

Lotus Notes Connector

A highly scalable, open architecture, internet messaging system running on Windows and Linux platforms.

7

Internet Exchange Messaging Server

VERSION

IMA INTERNATIONAL MESSAGING ASSOCIATES

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IEMS

Internet Exchange Messaging



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PREFACE

This is the Internet Exchange Messaging Server (IEMS) version 7 Lotus Notes Connector Manual that comes with your software. IEMS runs on Microsoft Windows platforms and most popular Linux distributions. As such, this Manual has been authored to help you install and run the Lotus Notes Connector on your Windows machines.

The Internet Exchange Lotus Notes Connector is a plug-in module that connects Notes environments to the Internet. With this module, Notes users can send and receive messages to and from the Internet, communicate with other local channels, provide a rich migration path for moving to open Internet messaging standards, and make full use of all the features offered by the Internet Exchange Messaging Server.

This manual is but one part of the entire IEMS 7 documentation set. It is assumed the reader of this manual understands the concepts presented in the **Internet Exchange Messaging Server 7 Principles of Operations** and the **Internet Exchange Messaging Server 7 Installation Guide**. Instructions on how to install the Lotus Notes Connector are not found here, but rather in the **Internet Exchange Messaging Server 7 Installation Guide**. This manual provides the necessary information on how to configure the Lotus Notes environment to interwork with IEMS, and the subsequent administration of the Notes Connector.

The IEMS 7 documentation set is made up of the following volumes:

- Internet Exchange Messaging Server 7 Principles of Operation
- Internet Exchange Messaging Server 7 Site Planning Guide
- Internet Exchange Messaging Server 7 Installation Guide
- Internet Exchange Messaging Server 7 Administrator's Manual
- Internet Exchange Messaging Server 7 cc:Mail Connector
- Internet Exchange Messaging Server 7 Lotus Notes Connector
- Internet Exchange Messaging Server 7 User's Guide
- Internet Exchange Messaging Server 7 Programmers Manual

All IEMS documentation can be found either on the IEMS 7 CDROM, or downloaded from the IMA web site (<http://www.ima.com/documents/>).

This manual is organized into the following chapters:

- Chapter 1**, *Notes Connector Architecture*
- Chapter 2**, *Notes Site Preparation*
- Chapter 3**, *Configuration*
- Chapter 4**, *Migration Tools*

CONVENTIONS USED IN THIS MANUAL

Conventions Used In This Manual

The conventions used in this manual are designed to help you learn IEMS 5 easily and efficiently.

Directory Path (e.g. *c:\VMACert.imc*) are printed in italic, arial font.

File names (e.g. **Setup.exe**) are printed in bold, arial font.

Menu choices (drop-down or pull-down list, links, columns, parameters, fields) are presented in bold, arial black font (e.g. **Host Table filename**).

Button commands (e.g. **Add**) are presented in bold, italic, arial font.

Screen Page (e.g. **User Details page**) are put in quote.

Keyboard Keys are presented in this manner: **ENTER; DELETE**

Anything you are asked to type are presented in courier new font (e.g. *jd@ima.com*).

CHAPTER 1

Notes Connector Architecture

Introduction

The Internet Exchange Lotus Notes Connector is a plug-in module that connects Lotus Notes environments to the Internet. Using this module, Lotus Notes users can send and receive messages to and from the Internet, communicate with other local channels, and provide a rich migration path for moving Lotus Notes Mail users to open Internet messaging standards. As a plug-in module, the Lotus Notes Connector is able to make full use of all the features offered by the Internet Exchange Messaging Server. These include:

- Anti-virus support
- Anti-spam support
- Batch SMTP tunneling
- LDAP Directory Service
- ESMTP support
- TNEF Attachment Decoding
- Calendaring and Scheduling (Microsoft Outlook compatible)

