries were required.

Part 2

Flash Migration from Microsoft Exchange to Scalix

Task 1: Changing the LDAP Setting on the Scalix Server

This chapter covers changing a setting on the Lightweight Directory Access Protocol (LDAP) server for a high numbers of users.

Contents

This chapter includes the following information:

Introduction

If you are migrating more than 1,000 user mailboxes from Microsoft Exchange to Scalix, you must modify an LDAP setting on the Scalix server to increase the default capacity.

Changing the LDAP Server Setting

You modify the slapd.conf file to configure LDAP for the migration.

To fine-tune LDAP on the Scalix server

1   Log in to the Scalix server as root.

2   Use an editor to open this configuration file:

    /var/opt/scalix/<nn>/s/sys/slapd.conf

where nn varies with Scalix installation.

3   Look for and change the size limit values, which are shown in bold text in the following example of an sldap.conf file.

Increase the size limit values enough to extract all entries in the Microsoft Exchange directory to the Scalix server. For example, if the migrating mailboxes number 1,800, then replace "1000" with "2000" (to allow for increases during the phased migration).

```
database     om
suffix       "o=MyContacts"
```

```
flatSuffix      "o=MyContacts"
directory       _MYCONTACTS_
sizelimit       1000
timelimit       100
useDit          false
engines         10
#
database        om
suffix          "o=Scalix"
flatSuffix      "o=Scalix"
#directory      SYSTEM
sizelimit       1000
timelimit       15
useDit          false
engines         10
#
database        om
suffix          ""
flatSuffix      "o=Scalix"
#directory      SYSTEM
sizelimit       1000
timelimit       15
useDit          false
engines         10
```

4   Save the slapd.conf file.

5   To restart the LDAP service, enter the following command:

```
omoff -a slapd
```

6   Wait approximately one minute and enter:

```
omon -a slapd
```

The reconfigured LDAP service is now in effect.

Task 2: Creating the Synchronization Agreement

This chapter covers the synchronization agreement needed to create/provision users on the Scalix system, based on user records from the Microsoft Exchange server.

Contents

This chapter includes the following information:

Adding Administrator Rights to a User Account

You pre-configure the "Service Account Admin" rights/permissions for the Microsoft Exchange Administrator account that you want to use for coexistence with Scalix. You need the domain name or Internet protocol (IP) address of the Microsoft Exchange server to do this.

To add Service Account Admin rights to an existing user account

1   Start Microsoft Exchange Administrator.

2   Click the relevant mail site name.

3   Click **File > Properties**. A properties window opens.

4   In the properties window, click the **Permissions** tab.
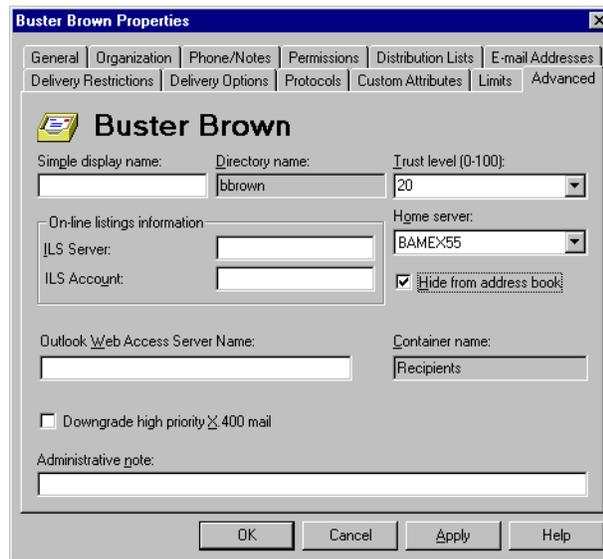
5   Click **Add**. The *Add Users and Groups* window appears.

6   Open the **List Names From** menu and choose the relevant server name.

7   In the **Name** list, select the relevant administrator or administrator group name.

8   Click **Add**. The selected name appears in the **Add Names** field.

9   Click **OK** to close the *Add Users and Groups* window.

10   If a permissions/domains confirmation window appears, click **OK** to close it. The prop-
     erties window reappears.

11   From the **Roles** drop-down list, choose **Service Account Admin**.
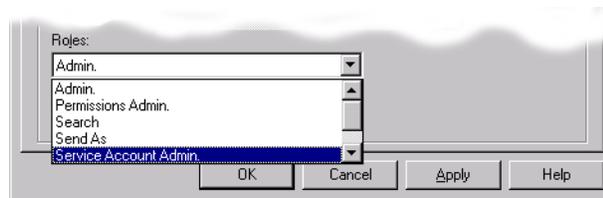
12   Click **Apply**, then click **OK** to save this new permission state and close the properties
     window.

Obtaining Microsoft Exchange Server Values

Before starting the agreement, you obtain the Microsoft Exchange values for the synchronization command (omldapsync) "a" attribute from the Microsoft Exchange server.

To obtain required values from the Microsoft Exchange server

1   Open the Microsoft Exchange Administrator application.

2   Select the site container that you are synchronizing.

3   Double-click any of the current user accounts. A properties window opens.

4   In the properties window, click the **E-mail Addresses** tab.

5   Note the following X.400 values:

```
C= country

P= organization

O= your_site
```

Write down this information and have it ready for the following procedure.

Creating the Synchronization Agreement

Create the agreement to synchronize the Microsoft Exchange server with the Scalix server. You need the domain name or Internet protocol (IP) address of the Microsoft Exchange server to do this.

To configure a synchronization agreement for the Exchange-to-Scalix migration

1   Log in to Scalix server as root.

2   To execute omldapsync in interactive mode, enter this command:

```
omldapsync –i <syncid>
```

where syncid is a unique name for your Exchange-Scalix migration synchronization agreement. Make the name no more than six alphanumeric characters in length. An example is Ex2Sx.

3   In the omldapsync menu that appears

```
0. Display this menu
1. Configure the LDAP dir sync settings
2. Force a complete (re)load of the directory
...
```

enter the number 1 at the prompt.

The omldapsync command determines that this is the initial directory synchronization and creates the subfolder for the synchronization agreement along with a sync.cfg file that is placed in the folder.

4   The response asks you to identify the type of Microsoft Exchange server:

```
INPUT: Select sync agreement type to create (00):
```

If you are synchronizing with Microsoft Exchange 5.5, enter 00 (two zeros).

If you are synchronizing with Microsoft Exchange 2000, 2003, or 2007, enter "11" (eleven).

5   The first of a series of interactive configuration prompts now appears:

```
INPUT: value for SCALIXHIDEUSERENTRY (scalixHideUserEntry):
INPUT: value for SCALIXMAILBOXCLASS (scalixMailboxClass):
INPUT: value for SCALIXLIMITMAILBOXSIZE (scalixLimitMailboxSize):
INPUT: value for SCALIXLIMITOUTBOUNDMAIL (scalixLimitOutboundMail):
INPUT: value for SCALIXLIMITINBOUNDMAIL (scalixLimitInboundMail):
INPUT: value for SCALIXLIMITNOTIFYUSER (scalixLimitNotifyUser):
INPUT: value for EX_SCALIX_MAILBOX (scalixScalixObject):
INPUT: value for EX_SCALIX_MAILNODE (scalixMailnode):
INPUT: value for EX_SCALIX_MSGLANG (scalixServerLanguage):
INPUT: value for EX_SCALIX_ADMIN (scalixAdministrator):
INPUT: value for EX_SCALIX_MBOXADMIN (scalixMailboxAdministrator):
```

If prompted, press **Enter** to accept default values.

6   You are prompted to edit the configuration file:

```
Edit config file now y/n (n)
```

Enter y.

7   You are prompted if you want to use the VI editor:

```
Use vi to edit y/n (n)
```

Enter n.

Note	If you are familiar with the synchronization agreement process and the VI editor, you can enter y at the prompt if future configuration changes are needed. For the initial configuration, enter n so that the omldapsync command can step you through configuration of the sync.cfg file.

8   You are prompted about the Java home directory:

```
JAVA_HOME[/usr/java/j2sdk1.4.2_02]:
```

Press **Enter** to accept the default.

9   You are prompted to identify the Microsoft Exchange server:

```
EX_HOST[]:
```

Enter the fully qualified domain name or IP address of the Microsoft Exchange server at the EX_HOST prompt. Use this format for the entry:

```
server.domain.ext
```

The EX_ variable indicates an export from the Microsoft Exchange server.

10   You are prompted to identify the Microsoft Exchange Administrator account to use:

```
EX_LOGON[cn=Export Admin,cn=user,dc=your_org,dc=com]:
```

Enter the Microsoft Exchange Administrator account user name.

11   You are prompted for the password:

```
EX_PASS[]:
```

Enter the Microsoft Exchange Administrator password.

This password automates the entire migration process. If you do not enter the password, omldapsync prompts you for a password every time you run the command. If security is a question, the password is saved in the sync.cfg file and is protected by the security policies configured for the Linux host system on which Scalix Server operates.

12 When omldapsync displays the following information:

    `IM_LOGON[Import Admin]:`

Enter the Scalix server name, for example scalix1.yourcompany.com

13 Accept the default path shown:

    `IM_CAA_URL[http://local_server.your_domain.com:8080/caa/]:`

by pressing **Enter**.

14 Enter a path to store the key:

    `IM_CAA_KEYSTORE[]:`

for example use the path shown of */var/opt/scalix/ldapsync/keystore*

15 Enter your Scalix administrator user account and domain:

    `IM_CAA_NAME[user_name@your_domain.com]:`

for example sxadmin@yourcompany.com

16 Enter the password for that account at the prompt:

    `IM_CAA_PASS[]:`

17 When omldapsync displays the following information:

    `EX_BASE1[cn=users,dc=your_org,dc=com]:`

enter the Microsoft Exchange Global Address List (GAL) container.

You can specify up to three containers using the subsequent prompts (EX_BASE2 and EX_BASE3) when you have more than one container. If not, EX_BASE is sufficient.

18 When omldapsync displays the following information:

    `IM_OMADDRESS[/internet,tnef]:`

enter the route you want to use throughout the duration of migration coexistence. When typing the route name, type only the name (not the "tnef" text) and be sure to enter a "/" preceding the name. For example:

    `/route_name`

19 When omldapsync displays the following information:

    `INPUT: Compare old config with new y/n (n):`

enter y at the prompt.

20 When omldapsync displays the following prompt:

    `INPUT: Replace old config with new y/n (?):`

enter y at the prompt.

21 When omldapsync displays the following information:

```
INPUT: Attempt to test data extraction now y/n (n):
```

enter y at the prompt. Output similar to the following appears, where the agreement is named "sa1":

```
INFO: test searching from bamex55.bamail.net ...
INFO: search base is cn=Recipients,ou=BAMUS,o=bamail
INFO: ... test searched OK.
INFO: test searching from localhost ...
INFO: search base is o=Scalix
INFO: ... test searched OK.
STATUS: Configuration of sa1 completed ########
```

This completes the agreement setup process.

Resolving Error Messages

If any WARNING or ERROR messages appear during this procedure, verify the synchronization agreement.

To verify the agreement

1 While logged in to Scalix, enter this command:

```
omldapsync –i <syncid>
```

where syncid with the name of the Microsoft Exchange-Scalix migration synchronization agreement that you created.

2 When the omldapsync menu appears, enter 1 and press **Enter**.

The synchronization agreement is now complete and ready for use.

Task 3: Completing the Initial Directory Synchronization

This chapter covers how to run the initial directory synchronization.

Contents

Introduction

After you complete the synchronization agreement, you can synchronize the directories on the Microsoft Exchange and Scalix servers. As with the agreement procedure, you execute the omldapsync command and enter the synchronization ID.

The initial directory synchronization process does the following:

- Exports all entries in the Microsoft Exchange LDAP container specified in the synchronization ID file
- Adds all entries to the Scalix server directory
- Converts Distribution Lists into Public Distribution Lists in Scalix
- Imports all entries from Scalix
- Adds all entries to the specified Microsoft Exchange container

Synchronizing the Directories

Synchronize the Scalix and Microsoft Exchange directories so that the content is the same.

To synchronize the directories for the first time

1   Log in to the Scalix server.

2   To execute omldapsync in interactive mode, enter this command:

    omldapsync -i <syncid>

where syncid is the name of your Microsoft Exchange-Scalix migration synchronization agreement that you created.

3   When the omldapsync menu appears:

    0. Display this menu
    1. Configure the LDAP dir sync settings
    2. Force a complete (re)load of the directory
    3. Update the directory after some changes

    ...

enter the number 2. This prompts omldapsync to synchronize the directory for the first time.

When you see a message similar to "export sa1 completed", the synchronization is complete and was successful.

If any error messages appear, follow the procedure in the next section to resolve the situation.

Managing Errors

It is not uncommon to encounter minor errors during the directory synchronization process. The omldapsync command notifies you of errors that occur during the synchronization of directories and provides an option to manage errors so that synchronization continues uninterrupted.

The following procedure describes a scenario in which the Microsoft Exchange Distribution List representing the Scalix server users was added and an error occurs when Scalix server attempts to export the Distribution List.

To manage errors

1   Execute omldapsync by entering the following command:

    omldapsync -i <syncid>

2   When the menu appears, enter 3.

The following information displays:

    STATUS: LDAP dir sync import sync01 started ##############

    ...
    INFO: ... 0 entries to delete
    INFO: ... 2 entries to add
    INFO: ... 1 entries to modify
    STATUS: delete old entries from flipper.bamail.net ...

```
INFO: ... 0 entries deleted
STATUS: add new entries to doclab.bamail.net ...
adding new entry cn=Scalix UsersDL,o=Scalix
ldap_add: Already exists
adding new entry cn=sName,o=Scalix
```

The ldap_add process notifies you that an entry already exists (this is where the Distribution List originated).

3   If you intentionally added the Exchange Distribution List knowing that omldapsync generates errors in this situation, you can "accept" the error by entering the following at the omldapsync prompt:

```
omldapsync -i <syncid>
```

4   When the omldapsync menu appears, enter 4 to accept the error and update the directory.

The directory synchronization is now complete.

Resetting a Synchronization

There are scenarios in which you want to reset Scalix after an initial synchronization from Microsoft Exchange is completed or failed.

To reset a synchronization

1   Create a file with the name of all of the mailboxes that were to have been synchronized in the first attempt. To do so, run this command:

```
omshowu -m all > allmailboxes.out
```

2   Use your preferred editor and open the *allmailboxes.out* file that is in your home folder.

3   Delete the lines that contain the two system accounts: sxadmin and sxqueryadmin because you do not want to delete them along with the others.

4   Purge the other mailboxes by running this command:

```
omdelu -f allmailboxes.out
```

5   To create a new list of directory entries that you want to migrate to mailboxes, run this command:

```
omsearch -e "cn=*" -m cn > alldir.out
```

6   Use your editor to open this newly created file and remove the following entries:

```
sxadmin, sxqueryadmin, ScalixAdmins, ScalixUserAdmins, ScalixGroupAd-
mins, ScalixUserAttribtesAdmins.
```

These mailboxes either already exist (sxadmin and sxqueryadmin) or are mailboxes representing groups.

7   Run the original ommigu command with this new input file, as shown here:

```
ommigu -userfile alldir.out -m mailnode -p password -expire >
ommigu.stdout 2> ommigu.stderr
```

Alert	Do not run the command in step 8 if the command run in step 7 results in errors.

8   Run the ommigu command, including the -raf option:

```
ommigu -userfile alldir.out -raf
```

The synchronization now runs without errors.

Note About Changing Entries

The omldapsync command does not report errors. Subsequent updates do not attempt to add a missing entry. However, there are instances that require you to perform more labor-intensive tasks such as manually modifying a directory entry on the Microsoft Exchange or Scalix server.

Scalix recommends that you change the target side of the directory synchronization to resolve conflicts. For example, if you are trying to synchronize a new Microsoft Exchange user named "John Doe", and the remote recipient with the same name already exists in Scalix, change the remote recipient entry to "John Doe1" (or something similar) and select option 3 (Update the directory after some changes) in the omldapsync menu. omldapsync reports no errors when successful. If errors do occur after you successfully add the "John Doe1" entry in the Scalix server directory, select option 4 (Accept previous error and update directory) in the omldapsync menu to ignore the error.

Task 4: Migrating Public Folders

This chapter covers the procedure for migrating public folders from Microsoft Exchange to Scalix.

Contents

This chapter includes the following information:

Requirements

You export public folders from Microsoft Exchange, then import them. If you have not already done so, create the two e-mail user profiles in the Windows Mail control panel that Microsoft Outlook refers to in this process:

- Scalix

- Microsoft Exchange

Exporting Public Folders from Microsoft Exchange

When migrating public folders to Scalix, you start by exporting them from Microsoft Exchange.

To export public folders from Microsoft Exchange

1 Using a "Microsoft Exchange" profile, start the Microsoft Outlook client. This allows you to connect to the Microsoft Exchange server as a public folder owner.

2 Choose **File > Import/Export**. A wizard appears.

3   Select **Export to a File**, and click **Next**. The *Export to a File* screen appears.
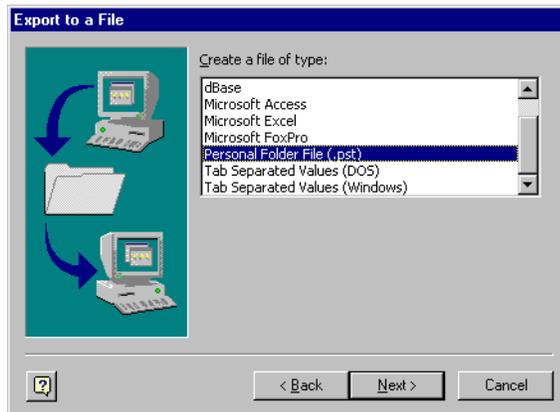
4   Select **Personal Folder File (.pst)**, and click **Next**. The *Export Personal Folders* screen appears.
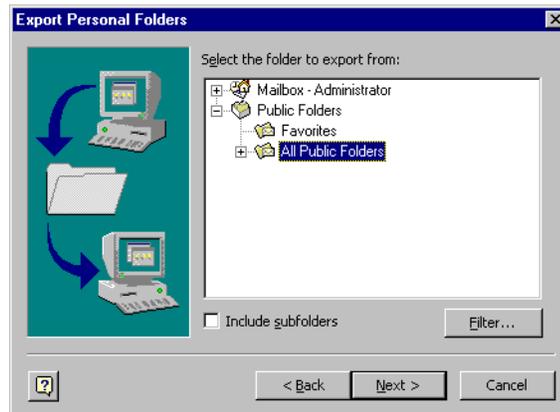
5   Navigate to the folder into which you copied the Microsoft Exchange public folders that you want to migrate ("Clean and migrate").

6   Check the **Include Subfolders** check box.

7   Click **Next**. The *Export Personal Folders* screen appears.
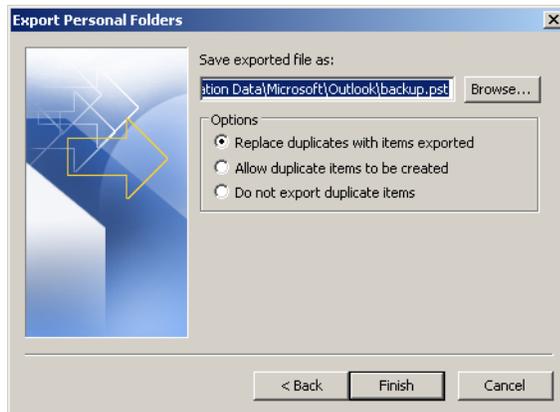
8   Enter a name for the file (in the format "file_name.pst") and specify a folder location in which to save the file. Write down the file name and location pathway for future reference.

9   Click **Finish**. A window appears.

10   If you have concerns about the vulnerability of your public folder data, enter a password for the .pst file.

11   Click **OK** to proceed.

12   A series of export status windows appears, representing the contents of each folder. Upon completion, you can import the .pst file to the Scalix server (next section).

Importing Public Folders for Scalix

Now import the folders.

To import the just-exported .pst files for Scalix

1   Using a Scalix profile, start Microsoft Outlook. This allows you to log in as a public folder owner on the Scalix server.

2   In the folder list, select **Public Folders**.

3   Choose **File > Import/Export**. A wizard appears.

4   Select **Import from Another Program or File,** and click **Next**. The *Import a File* screen appears.
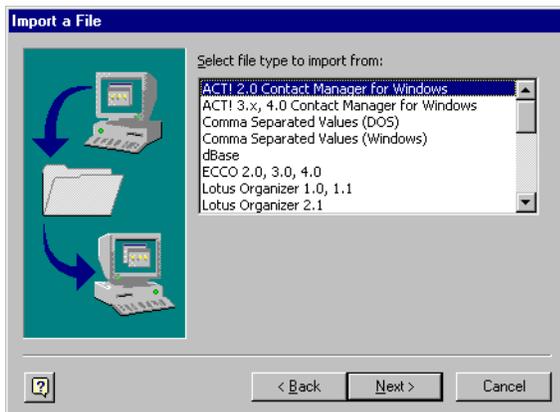
5   Select **Personal Folder File (.pst)**, and click **Next**. The *Import Personal Folders* screen appears.
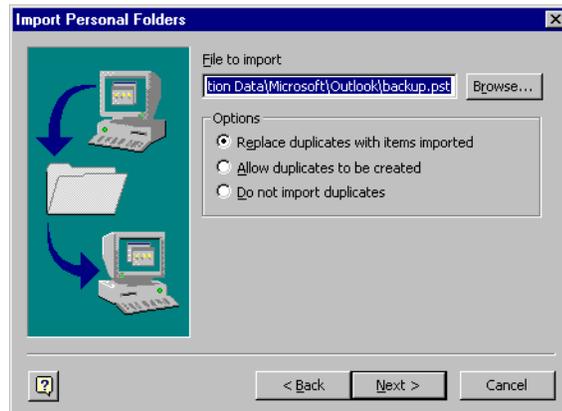
6   Click **Browse**, and locate and select the file that you created previously.

7   Enable the **Replace Duplicates with Items Imported** option.

8   Click **Next**. The *Import Personal Folders* screen appears.
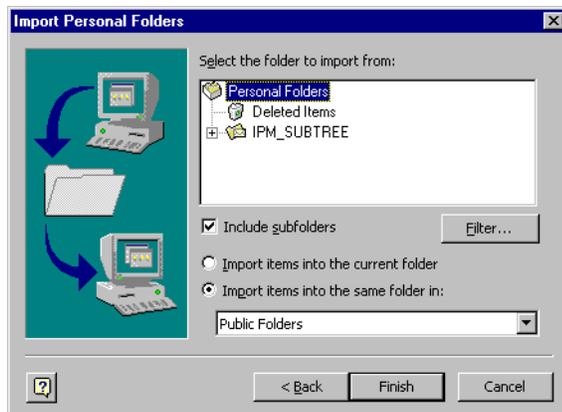
9   Use the explorer view to locate and select the top-level folder ("clean and migrate") that contains the public folder(s) you want to migrate.

10 Enable the check box by **Include subfolders**.

11 Enable the **Import items into the same folder** option.

12 Select **Mailbox – username** from the drop-down list.

13 Click **Finish**.

Task 5: Loading Scalix Mailboxes

This chapter explains how to provision Scalix mailboxes.

Contents

This chapter includes the following information:

Introduction

The migration process (outside of coexistence) requires that you convert Microsoft Exchange directory entries to Scalix server mailboxes. The principal tool is a Scalix command, ommigu. This command modifies Scalix server directory entries that represent Microsoft Exchange users. After omldapsync loads a Scalix server directory with Microsoft Exchange directory objects (such as mailboxes, custom recipients, distribution lists), the next step is to modify the objects so that they become mailboxes, ready for use or for data importation.

You must apply ommigu to all Scalix directory objects that are to become local Scalix mailboxes. For example, if an organization has 10,000 Microsoft Exchange mailboxes planned for migration onto two Scalix servers (5,000 users on each), you can provision all 5,000 users at this stage of the migration process. The unprovisioned 5,000 users remain on the other Scalix server as directory entries that (respectively) reference (using a SMTP address) the original Microsoft Exchange mailbox (similar to the period after the initial synchronization occurred using omldapsync).

The ommigu command converts each directory object to a full Scalix server mailbox while excluding it from the omldapsync process. ommigu also creates auto-forwarding information in the mailbox so that mail addressed to a Scalix server mailbox routes back to the respective Microsoft Exchange mailbox (using an SMTP address).

Provisioning a Mailbox

To provision a single directory entry as a mailbox (to validate the process)

1 Log in to Scalix.

2 Open a terminal window and enter the following:

```
ommigu –n "Exchange Display Name" –m "Scalix mailnode of the user" –G
```

The command arguments include the following:

- "Exchange Display Name" is the equivalent of the Scalix server "Common Name" attribute
- –G generates a random password for the mailbox
- –p <password> lets you specify a specific password
- -expire forces users to specify a new account password the first time they log in to Scalix server

Here are sample mailbox-provisioning commands:

```
ommigu –n "Forest Stevens" –m "xyzcorp,usa" –G
```

```
ommigu –n "Dave Johnson" –m "xyzcorp.usa" –p 123456 –e
```

3 Use these two commands to assess the results in Scalix.

```
omsearch –e cn=*
```

which lists the new mailbox by Common Name.

```
omshowiam –m –ca="exchange_display_name"
```

which lists the attributes for the user.

Verifying the New Mailbox

To see if the new mailbox appears in Microsoft Outlook

1 Start Microsoft Outlook, using a Scalix profile.

2 Set up an account for the new mailbox.

3 Log in to that mailbox.

4 Choose **Tools > Send/Receive**. This verifies a connection to the server.

Task 6: Reconfiguring Auto-Forward for the New Scalix Mailboxes

This chapter covers the process for cancelling the auto-forward on Scalix mailboxes and then updating the Microsoft Exchange directory via the synchronization command.

Contents

This chapter includes the following information:

Introduction

After provisioning the new Scalix mailboxes from the directory entries, do the following:

- Remove the forwarding (SMTP) address on Scalix mailboxes
- Use the omldapsync command to update the Microsoft Exchange directory

Both tasks can be accomplished with the ommigu command as outlined here.

Removing the Forwarding Address

To reconfigure auto forwarding

1   Log in to Scalix.

2   Open a terminal window and enter the following:

```
ommigu -n "Exchange display name" --raf
```

This command removes the auto-forwarding to Microsoft Exchange mailboxes.

It also updates other mailbox settings to indicate that the mailbox is associated with a migrated user and is ready for use.

3   To run omldapsync in interactive mode, enter the following:

```
omldapsync -i <syncid>
```

where syncid is the actual agreement name.

4   At the prompt, enter 3 to update the directory. The results scroll on-screen.

Task 7: Configuring Message Forwarding from Exchange to Scalix

This chapter covers the procedure for routing all new mail to Scalix.

Contents

This chapter includes the following information:

Introduction

At this point, you configure Microsoft Exchange to route all new mail messages to Scalix server mailboxes. This enables you to migrate data from what are now legacy Microsoft Exchange mailboxes without having new mail or other data reaccumulate in just-migrated Microsoft Exchange mailboxes.

To do this, you configure an Alternate Recipient address for every Microsoft Exchange mailbox you plan to migrate. The Alternate Recipient address routes messages originally destined for the Microsoft Exchange mailbox to the Scalix server mailbox. This alternate address must exist in the Microsoft Exchange Global Address List (GAL).

The omldapsync command already added a Microsoft Exchange custom recipient entry for each mailbox in the current migration group. This custom recipient entry contains an SMTP address that routes to the Scalix server mailbox. You must now record/add these custom recipient entries in Microsoft Exchange as the alternate recipients for each mailbox.

There are two methods you can use to add Alternate Recipient information in Microsoft Exchange:

- One entry at time
- Multiple entries at one time

Each of these methods is detailed in this chapter.

Adding Alternate Recipient Information for a Single Mailbox

To add Alternate Recipient information for a Microsoft Exchange mailbox

1   Start either the Microsoft Exchange Administration (for Microsoft Exchange 5.5) or System Manager application (for Microsoft Exchange 2000, 2003, or 2007).

2   Open the **Site > Recipients** list (or whichever list you have created) for your Microsoft Exchange site.

3   Locate the first mailbox associated with a user you are migrating to Scalix server, and double-click the entry. A properties window appears.

4   Click the **Delivery Options** tab.
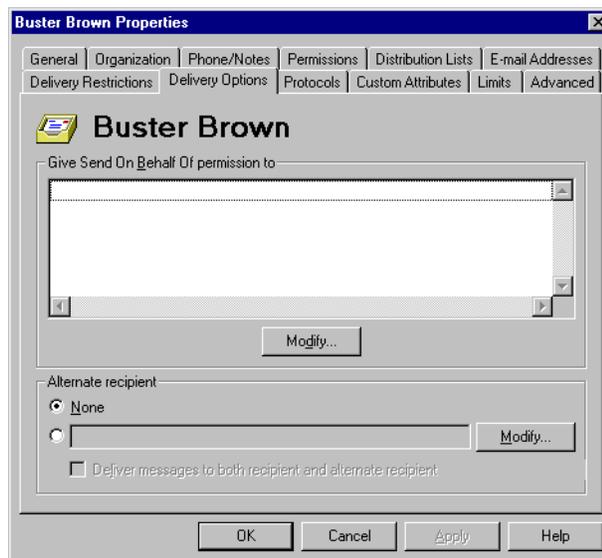
5   Click the **Modify** button. The *Mailbox* window appears.
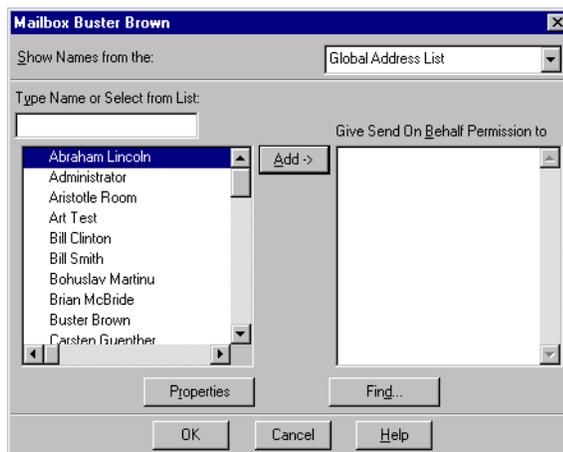
6   Make sure **Global Address Files** is selected in the drop-down list at the top right.

7   Scroll through the left-hand column and find the directory entry with a globe icon that has the same name as the user's mailbox.

Note	There is a listing for this user's mailbox—with no icon—as well as a second listing with a globe icon, representing the custom recipient that routes incoming mail to this user's Scalix mailbox.

8   Select the globe entry and click **Add**. The selected directory entry appears in the column to the right.

9   Click **OK** to close the *Mailbox* window.

10   When the properties window reappears, click **OK** to put the custom recipient entry into effect.

Adding Alternate Recipient Information for Several Mailboxes

Typically, a migration from Microsoft Exchange to Scalix server includes hundreds of users. Therefore, adding Alternate Recipient information one mailbox at a time is inefficient.

Using the Exchange Import and Export tools in conjunction with modified output files, you can add hundreds of alternate recipients to existing Microsoft Exchange mailboxes at the same time.

To add Alternate Recipient information for several Microsoft Exchange mailboxes

1   Start either the Microsoft Exchange Administration (for Microsoft Exchange 5.5) or System Manager application (for Microsoft Exchange 2000, 2003, or 2007).

2   Choose **Tools > Directory Export**. The *Directory Export* window appears.

3   To create a directory export file of Microsoft Exchange mailboxes, make these entries:

•   The default Microsoft **Exchange server** and **Home server** names are acceptable

•   The default settings/selections in **Export objects**, **Logging level**, and **Separators** areas are acceptable

•   Do not check **Include hidden objects**

- Click the **Export File** button
- When a window appears, name this file and pick a target folder
- Enter a name that identifies the contents of the output file, and make sure the .csv extension is present.

4   Click **Export** to start the process.

Tip	Write down the name and folder location of this file.

Modifying the Output File

Typically, you are migrating users in groups that are a subset of the container you specify in step 3 above. Therefore, you must modify the output file so that it contains only the mailboxes to which you want to add Alternate Recipient information.

To modify the output file

1   Start Microsoft Excel.

2   Choose **File > Open**, and open the output file from your directory export.

3   Choose **File > Save As**. The *Save As* window appears.

4   Save the file with a different file name.

5   Verify that the output file ends with column M, and that column N is empty.

6   In cell N1 (of column N), type "Alternate Recipient" as the column header.

7   Save these changes.

Entering Custom Recipient Container and Alias Name Parameters

Before you modify the exported-directory output file in Excel, be aware:

- The output file displays the following string in Column E:

    /o=Organization/ou=Site/cn=Custom_Recipient_Container/cn=alias_name

- The Excel output file displays the following string in Column L (the Obj-Container header):

    /o=XYZ/ou=XYZNA/cn=America

Using the Microsoft Exchange Administration application, you can determine that omldapsync stored the custom recipients in the America-CR container.

To complete the Alternate Recipient entry process for your Microsoft Exchange mail-boxes

1   With your exported directory output file open in Excel, enter the following string at the bottom of the spreadsheet (in the first empty row below all existing entries):

    /o=XYZ/ou=XYZNA/cn=America–CR/cn=

2   Enter a concatenation formula in cell N2 that adds the string from the static cell and the value in column E. For example, if you enter static data in cell A120, cell N2 must have the following formula:

```
=concatenate($A$120,E2)
```

3 Apply the same formula for all other entries in column N. Select (highlight) cell N2 and press **Ctrl+c** to copy the contents. Highlight all the other entries in column N and press **Ctrl+v** to paste the contents.

The text string that displays in the Alternate Recipient column contains four parameters (with delimiters).

```
/o=Organization/ou=Site/cn=Custom_Recipient_Container/cn=alias_name
```

Here are the Alternate Recipient column parameters.

Parameter	Description
Organization	Displayed in column L.
Site	Displayed in column L.
Custom_Recipient_Container	The container into which omldapsync inserted the Custom Recipient information. Use the Microsoft Exchange Administration application to obtain the name of the container.
alias_name	The Alias Name displays in column E, and the text string you enter in column N depends on the alias_name value.The rest of the string is identical for each cell. You can enter static information in a single cell and use the Concatenate function in Excel to combine the data from column E in the same row.

4 Verify the accuracy of the data, then choose **File > Save As** to save the file with a different name. Make sure you click **Yes** at the **Retain the Format** prompt.

5 Choose **Tools > Import > Select File** to import the file into Microsoft Exchange.

You can use the default values for Account creation, Logging level, and Separators. The Container value is where the mailboxes (not the custom recipients) reside.

Use the Microsoft Exchange Administration application to check the properties of a sampling of mailboxes, especially the **Delivery Options** tab where an Alternate Recipient appears.

Task 8: Migrating Mailbox Data

After you modify the Microsoft Exchange server with Scalix server mailbox information and provision the target mailboxes on the Scalix server, you can migrate mailbox data. This chapter explains how to do it with the Scalix Migration Tool.

Contents

This chapter includes the following information:

Requirements

- Scalix 10.0 or higher. For foreign-language mailboxes, migration can only take place with Scalix 11.0 or higher.
- Scalix Connect 10.0 or higher
- Microsoft Office 2000 or XP computer with Service Pack 2

Introduction

The Scalix Migration Tool is a command-line-based Windows application that moves mailbox data from the source server (Microsoft Exchange) to the destination server (Scalix) in a two-part process:

- Using ExMerge to extract the mailbox data from Microsoft Exchange into .pst files
- Moving the data from the .pst files into Scalix

Migration is a read-only process that does not change mailbox contents in any way. The tool works by opening the source mailbox at root, and then traversing the folder hierarchy copying messages and other mailbox data from each source folder. Once the copy is done, the migration tool makes sure the new mailbox exists on the destination server, then pastes the contents into it. As it pastes the data, it updates any changes to internal e-mail addresses that it encounters. These internal address updates are done according to the latest data in the LDAP server and are executed only on the destination server. When it finishes with one folder, it moves on to the next until all mail folders have been copied over.

"Hidden messages" that store display data or other message parameters automatically transfer during this process.

If the tool encounters a problem with a specific message or folder, it logs the information and continues with the migration until it is done. For that reason, it is essential that you review the logs after any migration to see what messages, if any, the tool skipped and why. You can manually copy those messages over later if needed.

Procedure Overview

The process for using the Scalix Migration Tool is:

- Install ExMerge (explained later) and configure it to extract .pst files from your Microsoft Exchange environment

- Build (or use an existing) Windows XP machine, with Office 2003 installed, including Microsoft Outlook 2003. This is the migration workstation.

- Create a directory on the migration workstation to run the tool from (C:\SMT is recommended), and save the sxmigrate.exe program in this directory

- Perform a few test mailbox extracts from the Microsoft Exchange environment with Exmerge.exe, then copy these machines to the local drive of the Windows migration workstation, into the directory where sxmigrate.exe exists

- Create the target mailboxes on Scalix (use Scalix Management Console or omaddu commands)

- Do a test run to load a few mailboxes. The mailbox must already exist on Scalix. Typically, ExMerge names the .pst file with the relative distinguished name (RDN) attribute of the given mailbox. Once you get a clean migration, do the remainder as a batch process.

Testing Using One or a Few Mailboxes First

Before you begin mass extractions, try extracting one mailbox, then importing it in to Scalix to verify the process' efficacy. Once a successful process is proven, you can undertake batch extractions.

Extracting Microsoft Exchange Mailbox Data

The Microsoft Exchange Mailbox Merge Program (Exmerge.exe) enables you to extract data from mailboxes on a Microsoft Exchange server. The Microsoft Exchange server version of this program is included in the Microsoft BackOffice Resource Kit, Second Edition. The Exchange 2000 Server version of Exmerge is included on the Microsoft Exchange 2000 server CD in the *Support\Utils\I386\Exmerge* folder.

One of the options this tool offers is to write each user's mailbox data into individual .pst files. The Scalix Migration Tool can be used to then read each of the .pst files and load the data into the user's corresponding Scalix mailbox.

Note	If using ExMerge, the export language needs to match the native language of the mailbox. If the two languages do not match, string properties are exported incorrectly.

To run the exmerge.exe program

1   At the Microsoft Exchange server containing the mailboxes you want to migrate, run exmerge.exe.

2   In the welcome screen, click **Next**.

3   At the next screen, select the **Two step merge** option and click **Next**.

4   At the next screen, select **Copy data to Personal Folders** and click **Next**.

5   At the next screen, enter the name of the Microsoft Exchange server from which you want to extract mailbox data and click **Next**.

   At this point, you can select the **Options** button, which provides additional filtering capabilities against the mailbox data. For example you can base the amount of data extracted by dates.

6   The next screen prompts for the mailboxes you want to merge. Choose specific mailboxes or all mailboxes.

7   At the next prompt, select the destination directory to write the .pst files to.

   At this point, also write the files to a network file share that is inaccessible by the Windows computers to be used to run the Scalix Migration Tool.

8   The final screen shows a progress bar and ultimately completes, after which you can click **Finish**. At this point the .pst files have been created in the target directory specified on the prior screen.

Copying .pst Files into Scalix

Once all Microsoft Exchange data has been extracted into .pst files, you can use the migration tool to copy the data over to Scalix.

sxmigrate Command and its Parameters

The basis of the Scalix Migration Tool is the sxmigrate command. An example is:

```
sxmigrate –s pst:///c:/test/mailbox.pst –d "scalix://Test User:pass-
word@<fqdn>" –dir ldap://<fqdn>/cn=users,dc=Scalix,dc=local?mail –dirauth
<username>@scalix.local:password1
```

The command has several options, as outlined in the table.

Table 1: Options for the sxmigrate Command

Option	Description
-s	Designates the source mailbox. The mailbox location is expressed in the form of a URL.*
-d	Designates the destination mailbox. The mailbox location is expressed in the form of a URL.*
-dir	Designates the location of the LDAP directory that the Scalix Migration Tool refers to when updating any changes to internal e-mail addresses that it encounters during migration. This LDAP directory can be the Microsoft Exchange Active Directory (AD) directory, the Scalix SYSTEM directory, or any suitable directory that can provide the old e-mail address information and the new e-mail address information. The LDAP directory location is expressed in the form of a URL.*
-diroff	Designates the credentials to access the LDAP directory if needed. This parameter is optional because some directories require credentials while others do not. Many can be accessed anonymously.
-log	Designates the path and file name for the log file.
--copy	Copies mailbox data to the destination server without the additional updating of internal e-mail addresses.
--fixup	Updates internal e-mail addresses without copying the data over to the destination server.
--ex55	Tells the migration tool that the source data is coming from Microsoft Exchange 5.5.
--noui	Suppresses the user interface.