System Architecture

Message Flow

Incoming messages from the Internet are retrieved by either SMTPD or the BSMTMP Decoder, depending on the message type. The messages are then sent to the Message Switch, which performs a directory lookup using the Internet Exchange Directory Server. Once the recipients of the messages are determined, the Message Switch then sends them to the Preprocessor for further processing, including possible anti-spam, anti-virus, TNEF decoding, etc. The Preprocessor consults with a Channel Action Matrix for each module to determine which modules should run for a given message. After all the necessary operations have been performed (i.e. virus scans, etc.), they are sent to the MTA Shared Message Queue. NOTESIN then retrieves messages from the Notes Channel for delivery to Lotus Notes users.

For messages originating within the Lotus Notes environment, NOTESOUT retrieves these messages and delivers them to the Message Switch, which then forwards them to the Preprocessor. After the necessary operations are carried out on the messages, they are sent to the MTA Shared Message Queue for delivery to the other Internet Exchange channels, such as cc:Mail, the local message store, the distribution lists, or the Internet. Messages bound for the Internet are delivered via SMTPC.

INCOMING MAIL

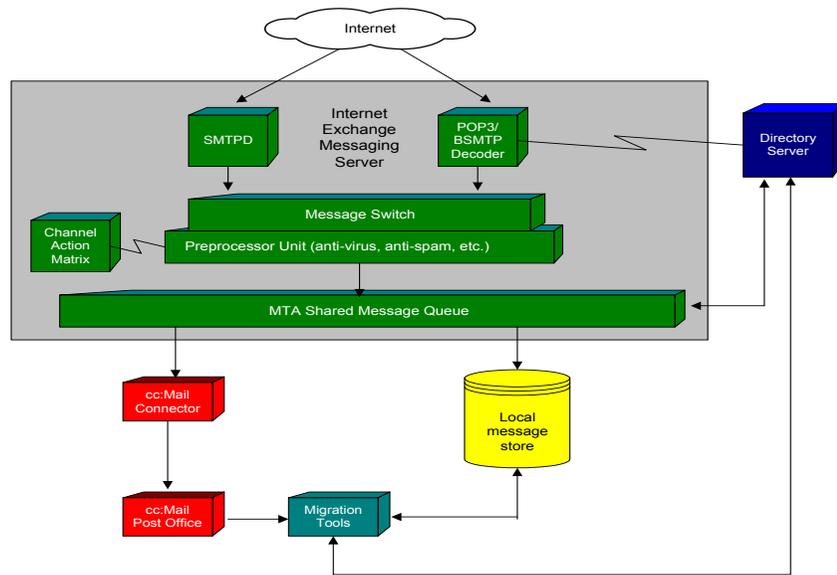


Figure 1. Migration strategy for cc:Mail users

Lotus Notes Connector Database

When Lotus Notes users send mail to users on the Internet, the messages are first sent to the Lotus Notes database assigned to the Notes Connector. Mail that arrives for the connector are stored temporarily in this database, which is called SMTP.BOX. The Notes Connector checks SMTP.BOX regularly to guarantee regular pickup of mail that leaves the Lotus Notes domain for the Internet. Incoming mail is placed in a second temporary store, known as MAILBOX, which is also on the Lotus Notes server.

Interaction with Lotus Notes

The Internet Exchange Notes Connector communicates with Lotus Notes via the Lotus Notes API. Two separate programs talk to Lotus Notes, one imports messages from the Internet and one exports messages from the Lotus Notes environment bound for the Internet.

Incoming Mail

NOTESIN

NOTESIN is a single threaded Win32 program that handles inbound message conversion and submission to Lotus Notes environment. NOTESIN runs as a daemon that the master conversion engine runs at every 30 seconds to see if there is a new message available in the local NOTESIN queue. Any new message is first routed by the MQ router from IEMS MQ into local NOTESIN queue. The message envelope information is stored in the Message database (MESG.BTR) and the message file is physically resides within the MQ system. The advantage of it is that it can reduce disk space usage because the message files are shared by different IEMS channel processors.