* In the Scalix Migration Tool, the -s, -d, and -dir options use URLs as locators. The form the URL takes can vary. Here are several examples:

- **For the source .pst file:** –s pst:///c://test/mailbox.pst

  This specifies the source mailbox as the .pst file located in c:\test\mailbox.pst. The mailbox is specified as a .pst URL. Notice the three slashes. The first two are part of the URL spec, the third is to specify an empty or non-existent hostname. Also notice the use of forward slash in the URL instead of backslash.

- **For the destination Scalix server:** –d "scalix://Test User:password@stin-gray.scalix.com"

  This specifies the destination mailbox as the Scalix mailbox "Test User" located on the server stringray.scalix.com. The password for the mailbox is defined as "password" and

follows the mailbox name after a colon character. Again, this is consistent with the URL RFC.

- **For an LDAP server:** –dir ldap://exchang1.scalix.com/cn=users,dc=Scalix,dc=local?mail

  This specifies the directory to use for directory fixup. In this example, the source exchange directory is used because the SMTP address does not change as a part of this migration. This method has no additional requirements on the Scalix server. If the Scalix directory is to be used, then a new attribute must be synchronized over from the source exchange directory (typically proxyAddresses à omLegacyEmailAddresses).

  This is an LDAP URL, the server name is exchange1.scalix.com. The DN to the user root is cn=users,dc=Scalix,dc=local (in our example server) and the attribute to use is the mail attribute. See an example of a Scalix server in the help screen. If a –dir parameter is provided, then it is assumed that if the destination mailbox is a Scalix mailbox, the Scalix directory is used (equivalent to specifying on the command line "-dir ldap://stingray.scalix.com/o=Scalix"omLegacyEmailAddress")

Note	Running sxmigrate.exe displays the tool's help screen.

Creating the Target Mailboxes

Once you have performed a few test mailbox extracts from the Microsoft Exchange environment with ExMerge.exe and have copied these to the local drive of the Windows migration workstation, you can move on to the next step. Remember that the .pst files must be copied into the directory where sxmigrate.exe exists.

The next step is to create the target mailboxes on Scalix. For this, use the Scalix Management Console. For more on how to create mailboxes in the Scalix Management Console, see the *Scalix Administration Guide*. If you want to use the command line, use the omaddu command.

Running the Scalix Migration Tool

After creating the target mailboxes, the next step is to execute the sxmigrate program. Because the specifics of the commands you use vary according to your setup, we provide only a sample command line.

Alert	If you are migrating from Microsoft Exchange 5.5, you must include the -ex55 option with the command.

Note	This procedure does not support cross-system free/busy retrieval. So if one user is still on Microsoft Exchange and another user has been migrated to Scalix, you see valid free/busy information for the migrated user once Microsoft Outlook or Scalix Web Access has published it. But you do not see it for the first user. In addition, only Microsoft Outlook and Scalix Web Access publishes free/busy information for Scalix. This must be done once a user has been migrated or they do not display as having any free/busy information.

To migrate users with the Scalix Migration Tool

1   Download the tool on the Windows migration workstation (in *C:\SMT* or elsewhere) and unzip.

2   Run several test mailbox migrations individually. The mailbox must already exist on Scalix. Typically ExMerge names the .pst file with the RDN attribute of the given mailbox (ldapsearch it; you will see).

   A sample command is:

```
C:\SMT>sxmigrate -s pst:///c:\smt\rdn.pst -d "scalix://Bart
Jones:mailpass@sxserver.abcco.com"

 -dir "ldap://exserver.abcco.com/cn=Recipients,ou=Chi-
cago,o=ABCco?mail" -dirauth "cn=exservice":Pa$$w0rd

 --ex55
```

   where:

   •   The name of the .pst file created by exmerge.exe is rdn.pst

   •   The Scalix user account (common name) is Bart Jones, whose Scalix password is mailpass

   •   The Scalix server FQDN is sxserver.abcco.com

   •   The Microsoft Exchange server FQDN is exserver.abcco.com

   •   The Microsoft Exchange organizational hierarchy is cn=Recipients,ou=Chi-cago,o=ABCco

   •   Microsoft Exchange SMTP addresses are loaded in the "mail" attribute (sometimes rfc822Mailbox is used here)

   •   Exservice is an account in Microsoft Exchange that has "service account" privileges on all levels of the hierarchy (the Administrator account can also typically be used), with a password of Pa$$w0rd

3   Once you successfully migrate several individual mailboxes, try a small batch.

4   When that succeeds, try a larger batch.

Additional Notes

A few additional things to keep in mind when using the Scalix Migration Tool:

- Typically exmerge.exe creates the .pst file names with the RDN attribute of the given mailbox

- You can use ldapsearch from a Linux host to make sure you get the search base and hierarchy that are correct against the Microsoft Exchange environment, and also reveal the RDN of each object

- You can use multiple migration workstations running in parallel

- While the 10.0.x builds of Scalix Connect can be used, it is best to use Scalix Connect 11.x

Task 9: Decommissioning Microsoft Exchange Mailboxes

This chapter explains how to deactivate Microsoft Exchange mailboxes, preventing them from being accessed by their users without deleting them.

Contents

This chapter includes the following information:

Introduction

When you complete migration of all the mailboxes and mailbox data, you can decommission the Microsoft Exchange mailboxes. This process makes them unusable without deleting them. Because a custom recipient of the same name already exists in the Global Address List (GAL), you can hide the Microsoft Exchange mailboxes without adversely affecting the system.

This task results in the deactivation of all Microsoft Exchange mailboxes, preventing them from being accessed by their users.

You have the choice of decommissioning a single mailbox or multiple mailboxes.

Decommissioning a Mailbox

To decommission a mailbox

1   Start the Microsoft Exchange Administration application.

2   Open the container (by default, "Recipients") containing the migrated mailboxes.

3   Double-click any mailbox entry, to open the *Properties* window.

4   Click the **Advanced** tab.
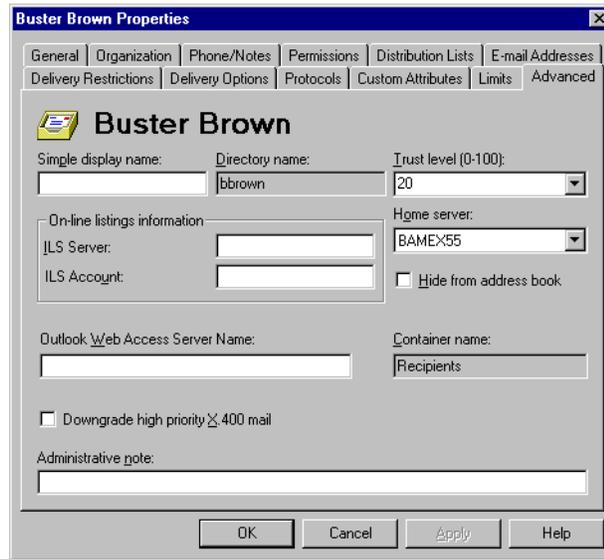
5   Enable the **Hide from address book** check box.

6   Click **OK** to save the change and close the window.

Decommissioning Multiple Mailboxes

To decommission Microsoft Exchange mailboxes

1   Open the backup file you created previously.

2   Verify that Column M contains a header named **Hide from AB** (address book) and has a value of `0` (zero).

3   Change the value in column M to `1`.

4   Save the file.

You can now import the file into Microsoft Exchange

1   Start the Microsoft Exchange Administration application.

2   Click **Tools > Directory Import**. The *Directory Import* window appears.
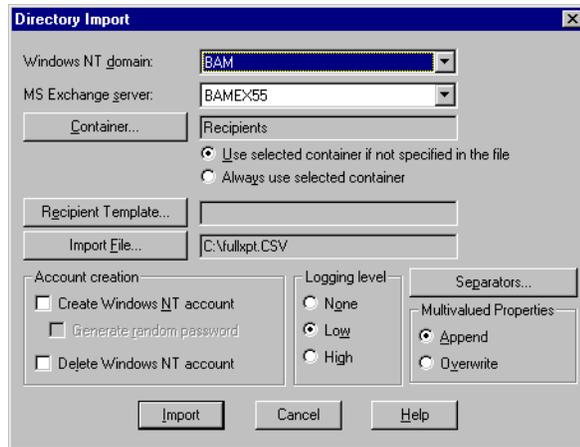
3   Choose from the following options:

- Click **Import File** and locate and open the Excel file

- Use the default values for the **Account creation**, **Logging level**, and **Separators** areas

- The **Container** value indicates where the mailboxes (not the custom recipients) reside

4   Click **Import**. A status window appears and closes when the task is complete.

Verifying the Decommissioning

1   Start the Microsoft Exchange Administration application or Microsoft Outlook.

2   Verify that the mailboxes are no longer visible in the Microsoft Exchange GAL.

Part 3

Phased Migration from Microsoft Exchange to Scalix

How Phased Migration Works

This chapter illustrates the concepts in phased migration to explain what is done and why. It starts with a sequence of pictures showing how phased migration works on a per-server basis.

Contents

This chapter includes the following information:

Introduction

In a phased migration, you have a lot of user accounts and data, so you migrate them in smaller groups, a few at a time. You set up a state of coexistence in which both Scalix and legacy mail servers communicate with one another while you move batches of user accounts/data at strategic intervals.

Important! It is imperative that each server not share the same Domain Name System (DNS) entry, but have distinct addressing, as shown. The separate DNS records must be in effect all through migration, as well as afterwards.
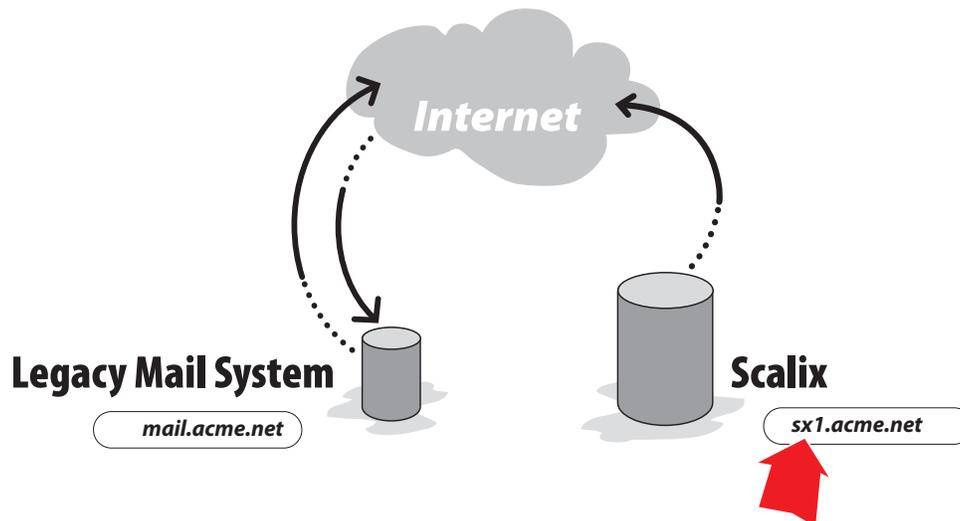
Figure 1: Use Different Domain Names

Step 1

Firewall

MX

Exchange

Step 2

Firewall

MX
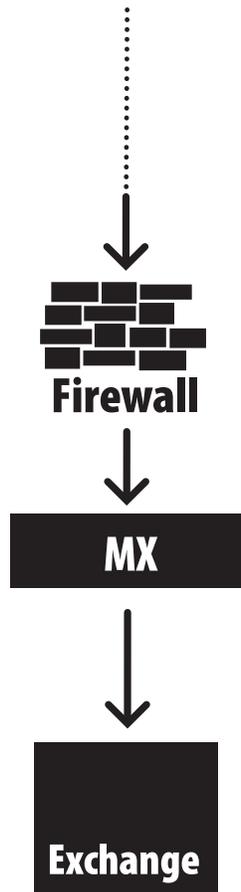
Scalix

Exchange

Before migration — All corporate e-mail is managed by Microsoft Exchange.
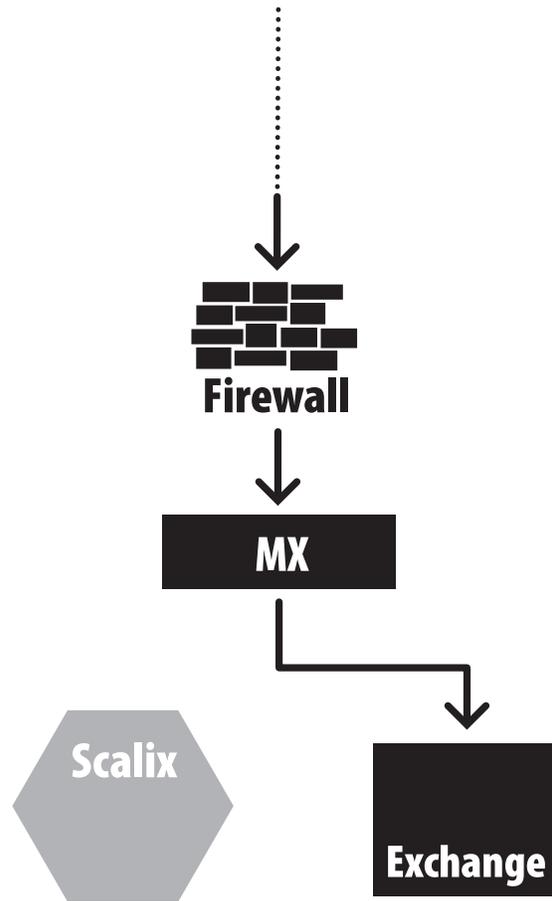
Before migration — The new Scalix server is installed and configured, ready for use. All corporate e-mail is still managed by the legacy server.

All that is needed is (1) to make sure that Scalix and the legacy system can cooperate/co-exist while (2) you do the migration of the users and their data.

Step 3
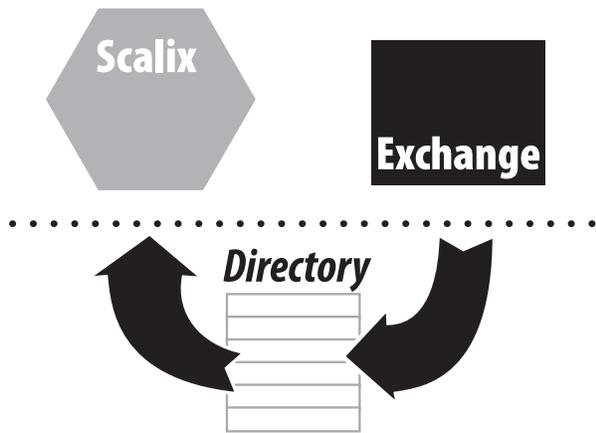
The contents of the legacy system's directory are synchronized to Scalix.

This can be done with one of three command-line utilities:

- omldapsync
- omloadfile
- sxaa

Step 4
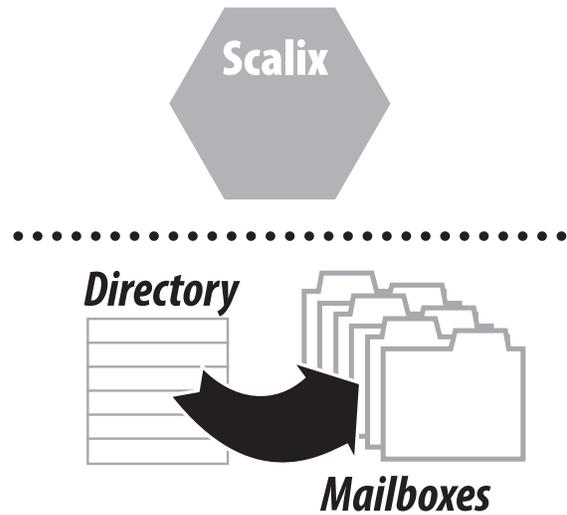
Using the new Scalix directory as the source, migration-ready mailboxes are created for all listed users and groups.

(All of these mailboxes are locked.)

If you use sxaa, directory pointers are created for all listed users and groups.

Step 5
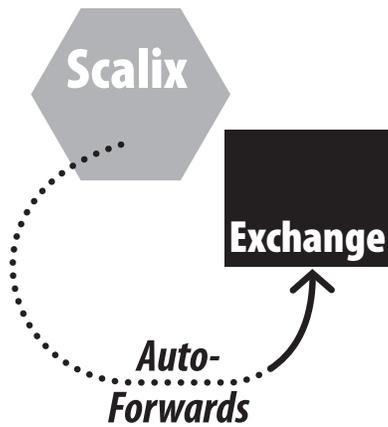
An auto-forward action is applied to each new Scalix mailbox, to automatically redirect any communications sent to Scalix back to the still-active legacy server.

The legacy server is still managing incoming and outgoing e-mail.

Step 6
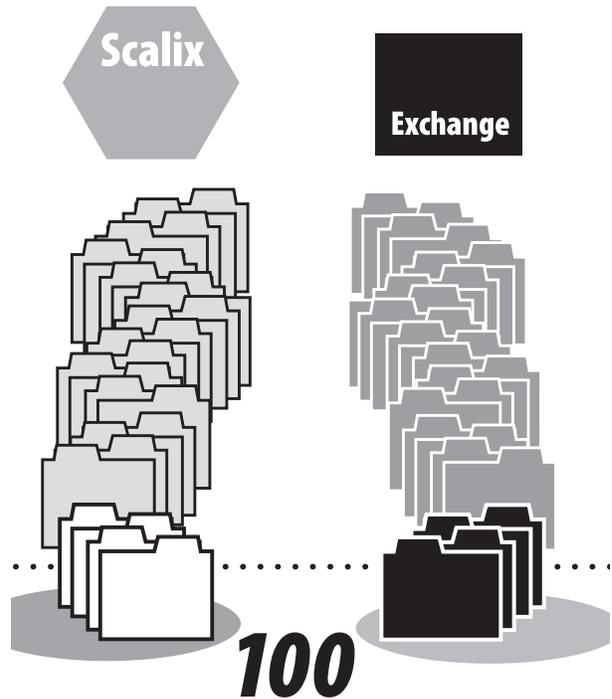
Divide your legacy-system users into small groups of users that can be migrated at one time. For example 20, 50, or 100; time and resources are the guides to the exact number you choose.

Step 7
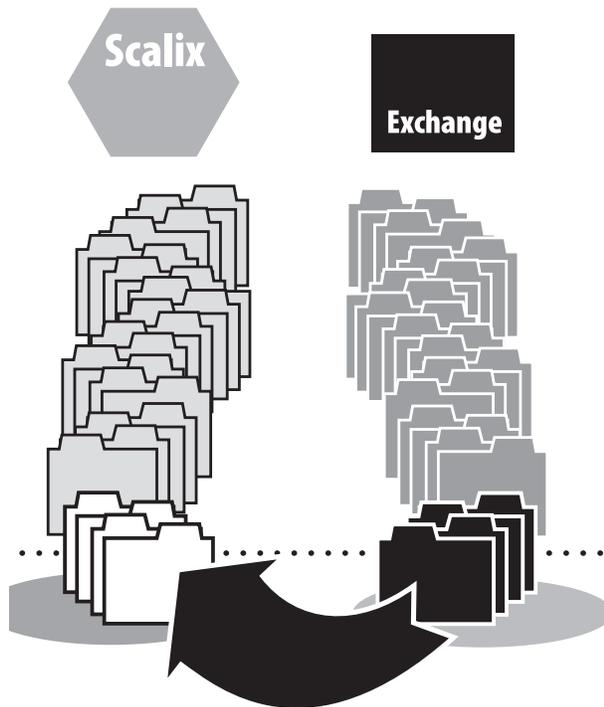
Start Migration — The migration of a group of user accounts and their data begins with copying the contents of the first group of mailboxes.

Step 8
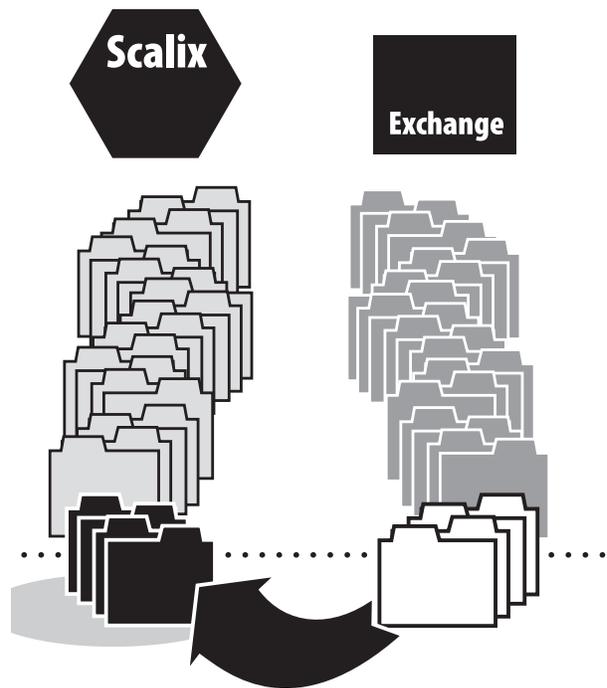
Finish Migration — When migration of the first group is complete, you can:

1. Turn off auto-forwarding on the just-migrated Scalix mailboxes.

2. Activate an alternate address on each of the just-migrated legacy mailboxes.

3. Or use .forward files.

The legacy system now forwards all incoming mail to the Scalix version of each mailbox.

Step 9

Firewall

MX

Scalix

Exchange
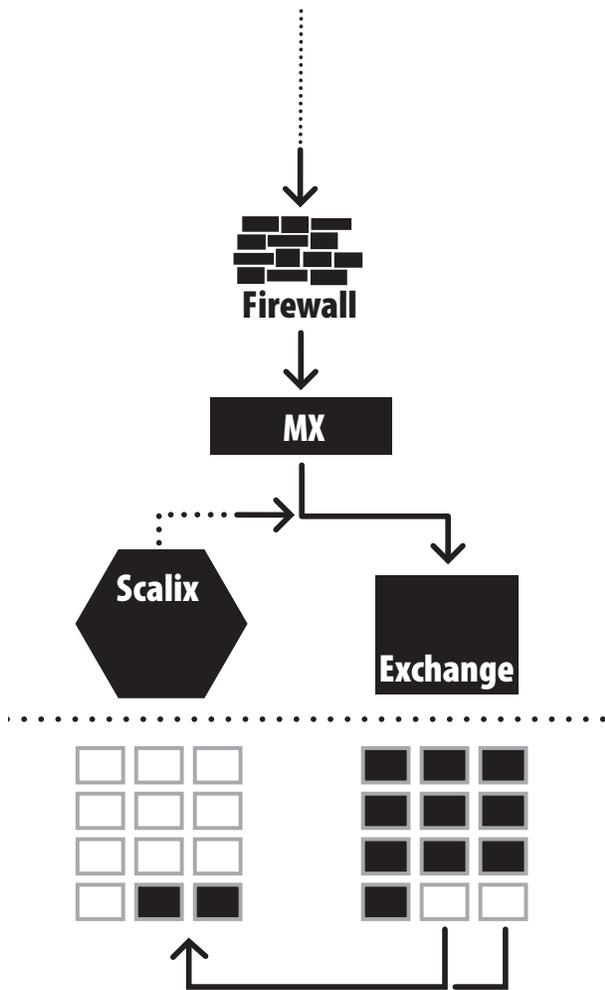
The mailboxes are present on both systems. Migration now transfers the data from selected legacy mailboxes to Scalix in an orderly manner.

The legacy system still manages all incoming e-mail and scheduling communications. It forwards all incoming messages to the just-migrated Scalix users. Scalix manages outgoing communications from all migrated mailboxes. The servers are actively coexisting.

Step 10

Scalix

Exchange
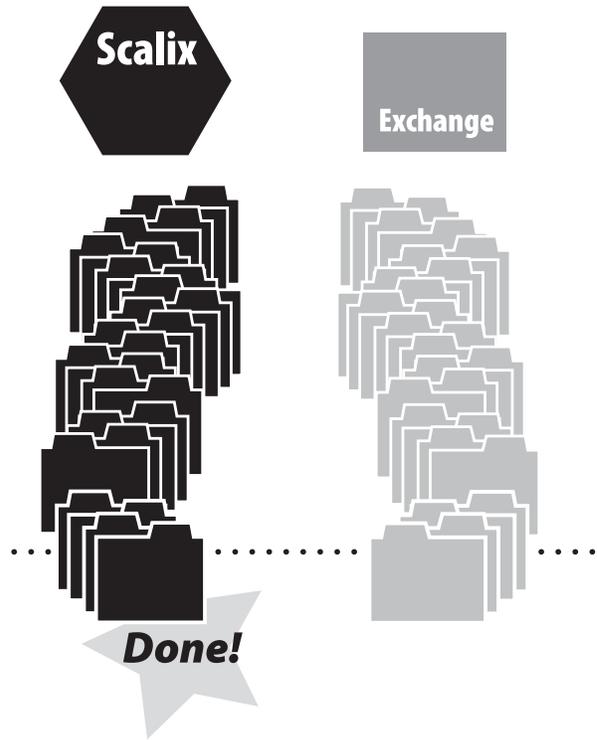
Done!

Migration is complete. You stop all auto-forwarding from Scalix to the legacy system. All mail going to the legacy system is redirected to Scalix mailboxes.

Step 11

Firewall

MX

Scalix

(Exchange)
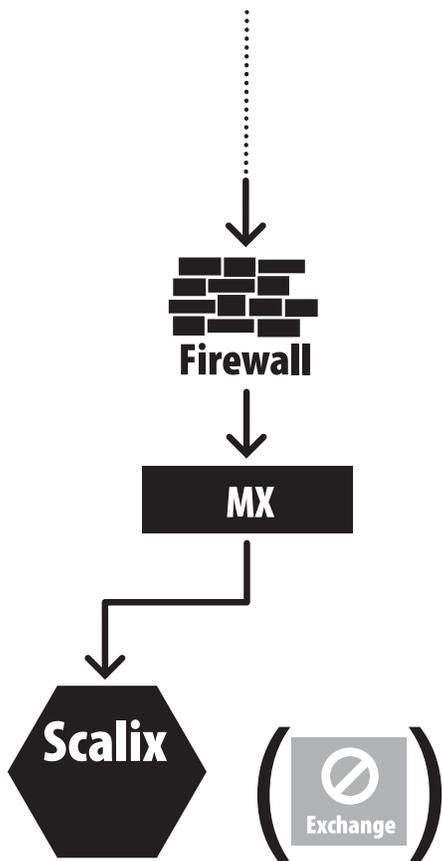
Done — The MX record is revised so that all mail goes to the Scalix server.

From now on, the Scalix server manages all e-mail, scheduling, and any other services formerly managed by the legacy system.

The legacy server is decommissioned and reused for other purposes.

Mailbox Management During Coexistence

Mailbox management tasks begin after a directory synchronization with the legacy system. You then complete a directory-based provisioning of new mailboxes on the Scalix server.

Scalix Server	Exchange Server
	Mailbox User – Joe Smith
	Joe.smith@xyzcorp.com
	Joe.smith@xyz.com
	Jsmith@oldco.com
	Mailbox User – Mary Jones
	Mary.jones@xzycorp.com
	Mary.jones@xyz.com
	Mjones@oldco.com
	Custom Recipient – Sam Jones
	Sam.jones@hotmail.com
	Public Distribution List – Sales
	sales@xyzcorp.com
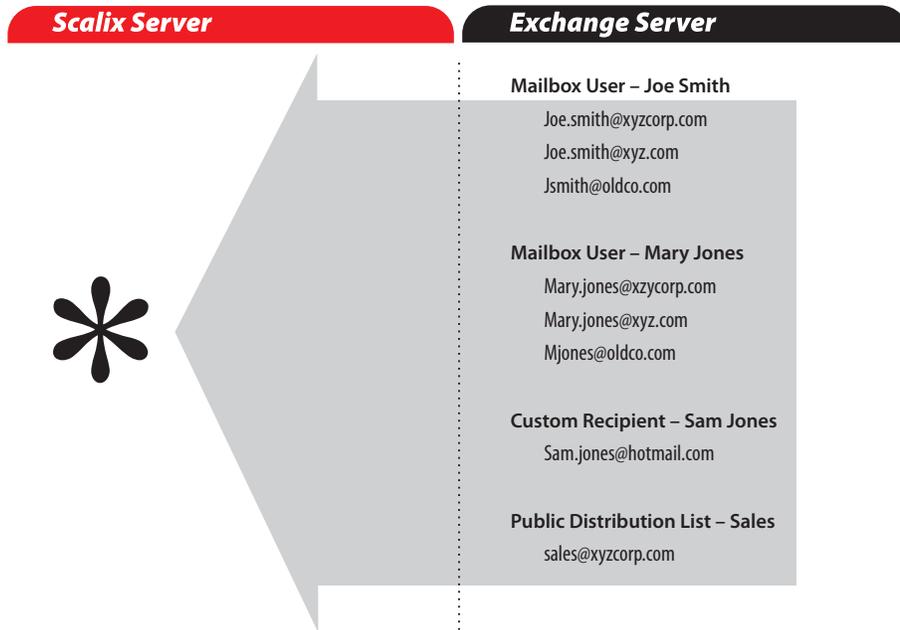
You now have the same users on each server, though in different states.

Scalix Server	Exchange Server
Remote Recipients (3)	**Mailbox User – Joe Smith**
Joe.smith@xyzcorp.com	Joe.smith@xyzcorp.com
Joe.smith@xyz.com	Joe.smith@xyz.com
Jsmith@oldco.com	Jsmith@oldco.com
Mary.jones@xzycorp.com	**Mailbox User – Mary Jones**
Mary.jones@xyz.com	Mary.jones@xyzcorp.com
Mjones@oldco.com	Mary.jones@xyz.com
	Mjones@oldco.com
Sam.Jones@hotmail.com	
	Custom Recipient – Sam Jones
Public Distribution List - Sales	Sam.jones@hotmail.com
sales@xyzcorp.com	
	Public Distribution List – Sales
	sales@xyzcorp.com

Next, you create auto-forwarding from the new mailboxes on Scalix that route mail to the legacy mail system. This is a precautionary step, because the Scalix mailboxes are not yet receiving incoming mail.

Scalix Server

Exchange Server

Locked Mailbox – Group A

Joe.smith@xyzcorp.com

Joe.smith@xyz.com

Jsmith@oldco.com

Auto-forward to joe.smith@xyzcorp.com

Mailbox User – Joe Smith

Joe.smith@xyzcorp.com

Joe.smith@xyz.com

Jsmith@oldco.com

Locked Mailbox – Group B

Mary.jones@xzycorp.com

Mary.jones@xyz.com

Mjones@oldco.com

Auto-forward to mary.jones@xyzcorp.com

Mailbox User – Mary Jones

Mary.jones@xzycorp.com

Mary.jones@xyz.com

Mjones@oldco.com

Remote Recipient - Sam Jones

Sam.jones@hotmail.com

Custom Recipient – Sam Jones

Sam.jones@hotmail.com

Public Distribution List - Sales

sales@xyzcorp.com

Public Distribution List – Sales

sales@xyzcorp.com

At this point, you can add a new, correct Scalix-specific address to each Scalix mailbox, and then turn off the precautionary auto-forward.

Scalix Server

Exchange Server

Mailbox – Group A

Joe.smith@xyzcorp.com

Joe.smith@xyz.com

Jsmith@oldco.com

Joe.smith@sx1.xyzcorp.com   *-NEW!-*

❌ Auto-forward to joe.smith@xyzcorp.com

Mailbox User – Joe Smith

Joe.smith@xyzcorp.com

Joe.smith@xyz.com

Jsmith@oldco.com

Mailbox – Group B

Mary.jones@xzycorp.com

Mary.jones@xyz.com

Mjones@oldco.com

Auto-forward to mary.jones@xyzcorp.com

Mailbox User – Mary Jones

Mary.jones@xzycorp.com

Mary.jones@xyz.com

Mjones@oldco.com

Remote Recipient - Sam Jones

Sam.jones@hotmail.com

Custom Recipient – Sam Jones

Sam.jones@hotmail.com

Public Distribution List - Sales

sales@xyzcorp.com

Public Distribution List – Sales

sales@xyzcorp.com

Now you start to create a custom recipient that matches each of the users on the legacy system, and each recipient points to that user's Scalix-addressed mailbox.

Scalix Server

Mailbox – Group A
Joe.smith@xyzcorp.com
Joe.smith@xyz.com
Jsmith@oldco.com
joe.smith@sx1.xyzcorp.com

Mailbox – Group B
Mary.jones@xzycorp.com
Mary.jones@xyz.com
Mjones@oldco.com
Auto-forward to mary.jones@xyzcorp.com

Remote Recipient - Sam Jones
Sam.jones@hotmail.com

Public Distribution List - Sales
sales@xyzcorp.com

Exchange Server

Mailbox User – Joe Smith
Joe.smith@xyzcorp.com
Joe.smith@xyz.com
Jsmith@oldco.com

Mailbox User – Mary Jones
Mary.jones@xzycorp.com
Mary.jones@xyz.com
Mjones@oldco.com

Custom Recipient – Sam Jones
Sam.jones@hotmail.com

Custom Recipient – Joe Smith
joe.smith@sx1.xyzcorp.com

Public Distribution List – Sales
sales@xyzcorp.com

The next step is to add a redirection address to each legacy mailbox, pointing to the corresponding custom recipient. This routes all incoming mail from the original mailbox to the custom mailbox (on the legacy system) then to the Scalix mailbox.

Scalix Server

Mailbox – Group A
Joe.smith@xyzcorp.com
Joe.smith@xyz.com
Jsmith@oldco.com
joe.smith@sx1.xyzcorp.com

Mailbox – Group B
Mary.jones@xzycorp.com
Mary.jones@xyz.com
Mjones@oldco.com
Auto-forward to mary.jones@xyzcorp.com

Remote Recipient - Sam Jones
Sam.Jones@hotmail.com

Public Distribution List
sales@xyzcorp.com

Exchange Server

Mailbox User – Joe Smith
Joe.smith@xyzcorp.com
Joe.smith@xyz.com
Jsmith@oldco.com
Redirect to joe.smith@sx1.xyzcorp.com

Mailbox User – Mary Jones
Mary.jones@xzycorp.com
Mary.jones@xyz.com
Mjones@oldco.com

Custom Recipient – Sam Jones
Sam.jones@hotmail.com

Custom Recipient – Joe Smith
joe.smith@sx1.xyzcorp.com

Public Distribution List – Sales
sales@xyzcorp.com

Once this is in effect, you can deactivate the original mailbox, as the custom recipient redirection process now channels all incoming mail to that user's Scalix mailbox.

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Scalix Server

Exchange Server

Mailbox – Group A

    Joe.smith@xyzcorp.com

    Joe.smith@xyz.com

    Jsmith@oldco.com

    joe.smith@sx1.xyzcorp.com

*[Deactivated mailbox
for Joe Smith]*

Mailbox – Group B

    Mary.jones@xzycorp.com

    Mary.jones@xyz.com

    Mjones@oldco.com

    Auto-forward to mary.jones@xyzcorp.com

Mailbox User – Mary Jones

    Mary.jones@xzycorp.com

    Mary.jones@xyz.com

    Mjones@oldco.com

Custom Recipient – Sam Jones

    Sam.jones@hotmail.com

Remote Recipient - Sam Jones

    Sam.Jones@hotmail.com

Custom Recipient – Joe Smith

    joe.smith@sx1.xyzcorp.com

Public Distribution List

    sales@xyzcorp.com

Public Distribution List – Sales

As you repeat this process with all your legacy user mailboxes, you migrate your system successfully, the two servers coexist effectively, and your mail system users do not notice any effect on their service.

Coexistence in a Single Picture
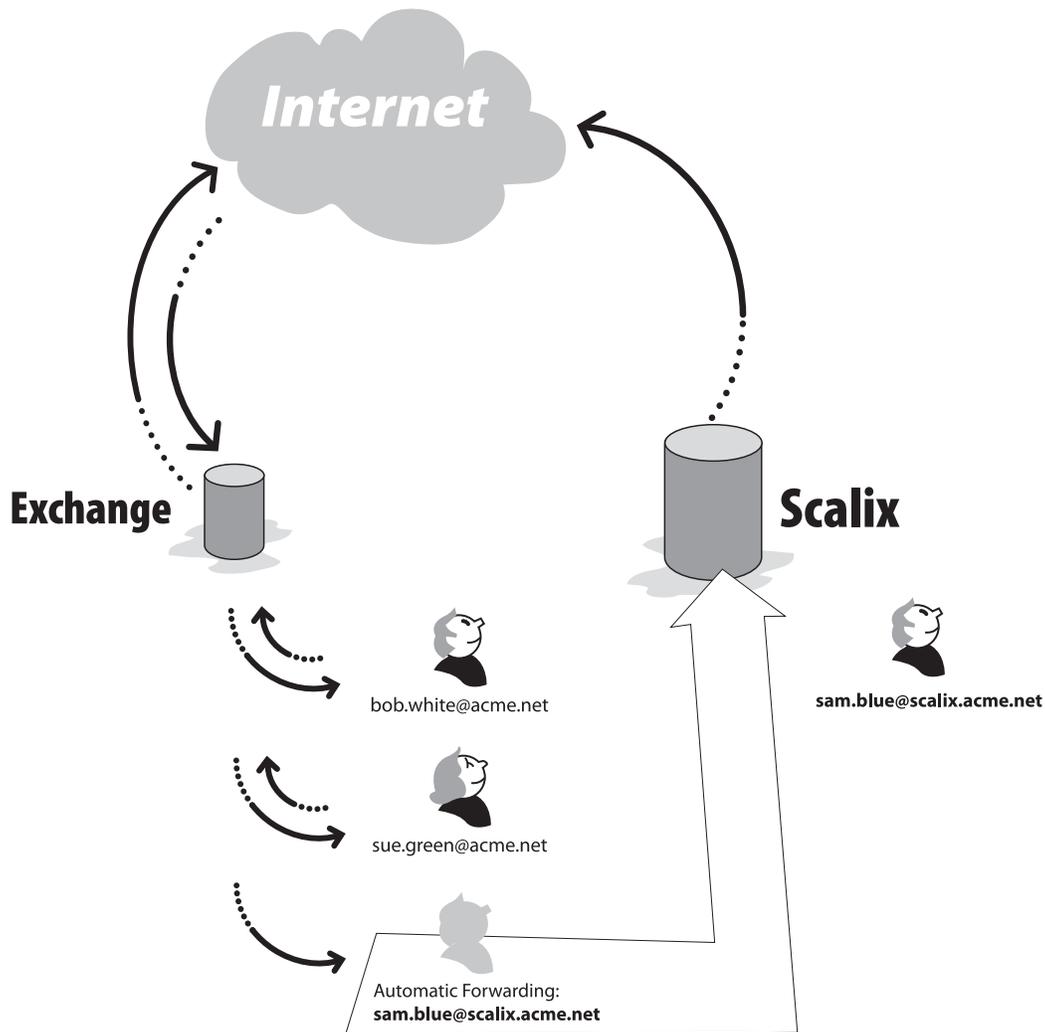
The effect of coexistence, as shown, is to make sure all incoming and outgoing mail goes through the legacy mail system, until all mailboxes are migrated.

Once a matching Scalix mailbox is ready and all the auto-forwarding/custom redirection takes effect, the legacy server continues to manage all incoming mail for that user, but it ends up on the Scalix server in the migrated mailbox.

At this point, outgoing mail from that user's mailbox goes directly to the networks from the Scalix server, with the user never noticing a thing. All other un-migrated mailboxes are served as before by the legacy mail system.

Task 1: Activating Auto-Forwarding on Microsoft Exchange

This chapter covers the first phased migration task, which is to activate Auto-Forwards on the Microsoft Exchange Internet Mail Server. During the coexistence period, mail is routed from the Microsoft Exchange server using its Internet Mail Service (IMS) to a Scalix server within the same Internet domain, by means of the auto-forwarding.

Contents

This chapter includes the following information:

Requirements

Before starting this task, you must have completed the following:

- Activated a Microsoft Exchange server Administrative user account (login)

- Installed and fully configured a Scalix server

- Completed the Domain Name System (DNS) setup for the Scalix server. The DNS setup is critical. If your Microsoft Exchange server is registered as, for example, "company.mail.com" then you need to assign the Scalix server a distinct DNS record, such as "company.scxmail.com".