OUTGOING MAIL

SMTPD

The *SMTPD* module is responsible for receiving messages from the Internet via SMTP/ESMTP protocol. It supports ESMTP service extensions SIZE, 8BITMIME, ETRN and DSN. It features a multithreaded model to achieve high performance and receive multiple SMTP connections simultaneously. Once a message is received by the Worker Thread, it would be submitted to the Internet Exchange MTA Shared Queue. SMTPD also performs several Anti-Spam Defense checking at the SMTP level before a message entering the Internet Exchange Shared Message Queue.

NOTE: For a more detailed explanation on the *SMTPD* Module and other *IEMS* channel modules, please refer to the ***Internet Exchange Messaging Server 7 Principles of Operation***, and ***Internet Exchange Messaging Server 7 Administrator's Manual***.

Outgoing Mail NOTESOUT

NOTESOUT is a single threaded Win32 program that handles outbound message conversion and submission to IEMS. NOTESOUT runs as a daemon that the master conversion engine runs at every 30 seconds to see if there is a new message available in the Notes Server SMTP.BOX file. NOTESOUT converts the message headers, body texts and attachments into either MIME or normal RFC822 message format based on the system settings. The converted message is then submitted to the MQ. The pre-processor will determine the further message route within IEMS or send it to the Internet via SMTPC.

SMTPC

The SMTPC module is responsible for delivering messages from the Internet Exchange MTA to the Internet via the ESMTP protocol. It supports the ESMTP service extensions SIZE, 8BITMIME, ETRN and DSN. For fast message delivery, it features an efficient queuing strategy by supporting two types of independent queues: the Pending Queue and the Deferred Queue. It also provides a mechanism for message priority handling based on the calculated message priority weight. To achieve a high scalability and performance, SMTPC incorporates a hierarchical architecture of multithreading model, as shown in Fig. 1. SMTPC Queue Router is responsible for retrieving messages from the Internet Exchange Shared Queue to its internal message queue via the MQ Switch, and while SMTPC Master Queue Manager is responsible for the controlling and synchronization of the Pending Queue Processors and the Deferred Queue Processors.

NOTE: For a more detailed explanation on the *SMTPC* Module and other *IEMS* channel modules, please refer to the ***Internet Exchange Messaging Server 7 Principles of Operation***, and ***Internet Exchange Messaging Server 7 Administrator's Manual***.

CHAPTER 2

Notes Site Preparation

Preparing the Lotus Notes Environment

Lotus Notes Version 4.6

Before installing the Notes Connector, you must prepare the local Notes environment so it will connect properly to the Internet Exchange Messaging Server 7 (IEMS). IEMS works with Lotus Notes 4.6, and Domino R5. Site preparation however differs between Notes 4.X and Domino R5. Please see the appropriate section below to guide you through the Notes site preparation.

To prepare the local Notes 4.6 environment, first perform the following:

- Remove the entry *SMTPMTA of the ServerTasks* option in NOTES.INI. Doing so will prevent the loading of the Lotus SMTP MTA by default.
- Delete the SMTP.BOX created by the Lotus SMTP MTA and create a new one using the standard *mail router mailbox* template.

Lotus Notes Server SMTP Settings

The Lotus Notes Server requires configuration to communicate properly with the IEMS Notes Connector. To do this, follow the steps described below.