- Opened a terminal window as root on the Scalix server

- On your migration Windows workstation (with access to both Scalix and Microsoft Exchange servers), create the needed e-mail user profiles (using the Windows Mail control panel). There must be one for "Exchange" and one for "Scalix", that have the proper settings. See the *Scalix Client Deployment Guide* for instructions on creating a Scalix profile.

- Created a Microsoft Exchange container to which you intend to import Scalix mailboxes

Activating Auto-Forwarding on Microsoft Exchange

To activate auto-forwarding on a Microsoft Exchange server

1 Start the Microsoft Exchange Administrator application.

2 Select the site to be migrated, and then choose **File > New Other > Recipients Container**. A blank properties window appears.

3 Enter a name for the new recipient container (for example, Scalix Mail Users) in both the **Display name** and **Directory name** fields.

4 Click **OK**. After a pause for processing, the new container name appears in the Microsoft Exchange Administration explorer view.

5 In the main Microsoft Exchange Administration window, click the **Connections** button in the toolbar (second last in the figure shown here).

The explorer view expands, to show "Connections".
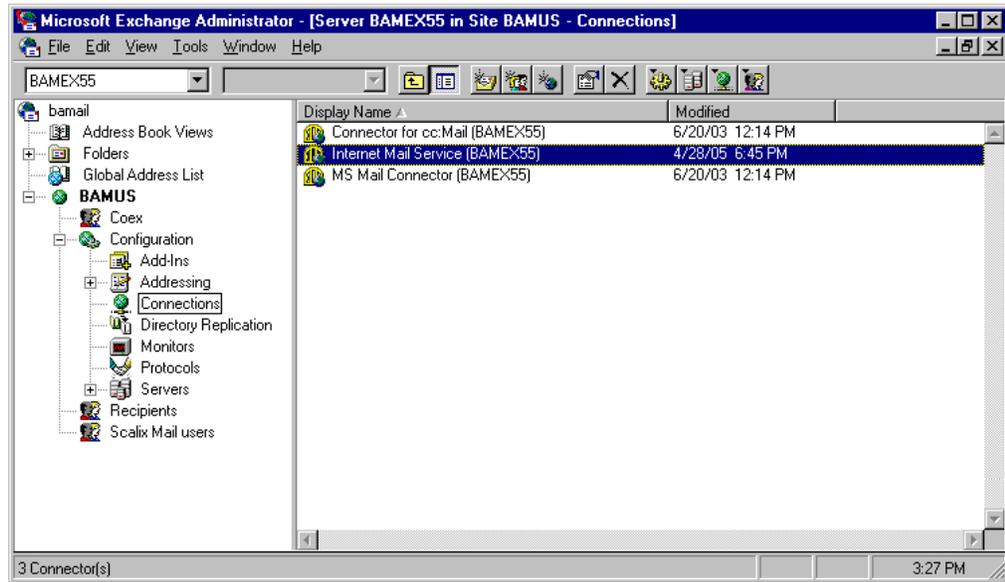
6   Click the **Connections** node in the explorer view.

7   Double-click **Internet Mail Service** in the listing on the right. The *Internet Mail Service Properties* window appears.
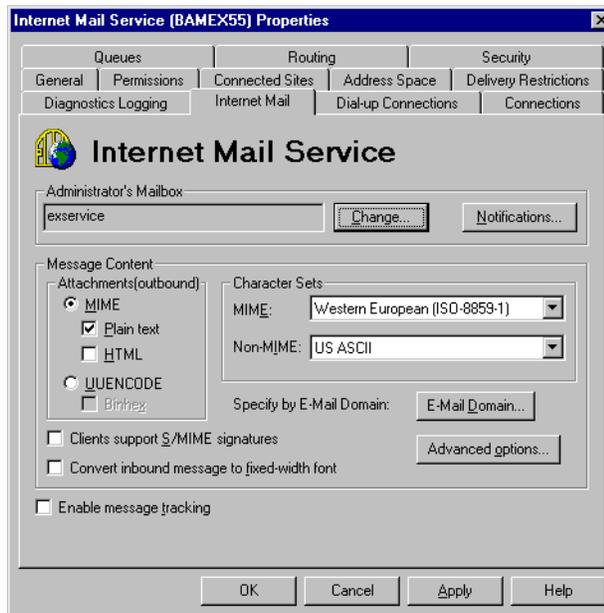
8   Click the **Internet Mail** tab, if it is not already in view.

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9   Click the **E-Mail Domain** button. The *E-mail Domain* window appears.

10   Click **Add**. The *Add E-Mail Domain* window appears.
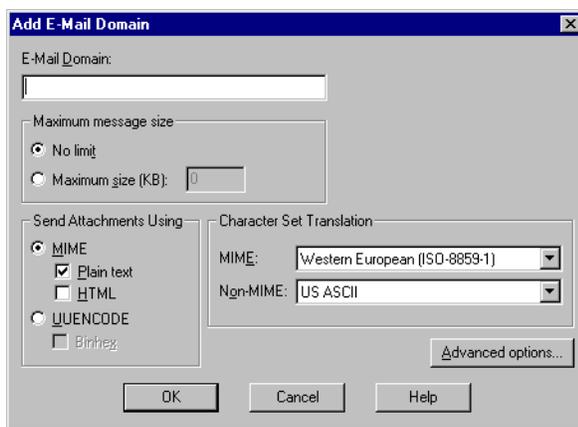
11   In the **E-Mail Domain** field, enter the fully qualified domain name (host.domain.ext) of the destination Scalix server.

12   Click the **Advanced options** button. The *Advanced options* window appears.
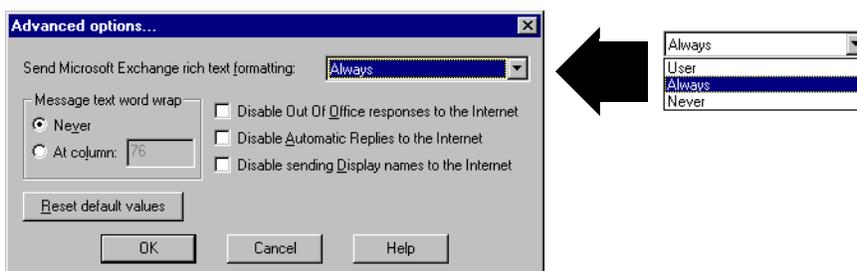
13   From the **Send Microsoft Exchange rich text formatting** drop-down list, select **Always**.

14   Disable the **Disable Automatic Replies to the Internet** check box.

15   Click **OK** to close this window.

16   Click **OK** to close each of the other open windows. An alert window appears, prompting you to restart the Internet Mail Service.

17   Click **OK** to close this window.

Stopping and Restarting the Exchange Internet Mail service

1   Open the **Services** control panel; click **Start > Settings > Control Panel > Services**. The *Services* control panel appears.

2   Locate and select the **Microsoft Exchange Internet Mail Service**.

3   Click **Stop**.

4   Leave the Services control panel open, and, after the "Started" notation is erased from Microsoft Exchange, restart the service by selecting the name and clicking **Start**.

This completes the activation of auto-forwarding.

Task 2: Preparing the Microsoft Exchange Users Distribution List

This chapter describes how to create a distribution list that includes all Microsoft Exchange users in the environment. This list is used during the public folder coexistence and migration process.

Contents

This chapter includes the following information:

Creating the Microsoft Exchange Users Distribution List

To prepare the Microsoft Exchange users distribution list

1   On the Microsoft Exchange server, start the Microsoft Exchange Administrator application.

2   Select a container that contains Microsoft Exchange users you want to migrate.

Note	The default selection/container is "Recipients".

3   Select **File > New Distribution List**. A blank *Properties* window appears.
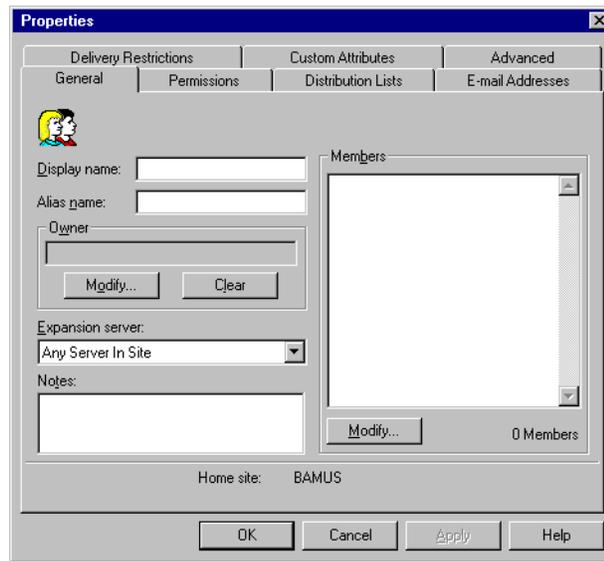
4   Enter `Exchange Users` in both the **Display name** and **Alias name** fields.

5   Click the **Modify** button in the **Members** area. A distribution list window appears.
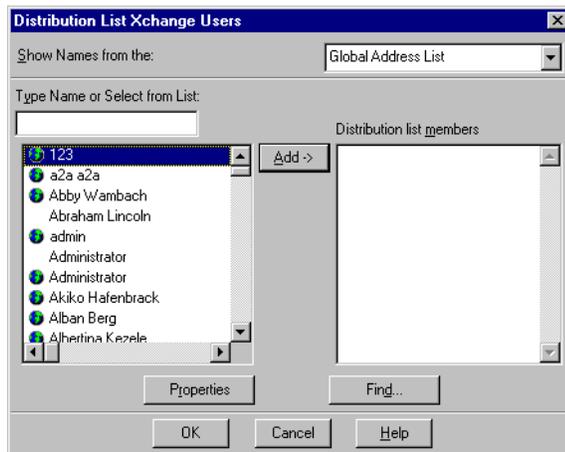
6   Select all the Microsoft Exchange users in the Global Address List (left column) and click **Add**. The selected names appear in the right column as Distribution List members.

7   Click **OK** to close this window and save your entry. Depending upon the number of users in your system, this can take some time to complete.

8   Click **OK** to close each of the remaining Microsoft Exchange Administration windows.

Task 3: Configuring a TNEF route for Microsoft Exchange Users

This chapter covers the configuration of the Transport Neutral Encapsulation Format (TNEF) route, which enables Microsoft Exchange recipients in the Scalix environment.

Contents

This chapter includes the following information:

Introduction

Scalix server uses the Sendmail message transfer agent (MTA) and Simple Mail Transfer Protocol (SMTP) to route messages between servers. To configure Scalix server for coexistence, you must configure a TNEF route on Scalix server for the Microsoft Exchange recipients in the Scalix server directory. When LDAP synchronization occurs, the Microsoft Exchange recipient entries are assigned to a Scalix server mailnode that corresponds to the omAddress value in sync.cfg file. By default, the omAddress value in the sync.cfg file is set to remote,tnef.

Alert	If you route messages directly between Scalix and Microsoft Exchange servers during coexistence, message formatting is downgraded to plain text.

Configuring TNEF Routes

To configure a single route between the Microsoft Exchange server and the Scalix server (with TNEF encoding)

1   Log in to the Scalix server, and open a terminal window.

2   Enter this command:

```
omshowrt –q all
```

A table appears, showing the existing routes on the Scalix server. This table is organized in three columns, these being queue, mailnode, and format.

```
UNIX     internet          MIME
UNIX     internet,tnef     TNEF
LOCAL     scalix1
```

where scalix1 is the name of a mailnode.

3   Enter this command:

```
omaddrt -m <route_name> -q unix -i tnef
```

where route_name is a name of your own choosing that represents this new route. Write down the new route name for use in future steps. This new route uses the SMTP queue while retaining all TNEF attributes.

A confirmation message appears:

```
omaddrt: Route successfully added
```

4   To verify the existence and content of the route, re-enter the omshowrt command:

```
omshowrt -q all
```

The routes table appears, listing your new entry:

```
UNIX     internet          MIME
UNIX     internet,tnef     TNEF
LOCAL    scalix1
UNIX     <route_name>      TNEF
```

5   To verify the route configuration, enter this command:

```
omshowux
```

A list of configurations appears, as shown here:

```
MIME Mailnode      : internet
TNEF Mailnode       : internet,tnef

TNEF Domains       :

Dist List Abbreviation Limit : 0
```

6   Make sure that **internet,tnef** is listed as the **TNEF Mailnode** attribute. This ensures that TNEF routing is enabled.

Note	TNEF routing also supports domain-based encoding. See the MAN pages for omconfux and omshowux for more information.

7   To list and verify the mail routes to the UNIX queue for SMTP delivery, enter this command:

```
omshowrt -q unix
```

A table appears, listing routes and formatting:

```
internet               MIME
internet,tnef          TNEF
<route_name>            TNEF
```

8   To verify the routing configuration, send a test e-mail message to both of the following:

- From a Scalix server user to a Microsoft Exchange user

- From a Microsoft Exchange server user to a Scalix user

For example, send a message from an address in this format:

```
sxadmin@mailnode.domain.ext
```

to an address in this format:

```
exchange_user@domain.ext
```

If the message exchange is successful, the route configuration is complete.

Task 4: Changing the LDAP Setting on the Scalix Server

This chapter covers changing a setting on the Lightweight Directory Access Protocol (LDAP) server for a high numbers of users.

Contents

This chapter includes the following information:

If you are migrating more than 1,000 user mailboxes from Microsoft Exchange to Scalix, you must modify an LDAP setting on the Scalix server to increase the default capacity.

For instructions, see "Task 1: Changing the LDAP Setting on the Scalix Server" on page 31. The procedure is the same for a flash or phased migration.

Task 5: Creating the Synchronization Agreement

This chapter covers the synchronization agreement needed to create/provision users on the Scalix system, based on user records from the Microsoft Exchange server.

Contents

This chapter includes the following information:

- "Adding Administrator Rights to a User Account" on page 33

- "Obtaining Microsoft Exchange Server Values" on page 35

- "Creating the Synchronization Agreement" on page 35

For instructions, see "Task 2: Creating the Synchronization Agreement" on page 33. The procedure is the same for a flash or phased migration.

Task 6: Completing the Initial Directory Synchronization

This chapter covers how to run the initial directory synchronization.

Contents

This chapter includes the following information:

For instructions, see "Task 3: Completing the Initial Directory Synchronization" on page 39. The procedure is the same for a flash or phased migration.

Task 7: Updating Microsoft Exchange and Scalix Directories

During a phased migration, your Microsoft Exchange directory and mailboxes have the potential to be modified daily, so you need to regularly update the Microsoft Exchange and Scalix server directories. This chapter explains how.

Contents

This chapter includes the following information:

-

Updating Microsoft Exchange and Scalix Directories

To synchronize Microsoft Exchange and Scalix directories

1   Log in to the Scalix server.

2   Run omldapsync in interactive mode by entering the following command:

```
omldapsync –i <syncid>
```

where syncid is the name for your Microsoft Exchange-Scalix migration synchronization agreement.

3   Enter 3 to update the directories.

This command synchronizes the directories on the Scalix and Microsoft Exchange servers by comparing the current export file (which is created by selecting this option) with the previous export file. The command adds, deletes, and modifies entries in the appropriate directory.

4   The results scroll on-screen. When the update completes, you are prompted to exit.

Tip	You can automate this directory update process by creating a script file that executes omldapsync with the appropriate options, which are detailed in the MAN page. You can schedule regular execution of the script as a cron job.

Task 8: Updating the Client Directory Access

Scalix provides a client interface to the directory that acts as an index of all users. You can use this index to specify the directory entries that clients (such as Microsoft Outlook, Internet clients, and LDAP clients) can access. When you modify the directory through any interface, including omldapsync, you must update client directory access before clients can view any new entries in the directory. This chapter explains how.

Contents

This chapter includes the following information:

Updating the Client Directory Access Index

You must update the client directory access (CDA) index after you successfully synchronize the Scalix and Microsoft Exchange directories.

To update the client directory access index

1   Log in to the Scalix server.

2   Enter the following command:

```
omexeccda
```

The results scroll on-screen as follows:

```
Fetching all entries from Directory  ... Please wait
Sorting Directory entries            ... Please wait
Building Directory Access Tables     ... Please wait
```

Tip	You can automate this process by including this script in a cron job.

Task 9: Hiding Directory Entries in Scalix Server

During the coexistence period, you may need to hide unwanted entries in the Scalix server directory, and at the same time, hide them from the Microsoft Outlook Address Book. This requires the modification of a parameter in the Scalix server directory, as described in this chapter.

Contents

This chapter includes the following information:

Hiding Directory Entries in Scalix

In the following example, the Microsoft Exchange entry for scheduling and free/busy lookup exports to Scalix server are named "Microsoft Schedule+ Free\/Busy Connector (BAMEX55)".

To hide selected directory entries

1   Enter the following command (example):

```
omsearch -e common-name=adm*
```

The following information appears on-screen:

```
COMMON-NAME=AdminSch=Microsoft Schedule+ Free\/Busy Connector
(BAMEX55)/OU1=exchange/S=(BAMEX55)/OU2=bamail/ALIAS=AdminSch/INTER-
NET-ADDR=AdminSch@bamail.net/G=Microsoft/LDAP-OBJECT-CLASS=Mailbox-
Agent=organizationalPerson=person=Top=ldapsync-first/I=S COMMON-
NAME=Administrator/OU1=exchange/S=Administrator/
```

```
OU2=bamail/ALIAS=Administrator/INTERNET-ADDR=Administrator@bam-
ail.net/LDAP-OBJECT-CLASS=organizationalPerson=person=Top=ldapsync-
first
```

2   To hide the COMMON-NAME=AdminSch=Microsoft Schedule+ Free\/Busy Connector (BAMEX55) directory entry, enter:

```
ommodent -e common-name=adminsch -n EX-CDA-DIRECTORY=1
```

The following information appears:

```
Modified 1 entry in the Directory
```

3   To update the client directory access (CDA) directory, enter:

```
omexeccda
```

Task 10: Preparing for Public Folder Migration

This chapter explains how to prepare for public folder migration.

Contents

This chapter includes the following information:

Introduction

The process during a phased migration for migrating public folders from Microsoft Exchange is: you migrate the Microsoft Exchange public folder data to Scalix server; and you auto-forward messages between the Microsoft Exchange and Scalix public folders. The forwarding is both ways, meaning from Microsoft Exchange to Scalix and from Scalix to Microsoft Exchange. If you do not migrate the folders and enable auto-forwarding, duplicate messages can display in Scalix public folders, for example.

Scalix recommends creating a backup folder for your public folders before you begin the migration and coexistence process.

During the public folder data migration process, you can migrate all data and maintain the current folder structure, or migrate some data and use the public folder data migration process as an opportunity to delete old data and unwanted folders.

The Import/Export wizard in Microsoft Outlook manages the migration of public folder data. Before you begin migrating public folder data, you:

- Determine which public folders you want to migrate
- Reset the permissions on them

- Reorganize them

- Prepare them

Each of these topics is outlined in this chapter.

Determining Which Public Folders to Migrate

When determining the public folders to migrate to Scalix, remember that any Microsoft Exchange user can potentially create and manage access to a public folder. Some public folders can be restricted and even administrators are unable to access or manage them. Alternatively, some organizations have policies where only administrators can create and manage public folders.

Scalix recommends that you notify all Microsoft Exchange users before you migrate public folders so that owners can consider whether to include their folders in the migration. Also notify users that a new public folder owner is established during migration and that all data messages are visible to an administrator.

Resetting Permissions on Public Folders

After you identify the public folders that you want to migrate, you must assign a new owner to each one so that you can:

- Export a .pst file to import into Scalix server

- Create a new rule using the Folder Assistant that enables cross-platform synchronization

For example, your organization designates one of your administrator accounts (that is part of an Administration group) to be the owner of all public folders within the organization.

Note	Any folder that is restricted in Microsoft Exchange (a default role set to the value of None) is set to a default role of Publishing Author after it is imported into Scalix. This means they can create and read items in the folder, create subfolders, and edit and delete their own items. They are not the owner and cannot edit or delete other people's items in the folder. If you want to restrict viewing of a public folder, change the default role to None after you create the public folder using the .pst import. This means that the folder is not visible. To view the various roles and how permissions vary, right-click a public folder in Scalix Web Access, for example, and view its permissions.