Create SMTP Domain

First, install a new SMTP Domain on the Notes Server. This is done in the Address book (Public Address Book on Lotus Notes) by selecting the *Create Server* Option. Select a Domain as shown in the next figure:

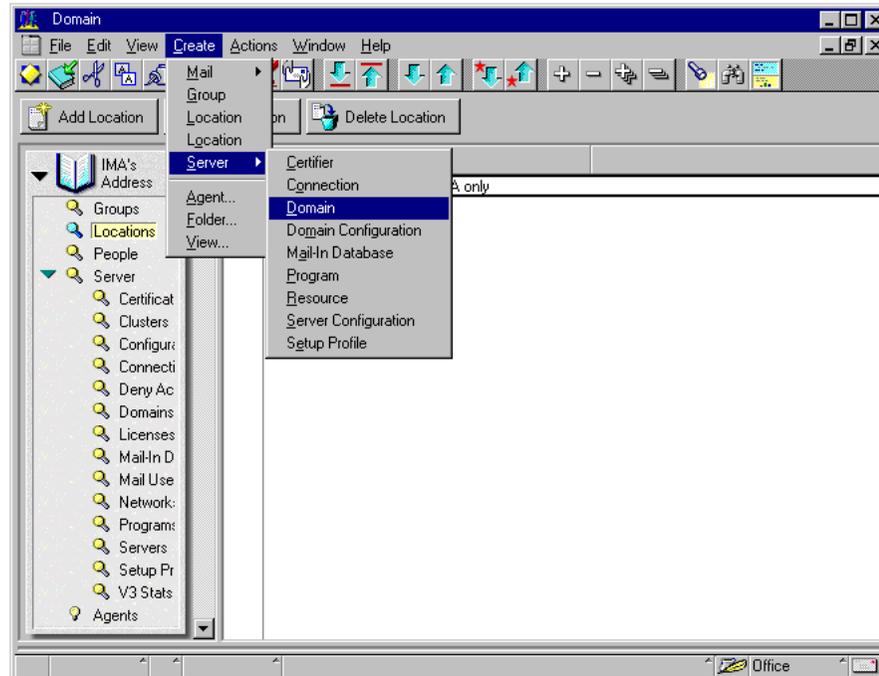


Figure 1: Create SMTP Domain

In the Domain Menu, configure the Domain type to *Foreign SMTP Domain*, which is one of the default domain type keywords. The Internet Domain must then be configured to identify which domain addresses are to be sent via a Foreign SMTP Domain (**Internet Exchange**). Wildcards such as *.* are permitted, which would mean all domains. If *.com is entered, messages from all domains with the extensions .com (e.g. ima.com) will be sent to the Internet via the IEMS Lotus Notes Connector.

In the option *Should be Routed to you*, specify a hypothetical Domain Name, which may be called *ieln* (for Internet Exchange Lotus Notes Connector). This field is used to specify all outgoing SMTP Mail. Choose any name for it. Once finished, save and exit this menu.