Reorganizing Public Folders and Data

After you determine the public folders to migrate and configure the owner permissions for them, Scalix recommends that you create a "clean and migrate" directory where you can reorganize public folders and data.

To create a directory for reorganizing public folders and data

1   Using a Microsoft Exchange profile, log in to Microsoft Outlook as the designated public folders owner.

2   Click the **All Public Folders** folder (inside **Public Folders**).

3   Choose **File > Folder > New Folder**. The *Create New Folder* window appears.

4   Enter `Clean and Migrate` in the **Name** field.

5   Click **OK**.

6   When the Microsoft Outlook window reappears, right-click the **Clean and Migrate** folder and choose **Properties**. A properties window appears.
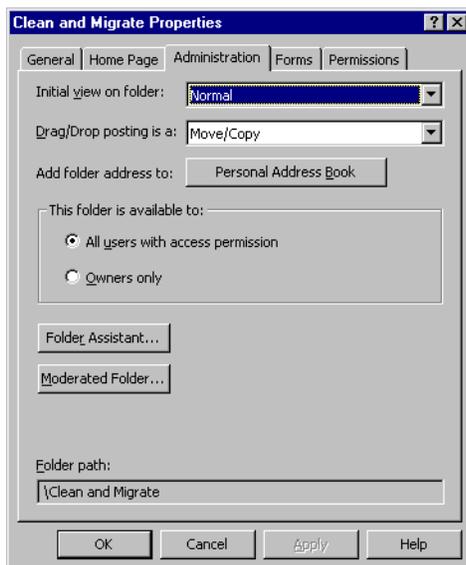
7   Make sure the following settings are in effect:

• **Initial view on folder** — **Normal**

• **Drag/Drop posting is a** — **Move/Copy**

• **This folder is available to** — **All users with access permission**

8   Click **OK** to save your settings and close the window.

9   Right-click all of the to-be-migrated public folders and drag them onto the **Clean and Migrate** folder.

10 At the prompt, click **Copy**. The contents of all public folders are copied into this migration folder.

Tip	The migration process provides the opportunity to delete legacy data from your public folders. The data that you decide to exclude (if any) from the migration process depends on the migration policies implemented by your organization. To remove unwanted messages, open the public folders and delete the messages that you do not want to migrate to Scalix.

Creating Public Folders on Scalix Server

Based on the folders being migrated from Microsoft Exchange, create a matching set of public folders on the Scalix server. The name of each public folder must be exactly the same as the originating folder.

For example, if you want to migrate the Microsoft Exchange public folder "For Sale" to Scalix, enter this command on the Scalix server:

```
omaddbb –s "For Sale"
```

A public folder created as root by command has no owner. A public folder created instead in a client, such as Scalix Web Access, has an owner, which is the Premium user account that created it. Scalix recommends upgrading the sxadmin account from Standard to Premium user and creating the public folders in Scalix Web Access. Both methods follow.

To create public folders on a Scalix server by command

1 Enter the omaddbb command, for example:

```
omaddbb –s "For Sale"
```

Use this command to create all the other public folders. The confirmation message that appears on the Scalix server refers to bulletin boards, which is the same as a public folder:

```
Bulletin Board added
```

2 To create a subfolder, use the command

```
omaddbb –m "TOP" –s <"Folder Name">
```

To create public folders in Scalix Web Access

1 Click **File > New > Folder**. In the window that appears, type a name for the entry, select an option from the drop-down list (e-mail and posts, contacts, or calendars), then click **Public Folders** to create it there.

2 Click **OK** to exit from the window and create the folder.

3 Create the rest of the folders.

A new folder gives users the role of Author, which means users can create and read items in it and edit or delete their items in it. They cannot create subfolders or edit or delete other people's items in the folder. They cannot modify the permissions on the folder.

The easiest way to change the permissions on such folders is to upgrade the sxadmin account to Premium user, log in to Scalix Web Access, then right-click and change the permissions on the folders.

Figure 1: Changing "Default" Permissions for Regular Users

Checking Your Work

You can check in Microsoft Outlook. You can also list public folders using a command.

To verify the success of your work

1   Start Microsoft Outlook, using the Scalix profile.

2   Open the public folders list.

3   Verify that the folders have been migrated from the **Clean and Migrate** folder.

To list public folders on a Scalix server

1   Run one of the following commands.

For top-level folders — `omlistbbs`

For all levels of folders — `omlistbbs -d 0`

Task 11: Migrating Public Folders

This chapter explains the procedure for migrating public folders from Microsoft Exchange to Scalix.

Contents

This chapter includes the following information:

For instructions, see "Task 4: Migrating Public Folders" on page 43. The procedure is the same for a flash or phased migration.

Task 12: Enabling Public Folder Forwarding on Scalix Server

This chapter explains how to enable public folder forwarding in Scalix.

Contents

This chapter includes the following information:

Introduction

The public folder coexistence process requires that you enable forwarding capabilities on the Scalix public folder, then create an Internet-routable e-mail address to be applied to public folders on Scalix. This address takes the form:

```
publicfoldername@scalixserver.yourcompany.com
```

Enabling forwarding allows a copy of a message posted to a given public folder in Scalix server to be forwarded automatically to a similarly-named public folder on Microsoft Exchange.

Two commands enable public folder forwarding on Scalix server:

- omaddent
- omaddbbsa

Examples

The specific use of omaddent results in a directory entry associated with the public folder and creates an SMTP address to receive inbound mail. It can be used three ways.

Example 1 — *Create a directory entry with accompanying e-mail address*

We want to create a new Scalix-based public folder named "For Sale" for use by Acme Corporation mail users. The Internet domain is acme.net, on a mailnode named scalixserver. To do so, create a directory entry (each of the two items on a single line):

```
omaddent -e "S=+BB/G=For Sale /CN=For Sale/ OU1=scalixserver/OU2=acme/
DDT1=BB-NAME/DDV1=For Sale/

IA=ForSale@scalixserver.acme.net"
```

Note	If the public folder name contains non-ASCII characters, such as Japanese characters or German umlauts, use DDV1-TX instead of DDV1 in the command.

Example 2 — *Hide the new entry (and e-mail address) immediately after creation*

To create and then hide the directory entry for the "For Sale" public folder on Scalix, enter the following:

```
omaddent -e "S=+BB/G=For Sale /CN=For Sale/ OU1=scalixserver/OU2=acme/
DDT1=BB-NAME/DDV1=For Sale/

IA=ForSale@scalixserver.acme.net/ EX-CDA-DIRECTORY=1"
```

Note	If the public folder name contains non-ASCII characters such as Japanese characters or German umlauts, use DDV1-TX instead of DDV1 in the command.

Example 3 — *Retroactively hide the previously created (visible) entry*

If we previously created the "For Sale" public polder and want to hide the entry, enter the following:

```
ommodent -e S=+BB/G=For Sale/CN=For Sale/OU1=scalixserver/OU2=acme -n EX-
CDA-DIRECTORY=1
```

Setting Up Forwarding

Run the omaddent command to enable forwarding of public folders, as outlined in the previous section.

To set up forwarding

1   Run the omaddent command in the following format:

```
omaddent -e "S=+BB/G=For Sale /CN=For Sale/ OU1=scalixserver/OU2=acme/
DDT1=BB-NAME/DDV1=For Sale/

IA=ForSale@scalixserver.acme.net"
```

The arguments of the omaddent command must include the following.

Table 1: omaddent Arguments

Parameter	Description
S	Must be set to +BB.
G	Specifies the user-visible name of the public folder.
CN	Specifies the Common Name that is required by the omldapsync command.
OU	Specifies the mailnode components, and you must enter the primary mailnode to route messages to the public folder server. Use the omshowmn command to display the primary mailnode. The primary mailnode displays with two asterisks (**) before the mailnode name.
DDT1	This is an internal tag that must be set to BB-NAME. Leaving the DDT1 blank causes Scalix server to route public folder messages to a UNIX gateway.
DDV1	This is an internal tag and must be set to the name of the public folder you are enabling. If the public folder name contains non-ASCII characters, such as Japanese characters or German umlauts, use DDV1-TX instead of DDV1.
INTERNET-ADDR	This is the SMTP address that is used outside the Scalix server system to send messages to the public folder.

Update the client directory access after adding or modifying entries in Scalix; simply run the omexeccda command.

To update the client directory access index

1   Enter the following command:

```
omexeccda
```

Activating Forwarding

After you create a directory entry associated with the public folder, you must activate the forwarding option in the similarly-named Microsoft Exchange public folder. This is done by providing a "forward to external address" option in the Scalix server public folder synchronization mechanism.

Note	This option provides functionality equivalent to the Microsoft Exchange public folder forwarding rule, that is, only new public folder messages are synchronized between the Scalix and Microsoft Exchange servers. Modified and deleted messages are not synchronized.

The omaddbbsa command configures a forwarding address that forwards any new messages to the specified public folder to an address that you specify:

```
omaddbbsa –f /route/forwarding_address/ –s public_folder_name
```

For example, to configure forwarding from the Scalix "For Sale" public folder to the external SMTP address "ForSale@bamex55.bamail.net", enter the following:

```
omaddbbsa –f /remote,tnef/IA=ForSale@bamex55.bamail.net –s "For Sale"
```

The remote,tnef parameter is the route that references the Microsoft Exchange server. This ensures that the forwarded messages preserve all MAPI properties.

Testing Your Work

To verify that the public folder forwarding mechanism is functioning, post a message to a public folder in Scalix, then check the corresponding folder in Microsoft Exchange to see if that message was successfully forwarded.

Task 13: Enabling Public Folder Forwarding on Microsoft Exchange

The final task in the public folder coexistence process is to enable forwarding capabilities on the Microsoft Exchange server. This chapter explains how.

Contents

This chapter includes the following information:

Introduction

To complete bidirectional bulletin board message routing, you configure Microsoft Exchange public folders to forward a copy of a newly posted message to the Scalix public folders. The Microsoft Exchange server has custom recipients that have an SMTP address that reference similarly-named Scalix public folders. For example, the "For Sale" public folder, which now has a similarly-named public folder on the Scalix server, now has a custom recipient.

The Internet address for "For Sale", like other custom recipients, references an external SMTP address (for example, ForSale@scalixserver.acme.net). You must then add a forwarding rule that enables the Microsoft Exchange server to forward a copy of a "For Sale" public folder message to the "For Sale" custom recipient. Microsoft Exchange then routes the message to the Scalix public folder named "For Sale".

Note	Notes in public folders cannot be forwarded to Scalix.

Requirements

To prevent message loops, configure Microsoft Exchange to only forward messages posted by Microsoft Exchange mailbox users. The most efficient method is by using Distribution Lists.

Most organizations have a method of broadcasting messages to some or all members of an organization by using one or more Distribution Lists. However, you can also use Distribution Lists for public folder forward functionality.

Activating Folder Forwarding

Set up forwarding of new public folder content from the Microsoft Exchange server to the Scalix server.

To enable Microsoft Exchange to forward messages from Exchange public folders to Scalix public folders
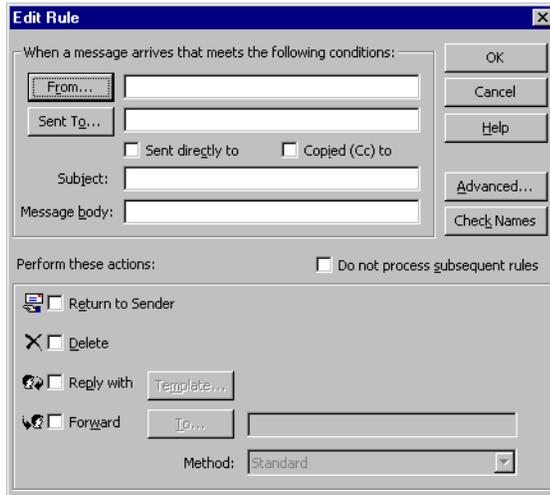
1   Start Microsoft Outlook as the owner of a Microsoft Exchange-based public folder.

2   Right-click the public folder and choose **Properties**. The properties window appears.
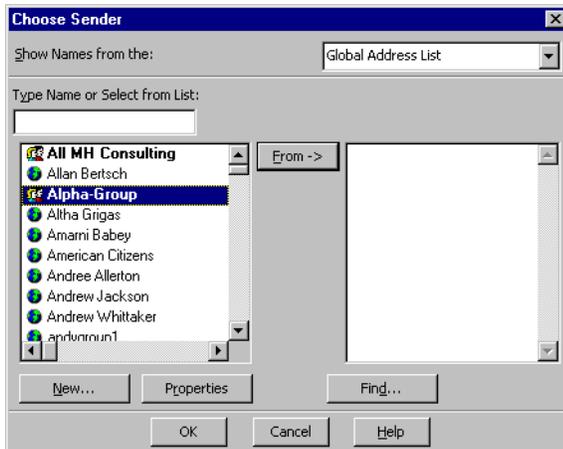
3   Click the **Administration** tab.
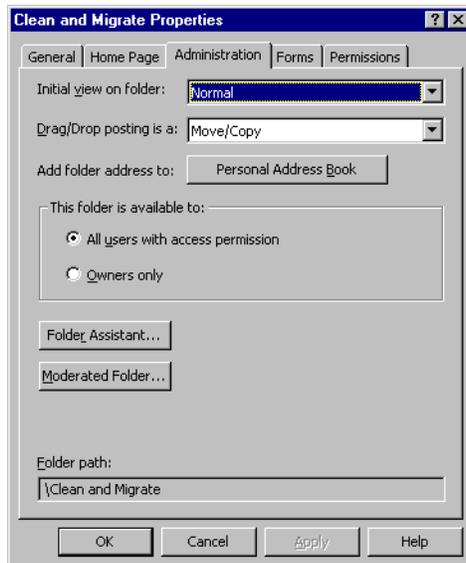
4   Click **Folder Assistant**. The *Folder Assistant* window appears.
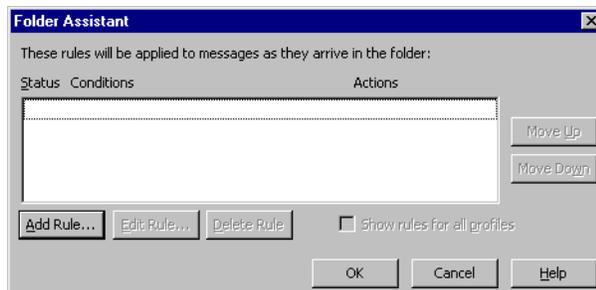
5   Click **Add Rule**. The *Edit Rule* window appears.


6   Click **From**. The *Choose Sender* window appears.

7   Make sure **Global Address List** is selected in the **Show Names from** drop-down list.

8   Select a Microsoft Exchange distribution list (represented by two-headed icons) whose users you want to allow to post to public folders.

9   Click **From** to move that list to the right area.

10   Repeat this process to add other lists.

11 Click **OK** to save the selections and close the *Choose Sender* window. The *Edit Rule* window reappears, displaying the selected groups.
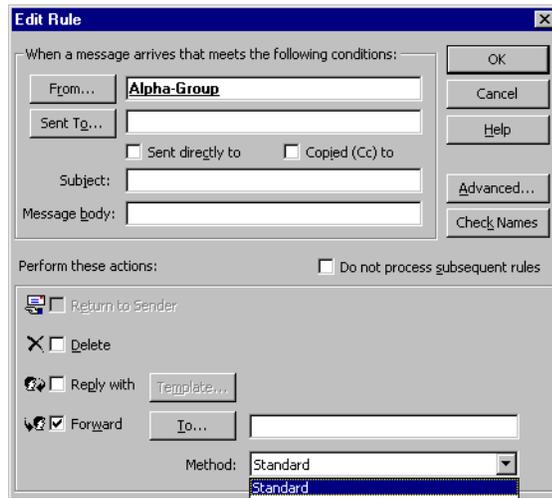
12 Enable the **Forward** check box.

13 From the **Method** drop-down list, select **Leave Message Intact**.

14 In the **To** field, enter the Internet address of the similarly named public folder stored on Scalix.

15 Click **OK** to close the window and save the entries.

16 Click **OK** to close all other windows.

17 To test the success of your efforts, post a new message to a Microsoft Exchange public folder, then see if it is visible in the corresponding Scalix public folder.

Task 14: Effective Distribution List Coexistence

This chapter offers tips for effective coexistence of public distribution lists (PDLs), or groups.

Contents

This chapter includes the following information:

Introduction

There is no central mechanism that synchronizes distribution lists. Instead, they are managed by either the Scalix or Microsoft Exchange system. Whichever system is not the manager must include a reference entry that sends a single message to the host system where the distribution list resides. The distribution list is then updated.

Although the Scalix or Microsoft Exchange system can manage distribution lists, Scalix recommends that you manage distribution lists in Microsoft Exchange until the end of the coexistence process.

As previously noted in "Task 2: Preparing the Microsoft Exchange Users Distribution List" on page 91, Scalix creates directory entries that represent Microsoft Exchange Distribution Lists and displays them as PDLs. To achieve this in Microsoft Exchange, you must create a Distribution List and add the Scalix server custom recipient of the same name.

Creating the Distribution List and Custom Recipient

To create a Distribution List and add the Scalix custom recipient

1   Start the Microsoft Exchange Administrator application.

2   Select the container from which you migrated Microsoft Exchange users (for example, Recipients).

3   Choose **File > New Distribution List**. A *Properties* window appears.
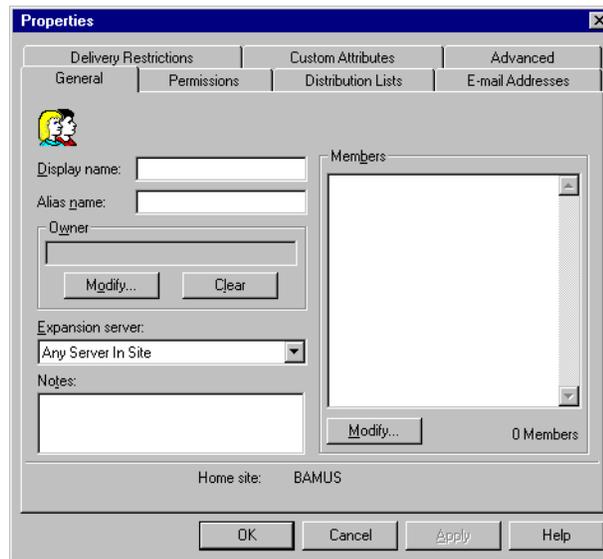
4   Click the **Modify** button in the **Members** area.

5   Add all Scalix users to the Distribution List.

Alert	Do not add ScalixAdmins, ScalixGroupAdmins, ScalixUserAdmins, ScalixUserAttributeAdmins, or querymgr to the new Scalix distribution list.

6   Enter a name in the **Display name** field.

7   Enter a name in the **Alias name** field. (It does not have to be different.)

8   Click **OK** to save your entries and close the properties window.

Updating Directory Information

1   Log in to Scalix.

2   Enter the following omldapsync directory-update command:

```
omldapsync –i <syncid>
```

where syncid is your existing synchronization agreement name.

3   When the omldapsync menu appears, enter 3 to update the directory.

Updating the Client Directory Access List

1   Enter this command:

```
omexeccda
```

This completes the task.

Note

You cannot view Microsoft Exchange Distribution List members in Scalix (using either Scalix Connect for Microsoft Outlook or Scalix Web Access), but you can see the Distribution List name. If you were logged in to Scalix during the recent operations, exit and then restart Microsoft Outlook to refresh the displays.

Task 15: Loading Scalix Mailboxes

This chapter explains how to provision Scalix mailboxes.

Contents

This chapter includes the following information:

The migration process requires that you convert Microsoft Exchange directory entries to Scalix server mailboxes. The principal tool is a Scalix command, ommigu. This command modifies Scalix server directory entries that represent Microsoft Exchange users.

For instructions, see "Task 5: Loading Scalix Mailboxes" on page 49. The procedure is the same for a flash or phased migration.

That chapter deals with a single mailbox entry. The next chapter outlines how to provision mailboxes in bulk.

Task 16: Bulk Mailbox Provisioning and Configuration

This chapter explains how to provision Scalix mailboxes in bulk.

Contents

This chapter includes the following information:

Introduction

The ommigu script contains powerful filtering capabilities to organize users into migration groups. This enables you to migrate the users in your organization in phases. A phased migration implies for select users an extended coexistence period between Microsoft Exchange and Scalix.

Performing the tasks described in the "Loading Scalix Mailboxes" chapter provisions and configures a mailbox for use with Scalix server. ommigu filtering capabilities enable you to provision and configure groups of users based on:

- Microsoft Exchange attributes
- Scalix attributes
- A userlist text file

Each of these options is outlined here; choose one.

Using Microsoft Exchange Attributes to Provision Scalix Mailboxes

To use Microsoft Exchange attributes to provision a group of users (mailboxes)

1   Use the –ldapfilter option as follows:

```
ommigu –ldapfilter "attribute=string" –h ldapserver
```

where:

- **attribute** represents the LDAP representation of the Microsoft Exchange attribute
- **string** represents the string within the Microsoft Exchange attribute
- **ldapserver** represents the server against which you are executing the query (typically, the Microsoft Exchange server itself)

For example:

```
ommigu –ldapfilter "l=Boston" –h ex55ord.xyzcorp.com –m "xyzcorp,hq"
```

Because the city attribute in Microsoft Exchange contains the LDAP representation of l, ommigu queries the Microsoft Exchange server for all users that contain the string Boston in the city field.

All user accounts matching this criteria are provisioned for use with Scalix.

2   Configure these user accounts for use with Scalix by entering:

```
ommigu –ldapfilter "attribute=string" –h ldapserver --raf
```

3   Execute omldapsync in interactive mode by entering:

```
omldapsync –i <syncid>
```

where syncid is the name of the synchronization agreement that you created.

4   At the prompt, enter 3 to update the directory.

Using Scalix Server Attributes to Provision Scalix Mailboxes

When the initial synchronization between Scalix server and Microsoft Exchange occurs (using omldapsync), most of the information stored in Microsoft Exchange directory attributes is mapped to corresponding attributes in the Scalix directory. So you can provision the Scalix system directory using either the –ldapfilter or –filter option.

Using the –ldapfilter option requires that you include the LDAP representation of the Scalix server attribute. Using the –filter option requires that you include the Scalix server name of the attribute (typically referred to as a tag).

To use Scalix server attributes (example)

1   Provision all users (mailboxes) in the Scalix directory with the given name of Mark by entering:

```
ommigu –filter "G=Mark" –show
```

The name of the Scalix server is not required.

2   Because the LDAP representation of this field is givenName, you can also provision the Microsoft Exchange server for all directory objects with a given name of Mark. To do so, enter the following command:

```
ommigu –ldapfilter "givenName=Mark" –h ldapserver –show
```

3   Configure these user accounts for use with Scalix by entering:

```
ommigu –ldapfilter "givenName=Mark" –h ldapserver --raf
```

4   Execute omldapsync in interactive mode by entering:

```
omldapsync –i <syncid>
```

where syncid is the name of the synchronization agreement created by you.

5   At the prompt, enter 3 to update the directory.

Using the Userfile Option to Provision Scalix Mailboxes

You bulk-provision and configure user accounts using the ommigu -userfile option. The userfile itself is a text file that lists the Scalix common name attribute for all users. Because the Scalix common name corresponds to the Microsoft Exchange display name attribute, you can use the directory export capabilities in the Microsoft Exchange Administration application to extract users to a comma-separated file.

To provision and configure a group of users (mailboxes) using the -userfile option

1   Using the Microsoft Exchange Administration application, extract the current users to a comma-separated file.

2   Edit the file to remove the user accounts that you do not want to migrate.

3   Save the file in .txt format, using the .txt extension.

4   Provision the mailboxes in this list by entering this command:

```
ommigu –userfile <path>/grp1.txt
```

where path is the location of the file and the name of the file is grp1.txt.

5   Configure these users for use with Scalix server by entering:

```
ommigu –userfile <path>/grp1.txt -–raf
```

6   Run omldapsync in interactive mode by entering:

```
omldapsync –i <syncid>
```

where syncid is the name of the synchronization agreement that you created.

7   At the prompt, enter 3 to update the directory.

If You are Asked for Passwords

1   If this prompt appears after you have entered 3:

```
INPUT: please enter password for EX_PASS=
```

enter the Microsoft Exchange migration user password.

2   When this prompt appears:

```
INPUT: please enter password for IM_PASS=
```

enter the Scalix server administrator password.

Task 17: Reconfiguring Auto-Forward for the New Scalix Mailboxes

This chapter covers the process for cancelling the auto-forward on Scalix mailboxes and then updating the Microsoft Exchange directory via the synchronization command.

Contents

This chapter includes the following information:

For instructions, see "Task 6: Reconfiguring Auto-Forward for the New Scalix Mailboxes" on page 51. The procedure is the same for a flash or phased migration.

Task 18: Configuring Message Forwarding from Exchange to Scalix

This chapter covers the procedure for routing all new mail to Scalix.

Contents

This chapter includes the following information:

- "Introduction" on page 53
- "Adding Alternate Recipient Information for a Single Mailbox" on page 54
- "Adding Alternate Recipient Information for Several Mailboxes" on page 55

For instructions, see "Task 7: Configuring Message Forwarding from Exchange to Scalix" on page 53. The procedure is the same for a flash or phased migration.

Task 19: Migrating Mailbox Data

After you modify the Microsoft Exchange server with Scalix server mailbox information and provision the target mailboxes on the Scalix server, you can migrate mailbox data. This chapter explains how to do it with the Scalix Migration Tool.

Contents

This chapter includes the following information:

For instructions, see "Task 8: Migrating Mailbox Data" on page 59. The procedure is the same for a flash or phased migration.

Task 20: Decommissioning Microsoft Exchange Mailboxes

This chapter explains how to deactivate Microsoft Exchange mailboxes, preventing them from being accessed by their users without deleting them.

Contents

This chapter includes the following information:

When you complete migration of all the mailboxes and mailbox data, you can decommission the Microsoft Exchange mailboxes. This process makes them unusable without deleting them.

For instructions, see "Task 9: Decommissioning Microsoft Exchange Mailboxes" on page 67. The procedure is the same for a flash or phased migration.

Task 21: Post-Migration and Coexistence Closure Tasks

The chapter outlines the tasks to complete the migration of Microsoft Exchange users and data to Scalix and to end coexistence between Scalix and Microsoft Exchange.

Contents

This chapter includes the following information:

Achieving Successful Coexistence

For a phased migration, a successful state of coexistence and a satisfying migration to Scalix depend on the following:

- All inbound Internet mail must continue to be routed to the legacy mail service until the last user is migrated to Scalix. Only then can the mail exchanger (MX) records can be changed to direct mail to the Scalix service.

- Every newly migrated Scalix user needs access to a complete address book listing all users, whether on Scalix or on the legacy system. When they send e-mail to any user, it needs to be routed to the appropriate environment (wherever the destination recipient's mailbox truly exists). This means you need mailbox forwarding mechanisms and/or directory entries within the Scalix environment as well, to make sure mail routes to the legacy environment.

- Each time a user (or a group of users) is migrated from the legacy environment to Scalix, auto-forwarding mechanisms must be active and directory entries must be updated

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Managing Distribution Lists

As a phased migration proceeds, one serious question arises: how to coordinate Distribution Lists. Some recipients on a Distribution List still reside in the old environment (Microsoft Exchange) while some recipients are migrated to the new environment (Scalix).

If you delete Microsoft Exchange mailboxes (after successful migration to Scalix server), any Alternate Recipient information (referencing the new Scalix server mailbox) is removed from all Microsoft Exchange Distribution Lists. If this poses a problem, you can manually insert the reference to the Scalix server mailbox back into all Microsoft Exchange Distribution Lists to which the just-migrated users belong.

However, during the migration process, Scalix server provisions directory entries as mailboxes with automatic redirection instead of redirection-only entries. The benefit of provisioning entries in this manner is that it enables the option of mirroring the structure and members of Public Distribution Lists (PDLs) on Scalix server at anytime. As users are migrated from Microsoft Exchange to Scalix server, you do not have to delete and add the directory entry into the list. Similarly in the Microsoft Exchange environment, the management of Distribution Lists during the migration to Scalix is simplified because you do not have to remove mailboxes.

Although you eventually add (and hide) Alternate Recipient information to Microsoft Exchange mailboxes, you do not need to remove mailboxes and replace them with custom recipients during the migration process.

# *Switching Distribution List Management to Scalix*

You can switch Distribution List management from Microsoft Exchange to Scalix either during the coexistence period or after coexistence. (The latter is outlined in the next section.) This requires the creation of a Microsoft Exchange Custom Recipient entry with the Internet address of a specific Scalix server Public Distribution List and a unique display name (for example, SALES-PDL).

To switch distribution list management to Scalix

1   Create a custom recipient pointing to the Scalix group; in the Microsoft Exchange Administrator application, choose **File > New Custom Recipient**. The *New E-mail Address* window appears.
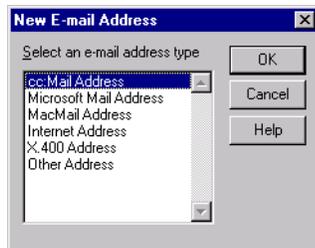
2   Select **Internet Address** and click **OK**. The *Internet Address Properties* window appears.
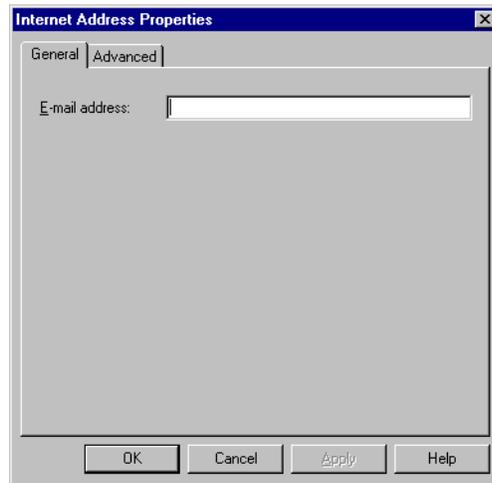
3   In the **E-mail address** field, type the Scalix group's full e-mail address, for example sales@mailserver.scalix.company.com

4   Click **OK** to proceed. The *Properties* window appears.

5   Click the **Display** field and type the Scalix group's name (probably the same name as the original Microsoft Exchange PDL).

6   Click the **Alias** field and type the scalix group's full e-mail address. Ignore all the other fields.

7   Click **Apply**, then click **OK**, to close this window and save your entries.

8   When Microsoft Exchange reappears, open the **Lists** menu and choose **Custom Recipients**. The new custom recipient appears in the now-visible list.

9   Remove the Microsoft Exchange auto-forward from the Scalix group/Public Distribution List that refers to the original Microsoft Exchange Public Distribution List.

10 Set up the auto-forwarding for the Microsoft Exchange group; in Microsoft Exchange Administrator, double-click the original PDL entry to open that list's properties window.

11 Click the **Modify** button below the users list. The *Distribution List* window appears.

12 Select and delete all the entries in the **Distribution List Members** list.

13 In the same window, locate the custom recipient (representing the Scalix group).

14 Select it and click **Add ->**.

15 Click **OK** to save the change and close the window.

16 When the *Properties* window reappears, click **Apply**, then click **OK** to save your changes.

17 Now hide the custom recipient from Microsoft Exchange view. First, start the Microsoft Exchange Administrator application.

18 Open the **List** menu (on the Microsoft Exchange Administrator toolbar) and choose **Custom Recipients**.

19 Locate and double-click the Scalix-group custom recipient in the list that appears.

20 When the *Properties* window appears, click the **Advanced** tab.

21 In the Custom Recipient Options, enable the **Hide from address book** check box.

22 Click **Apply** to activate your changes, then click **OK** to close the properties window.

23 You can exit the Microsoft Exchange Administrator application.

What Happens?

Any remaining Microsoft Exchange users can address messages to the same Microsoft Exchange-based Distribution List that now has only one member—the custom recipient that contains the Internet address of the corresponding Scalix server Public Distribution List.

You can now switch administration of this distribution list (including additions or deletions of recipients) to the Scalix server copy.

Switching PDL Management After Coexistence

If you switch Distribution List management after coexistence (when there are no more actively used mailboxes on Microsoft Exchange), you must add all relevant users to the Scalix server Distribution List in one of two ways:

- Using Scalix Management Console

- By running the omaddpdln command in a terminal window

Adding a number of names to a Scalix Public Distribution List can be made efficient by extracting the original Microsoft Exchange recipient list to a text file, then formatting the file for importation into Scalix.

Copying the PDL from Microsoft Exchange

1   In the Microsoft Exchange Administrator application, open the Recipients container where the Distribution Lists are stored.

2   Right-click the appropriate Distribution List entry and select **Properties**. The *Properties* window opens.

3   In the **General** tab, click **Modify**. A *Distribution List* window appears.

4   Select all of the list's users (by clicking the **Members** list and pressing **Ctrl+A**) and copy them to the Windows clipboard.

5   Close the *Distribution List* and *Properties* windows.

6   Open a new Notepad or Wordpad document and paste the collection of user information into the document window.

7   Save this document as *Dlist.txt*

8   Exit the Microsoft Exchange Administrator application.

Formatting the List File for Importation

To process the text file in Microsoft Excel for use in Scalix

1   Open a new Excel workbook, with the active cell being A1.

2   Click **Data > Import External Data > Import Data**. The *Select Data Source* window appears.

3   Locate and select the user names text file.

4   Click **Open**. The Text Import wizard appears.

5   In the first wizard screen, click the **Delimited** button.

6   Click **Next**. The second wizard screen appears.

7   Enable the **Delimited** check box and uncheck any others.

8   Make sure that both first and last names are sorted into the same cell/column as shown in the preview area of the window.

9   Click **Next**. The third wizard screen appears. No changes are needed.

10 Click **Finish**. The *Import Data* window appears.

11 Click **OK**. (The default location is the current worksheet, in cell =A1.) Row 1 displays names from the list, one first/last name pairing per cell.

12 Select the entire row. (Selecting empty cells does not affect this procedure.)

13 Copy the row's contents to the Windows clipboard.

14 Open a new Excel workbook.

15 Click **Edit > Paste Special**. The *Paste Special* window appears.

16 Enable the **Transpose** check box. (All other default settings are acceptable.)

17 Click **OK** to complete the pasting of data. Excel redistributes the first and last names in Column A.

18 Due to the default column width, the name entries can appear to spill into column B and C. Widen Column A to verify that each first/last name entry fits in its own Column A cell.

19 Save this file/workbook as a text file for importation into Scalix.

20 Print the file.

Continuing Coexistence

If you are planning to operate both Microsoft Exchange and Scalix servers after the initial migration, you run the omldapsync command on a regular basis to synchronize directories. This is entirely feasible, but remember the following as you perform regular updates of both server directories:

Do not change or delete user records on the Scalix server. Always edit the records on the originating Microsoft Exchange/IMAP server.

Then, start a new omldapsync operation to update the Scalix server.

If you synchronize directories on Scalix and Microsoft Exchange, the operation involves two sequential unidirectional synchronizations that are entirely independent of each other:

•   Scalix users become "foreign address" entries in the Microsoft Exchange Global Address List (GAL)

•   Microsoft Exchange users become "Internet" users in Scalix

There is no duplication of directory entries; during omldapsync, each set of users is treated differently on the target server. Scalix users are kept in a separate Microsoft Exchange recipients container, and Microsoft Exchange users are never given Standard or Premium user status in Scalix.

As a result, problems can arise from mistaken assumptions about "synchronization".

As an example, you synchronize a "Jane Smith" user record from Microsoft Exchange to Scalix. Later, you either edit the Scalix "Jane Smith" record on Scalix or delete that record from Scalix. (If a record originates in Microsoft Exchange, resist the impulse to edit or delete it in Scalix.) It later becomes apparent that it was wrong to change or delete the "Jane Smith" record. You assume that the record will be replaced in the next omldapsync operation, but you discover nothing has changed afterwards.

The explanation is simple, as is the solution:

- omldapsync does not compare each directory (Scalix and Microsoft Exchange) for changes or deletions in shared records, so it does not detect the missing "Jane Smith" record on Scalix and replace it

- You must manually edit the files used by omldapsync (details follow), specifically the "Jane Smith" record", to force omldapsync to reload the "Jane Smith" record from Microsoft Exchange to Scalix

How omldapsync Works

omldapsync, when run, takes a snapshot of the entire Scalix directory, including Scalix users and "Internet" users. omldapsync also polls the Microsoft Exchange directory for both kinds of users and notes them in the same snapshot. It then compares the aggregate snapshot file with the previously-saved snapshot file. Any additions or changes are then recorded in a [name] file that is exported to Microsoft Exchange and to Scalix.

Again, there is no direct comparison of the two server's user directories. An intermediary process is used.

Editing the omldapsync [name] File

If you accidentally delete a record on Scalix or Microsoft Exchange that originated from the other server, you can force omldapsync to reload the original record on the destination server.

1 Log in to Scalix as root.

2 Use a text editor to open the snapshot file that contains the original "Jane Smith" record.

        ~/ldapsync/[name_of_sync_agreement]/search.last

3 Find and delete the "Jane Smith" record and the following carriage return.

4 Save the change to the snapshot file.

5 Restart omldapsync. After comparing the latest collection of user records with the previous snapshot, it creates a [name] file that replaces the missing "Jane Smith" record on the destination server.

Part 4

Migrating an IMAP System to Scalix

Completing an IMAP-to-IMAP Mail System Migration

If your current mail system allows only IMAP4 or POP3 access and/or if the system has no LDAP v2 support, you can migrate the user accounts and their data from the legacy system to Scalix. This chapter outlines a flash migration from any e-mail system that supports IMAP4 protocol to Scalix, which also uses the IMAP4 protocol.

This particular migration process employs a set of utilities included in E-Mail Shuttle software by GeM Solutions. A trial version is available from
http://www.gem-si.com/downloads.cfm

Requirements

- Windows 2000 or XP computer

- Microsoft Office 2000 or XP

- An extractor code for E-Mail Shuttle, provided by Scalix or with E-Mail Shuttle

- The administrator account login for Scalix

- The administrator account login for your legacy IMAP server

Installing E-Mail Shuttle

The installation program is EmailShuttle.exe.

1   Launch the E-Mail Shuttle installation wizard. You can accept the default directory or change it to *C:\Program Files*. Also be sure to choose the following:

- Extractor — **IMAP4 Compliant E-mail System**
- Loader — **IMAP4 Compliant E-mail System**
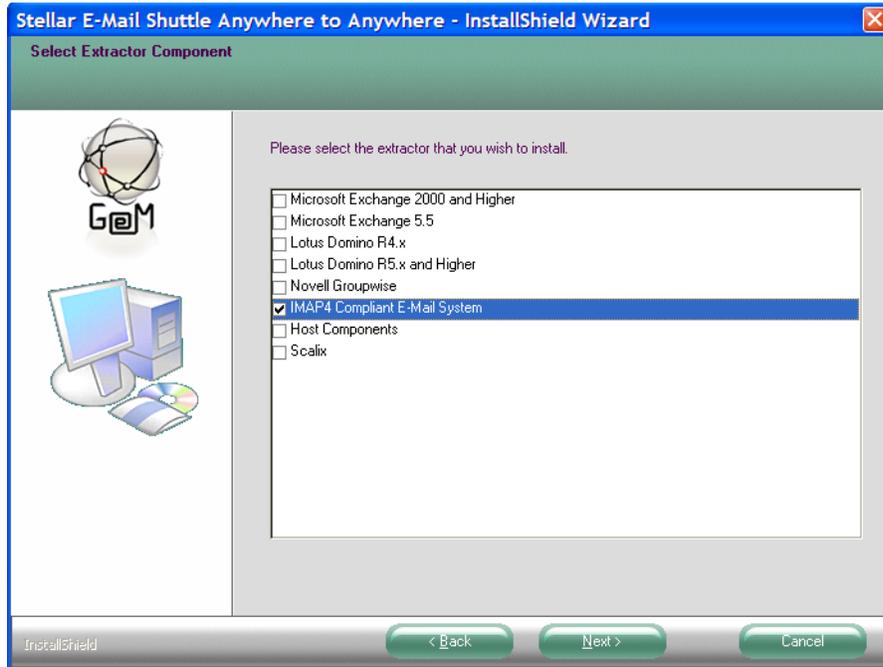
Configuring E-Mail Shuttle

You configure E-Mail Shuttle using the Mission Control application.