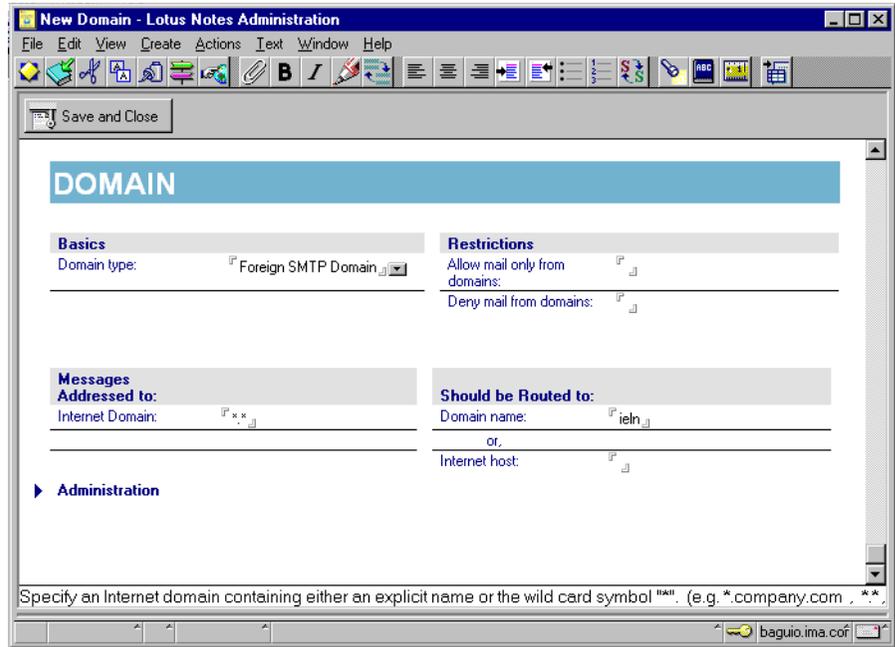


Figure 2: Configure Domain Type

Modify Server Document

Once the domain is set up, configure the Notes Server options under Add/Edit Server (see Figure 3 on page 9). The server configures the routing logic and tasks for messages that will be sent to the Internet via SMTP routing.

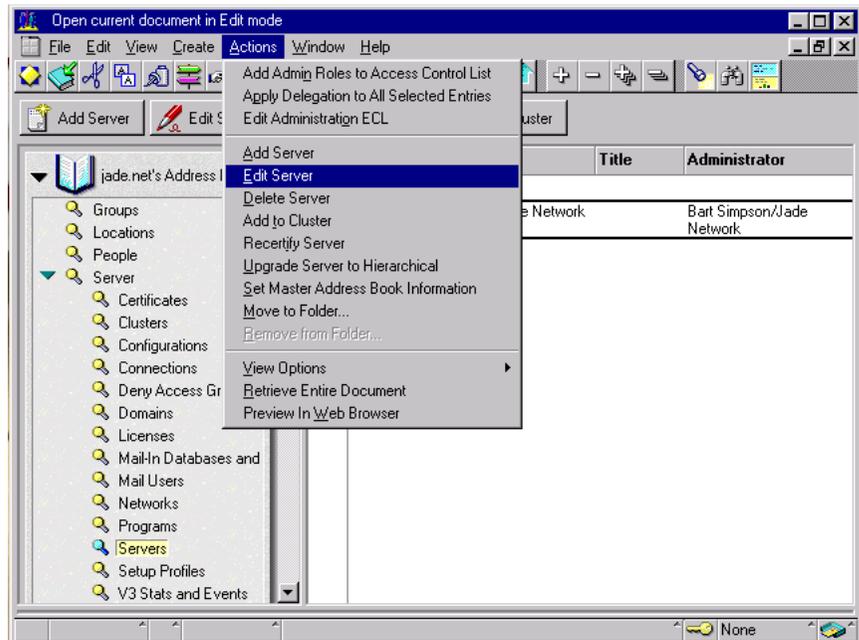


Figure 3: Modify Server Document

LOTUS NOTES VERSION 4.6

In the *Routing Tasks* field, add the additional keyword *SMTP Mail Routing*. After configuring the Notes Server Document, save the changes and close the menu.