To configure E-Mail Shuttle

1   Click **Start > All Programs > GeM Solutions, Inc > GeM E-Mail Shuttle > GeM E-Mail Shuttle Extractor > GeM E-Mail Shuttle Mission Control for IMAP4**. The IMAP *Extract Mission Control* window appears. The default settings in the tabs are acceptable, with two exceptions: the **Misc** and **IMAP** tabs.
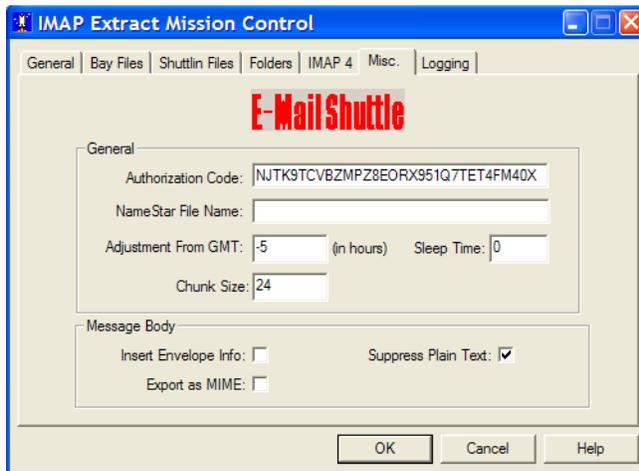
2   Click the **Misc** tab.

3   In the **Authorization Code** field, type the extractor code if it is not already entered.

4   Click the **IMAP 4** tab.
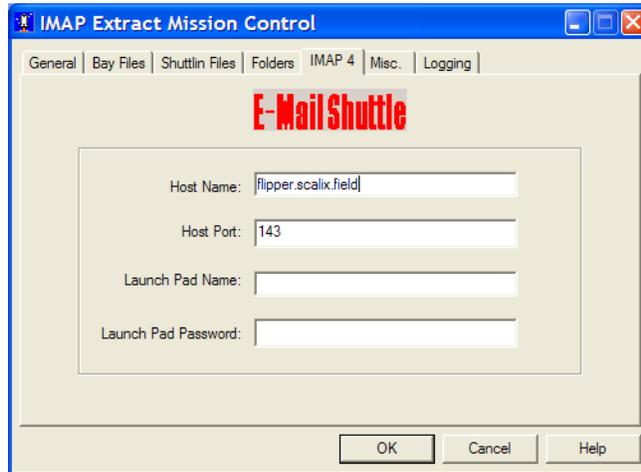
5   In the **Host Name** field, type the fully-qualified domain name of the legacy IMAP4 server.

The default **Host Port** of 143 is an acceptable value for IMAP4.

Leave the **Launch Pad Name** and **Launch Pad Password** fields empty.

6   Click **OK** to update the *\eshuttle\Extractor\IMAP4\eshuttle.ini* file with your new entries and exit the application.

Loading the Mailboxes on the Scalix Server

Scalix recommends testing the following migration process on a small sampling of users before undertaking the migration of your entire system.

The next step is to load (provision) the mailboxes on the Scalix server. There are several way to do this:

•   Use Scalix Management Console

•   Use the omaddu command

•   Use a combination of omldapsync and ommigu

•   Use more advanced auto-forwarding mechanisms

The most important consideration is to make sure that the primary Internet address of the Scalix user is loaded correctly before initiating any mailbox migration.

The first phase is to create a file that lists users on the legacy IMAP4 mail system. The file name is "shuttlin*" (with an asterisk) and have a file extension of ".txt".

Example: **shuttlin1.txt**

There are two ways to create a shuttlin*.txt file:

•   Use the Shuttlin Editor application provided

•   Use any text editor that can save the contents of a file as ASCII text

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Both methods are outlined here; choose one.

## Using Shuttlin Editor to Create a User File

The Shuttlin Editor is installed by default with the product. It can also be launched as EShuttlinEdit.exe from the *\Extractor\IMAP\Users* folder.

*To use the Shuttlin Editor to create the user file*

1   Start the Shuttlin Editor from the **Start** menu (… **> Tools > GeM E-Mail Shuttle Shuttlin File Editor**). The *Shuttlin Editor* window appears.
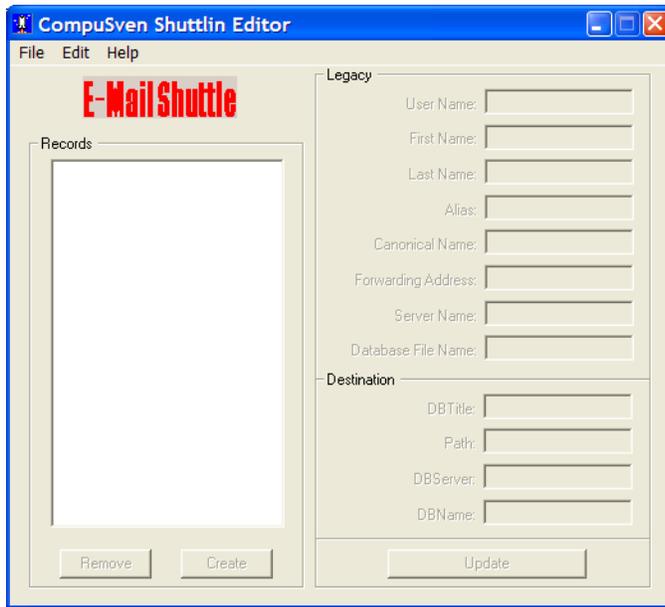

2   Click **File > Open/New**. A window opens.
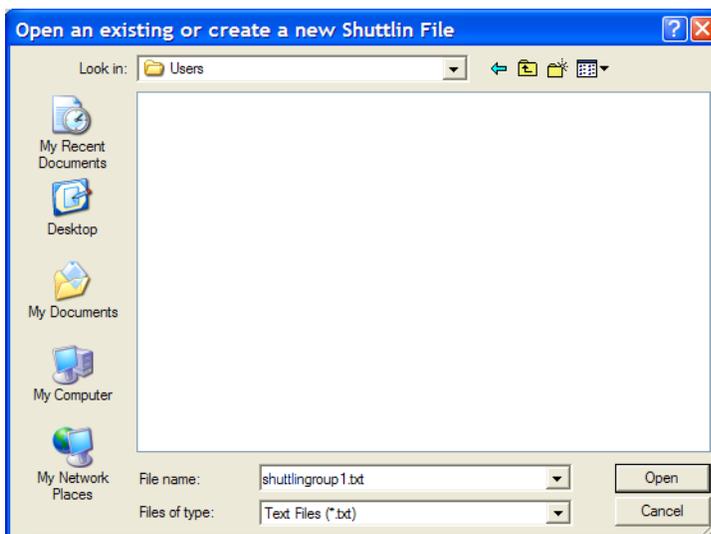
3 Use the window to navigate to the target folder:

   \Extractor\IMAP\Users

4 Enter a name for the file in the **File name** field, ending the filename with a ".txt" extension. Make sure the file type is "Text file".

5 Click **Open**. The *Select Shuttlin file type* window opens.
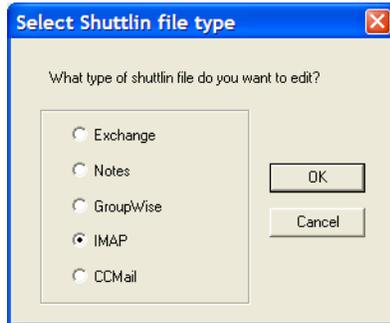
6 Enable the **IMAP** option.

7 Click **OK** to save the file type selection. The *Shuttlin Editor* window reappears, displaying the new file name in the title bar.
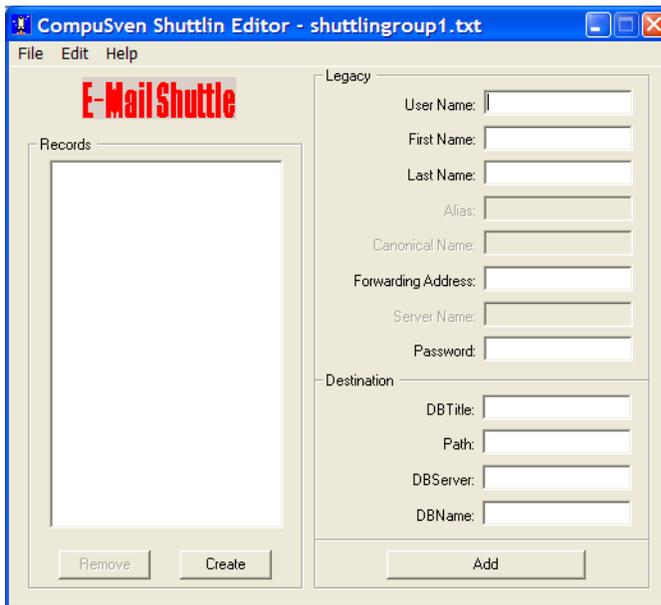
8 Complete the following fields to add information for a current user:

   User Name — The login name used for access to the IMAP4 server. Quite often this is formatted as "First Last" or "FirstLast" or "First.Last". On some systems, it can be an Internet e-mail address (first.last@yourcompany.com).

   First Name — The first name of the user, sometimes referred to as the given name

   Last Name — The last name of the user, sometimes referred to as the surname

Forwarding Address — The Internet address for the user on the legacy IMAP4 server, in the format name@pop.company.net

Password — The password used to access the mailbox on the legacy IMAP4 server

DBTitle — The primary Internet address of the corresponding mailbox on the Scalix server

Path — The password used for access to the Scalix mailbox

DBServer — The fully qualified domain name of the Scalix server

DBName — This value is always `DBTitle`

9   Click **Add** to store this user's information.

Note	The Create button has no purpose. You can ignore it for this task.

10 Save the file; click **File > Save**.

11 Exit from the application; click **File > Exit**.

Using a Text Editor or Spreadsheet to Create a User File

You can also create a shuttlin*.txt file using an application (Microsoft Word, Excel, Notepad, and so on) that saves files in a text (.txt) format. The contents must be organized according to these requirements:

*   The file must begin with a single ES_System^IMAP^ line

*   Each user's information must be placed in a separate ES_Export line

*   Use "^" as the delimiter character

An example of a file called shuttlingroup1.txt is shown here for users Ed Fry and Jane Rogers:

```
ES_System^IMAP^

ES_Export^Ed Fry^^^^pa$$w0rd^ed.fry@cpgcorp.com^Ed^Fry^ed.fry@cpg-
corp.com^123456^scalix.cpgcorp.local^DBTitle^

ES_Export^Jane.Rogers@scalixtester.com^^^^xandros^Jane.Rogers@scalixt
ester.com^Jane^Rogers^Jane.Rogers@scalixtester.com^xan-
dros^scalix1.scalixtester.com^DBTitle^
```

Extracting the Mailbox Contents

After completing the shuttlin*.txt file, you can run the E-Mail Shuttle extractor. This application, IMAPExtract.exe, can be found in the *\Extractor\IMAP* folder.

1   To run this application, either click the .exe file, or open a command window, change to the directory, and type

```
IMAPExtract console
```

The extractor script automatically open the user's list and starts the extraction.

The results of the extraction process are displayed on the screen and logged in the *\Extractor\IMAP\LogFile* folder.

A sample of successful results is shown here:

```
Tue Dec 07 13:33:04 2004      User [Dan Smith] Summary:
Tue Dec 07 13:33:04 2004
Tue Dec 07 13:33:04 2004      Run Summary:
Tue Dec 07 13:33:04 2004      Successfully unloaded: 4 total messages
Tue Dec 07 13:33:04 2004                               3 total folders
Tue Dec 07 13:33:04 2004      Errors:
Tue Dec 07 13:33:04 2004       0 total messages not unloaded due to errors
Tue Dec 07 13:33:04 2004       0 total folders not unloaded due to errors
```
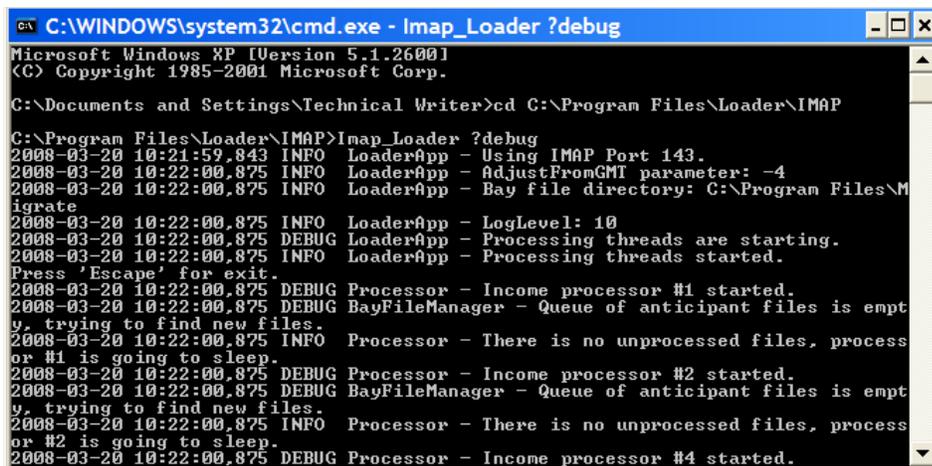
Loading the Extracted Data onto Scalix

After extracting the data from your legacy mailboxes, you can run the loader and transfer the data from the previously-created .txt file to Scalix mailboxes. This application can be found in the *\Loader\IMAP* folder, named Imap_Loader.exe.

1   To run this application, click the .exe file, or open a command window and enter

```
Imap_Loader ?debug
```

Results of the data loading process are displayed on the screen and logged in the *\Loader\IMAP\LogFile* folder.

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Part 5

Command Reference

omldapsync Synchronization Command

This chapter outlines use of the omldapsync command for synchronizing the Scalix and Microsoft Exchange servers.

Contents

This chapter includes the following information:

Introduction

Successful communication between the Scalix and Microsoft Exchange servers requires that you synchronize entries in both the Scalix and Microsoft Exchange directories. Later in the migration process, the directory entries are used to set up mailboxes on the Scalix server and enable coexistence between both e-mail systems.

The directory synchronization process uses the Lightweight Directory Access Protocol (LDAP) as the method for exchanging directory entries. Coexistence uses a single connection point between Scalix and Microsoft Exchange.

The omldapsync command is the tool that you use to synchronize the directories. The omldapsync command is executed on the Scalix server and uses a mapping file that is created during the Scalix server installation. If required, you can edit the mapping file at any time to make configuration changes.

For every synchronization agreement, omldapsync creates a directory that contains configuration files, logging files, and Import and Export subdirectories. The Import directory contains files used during the Microsoft Exchange-to-Scalix synchronization, and the Export directory contains files used during the Scalix-to-Microsoft Exchange synchronization.

Because LDAP is typically used as a directory search tool rather than a directory synchronization utility, you must modify some default settings for LDAP on the Scalix and Microsoft Exchange servers to enable the directory integration to operate correctly.

Using the omldapsync Command

You can use the omldapsync command two ways:

- Interactive mode (this section)

- Command-line mode, which allows you more control over omldapsync (next section)

When you execute omldapsync in interactive mode, you can do the following:

- Create the synchronization agreement

- Perform an initial synchronization of the directories

- Update the directories based on changes since the last synchronization

- Accept manual error-correction modifications to the directories (for errors detected during the synchronization)

To use the omldapsync command in interactive mode

1   To execute omldapsync in interactive mode and perform omldapsync tasks, enter the following command:

```
omldapsync –i <syncid>
```

where syncid is the name of the synchronization agreement that you created. If you need to create one, see "Creating the Synchronization Agreement" on page 35.

The following menu options appear.

`0. Display this menu`

Displays the omldapsync menu.

`1. Configure the LDAP dir sync settings`

Allows you to configure the synchronization agreement. If an agreement does not exist for the agreement name you enter, omldapsync creates a new directory structure and corresponding files.

`2. Force a complete (re)load of the directory`

Allows you to perform an initial synchronization of the Scalix and Microsoft Exchange directories. omldapsync extracts all entries from the Microsoft Exchange directory and creates a file that it imports to the Scalix directory. omldapsync also extracts all entries from the Scalix directory and creates an import file for the Microsoft Exchange directory.

Note that you perform an initial synchronization once. While it is possible to execute an "initial synchronization" several times, omldapsync returns errors if you do not delete all remote recipient entries in both the Scalix and Microsoft Exchange directories before executing the initial synchronization again. To accept these errors, select option 4.

`3. Update the directory after some changes`

Synchronizes the directories on the Scalix and Microsoft Exchange servers by comparing the current export file (which is created by selecting this option) with the previous export file.

omldapsync adds, deletes, and modifies entries in the appropriate directory. The Import directory corresponds to the Microsoft Exchange server, and the Export directory corresponds to the Scalix server.

```
4. Accept previous error and update directory
```

Select this option only when you want to accept errors that occur during the synchronization process. Accepting errors causes omldapsync to disregard the error condition during future directory synchronizations.

Correcting errors typically involves modifying one or more directory entries on the Scalix or Microsoft Exchange server.

```
5. Skip previous error and update directory
```

```
6. Update the directory and prompt for error
```

```
7. Modify all sync records from the directory
```

```
8. Delete all sync records in the directory
```

```
d. Toggle debug mode from current setting <0>
```

```
n. Toggle test mode from current setting <>
```

```
q. Quit
```

2   Enter the appropriate number to proceed.

Command-Line Options

This section outlines options that can be used with the omldapsync command. If you want more control over the process, use them with omldapsync instead of the interactive menu.

To use the omldapsync command with options

1   Enter the command, followed by an option:

```
omldapsync –i <syncid>
```

where syncid is the name of the synchronization agreement that you created. The options are outlined in the table. You can also view them in the omldapsync MAN page.

Table 1: omldapsync Options

Parameter	Description
-s <syncid>	Displays details of the agreement. If the synchronization agreement specified does not exist or is specified as "all", then all available synchronization agreements are listed. Otherwise, the most recent log file content for the synchronization agreement is displayed.
-c <syncid>	Configures a synchronization agreement. If the synchronization agreement specified does not exist, you are prompted to create a new agreement.
-r <syncid>	Deletes synchronization agreement information. All files and data associated with this agreement are deleted from the Scalix server. Imported and exported directory entries are not deleted.
-i <syncid>	Displays the interactive menu for the agreement.

Table 1: omldapsync Options

Parameter	Description
-l \<syncid\>	Deprecated; add the -L flag to the -u option. Loads the directories using the synchronization agreement. This option is used to populate the directories with the initial contents of each system for the first time. If -I is used in with the -l option, an import occurs. Using -E with -l option executes an export to the Microsoft Exchange server. Using the -l option exclusively executes both an import and an export. You can use this option to resynchronize information, but you must first manually delete the already imported and exported entries.
-u \<syncid\>	Updates the directories using the synchronization agreement. Use this option to keep the directories up-to-date. Use this option after the first-time synchronization (the -l option). If -I is used in with the -u option, an import occurs. Using -E with -u option executes an export to the Microsoft Exchange server. Using the -l option exclusively executes both an import and an export. Add the -A option to accept previously reported errors. Add the -S option to skip previously reported errors. Add the -P option to force a prompt to accept each error. Add the -L option to force (re)load of the directory. Add the -M option to force modification of all entries in the directory. Add the -X option to delete all entries in the directory. Use a system scheduler such as cron to update directories on a regular (hourly, daily, weekly, and so on) basis.
-d level	Debugs the command execution. The default level is 0, which generates status and information messages. To generate more messages for debugging purposes, set the level to 1, 3, 7, or 15. The greater the value you enter, the more output the command produces. This can reduce the performance and create large log files. Output for last execution of omldaputil is saved in the omldaputil.log file in the respective import or export directory.
-n	Show output without performing the real operation. Can be used for a test run to perform a safety check before a real run.

Command Examples

To list all agreements present on the system, enter:

```
omldapsync –s all
```

To configure a new or existing agreement named "100", enter:

```
omldapsync –c 100
```

To interactively choose common tasks for agreement 100, enter:

```
omldapsync –i 100
```

To load directories for the first time with agreement 100, and use debug level 3, enter:

```
omldapsync –l 100 –d 3
```

To accept previous errors and update the import directory with agreement 100, enter:

```
omldapsync –u 100 –I –A
```