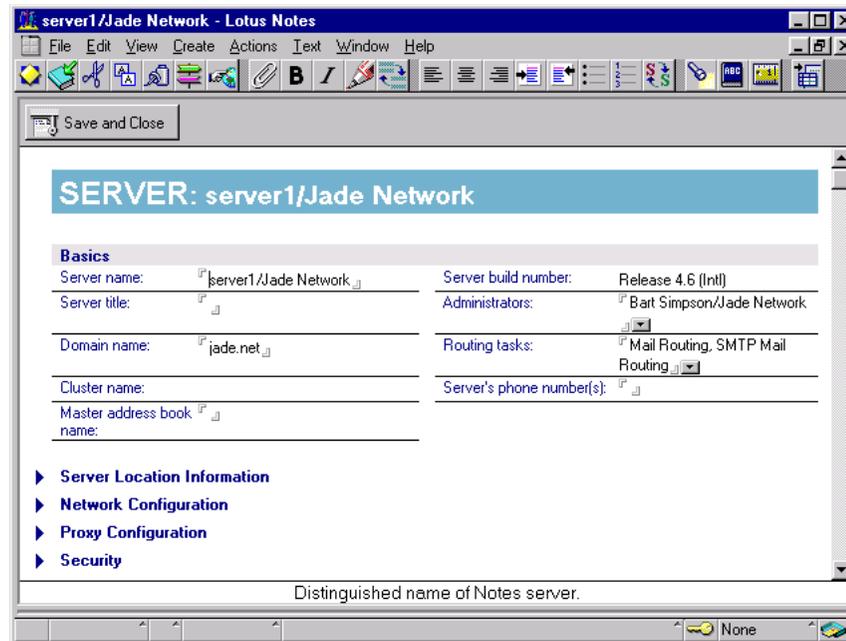


Figure 4: Modify Server Document - 2

Configure Server Connection

The server connection provides the Lotus Notes environment with information on how to route messages by defining the Connection Type as SMTP. The Source Server and Source Domain are the Notes Server and Domain from where mail is sent from. The Destination Server and Destination Domain are the locations where all Source Mail will be routed to.

The Destination Server and Destination Domain can be called anything as long as they are called by the same name. It will not affect the setting of the Lotus Notes Connector if the name is changed to anything else.

If you already have this setup from a previous installation, you will most likely need to simply add additional *Routing Task* information, which would be SMTP Mail Routing.

Using the Create/Server/Connection menu, open the Server Connection (see Figure 5 on page 11). The option *Scheduled Connection* should be set to *ENABLED*, and the routing and replication field to an integer value (e.g. 5). The routing cost is the measurement used for determining the best server-to-server route. You may enter any value in this field. If you have a large network, please consult your administrator regarding the best routing cost for your network. The Source Server must have the same name as the System/Notes Domain.

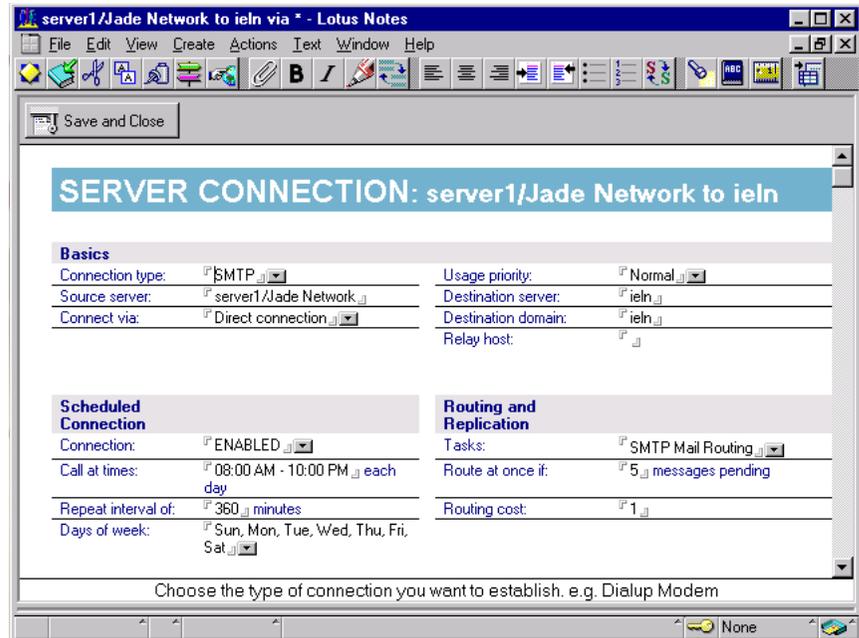


Figure 5: Modify Server Connection

Set up the Notes Server for Internet Mail

Notes requires a new database to be configured for Internet Mail, as well as additional configuration for access controls to that database.

Create a New Database

Using the *New Database* option under File/Database/New, create a new database using the dialog box provided (see Figure 6 on page 11)

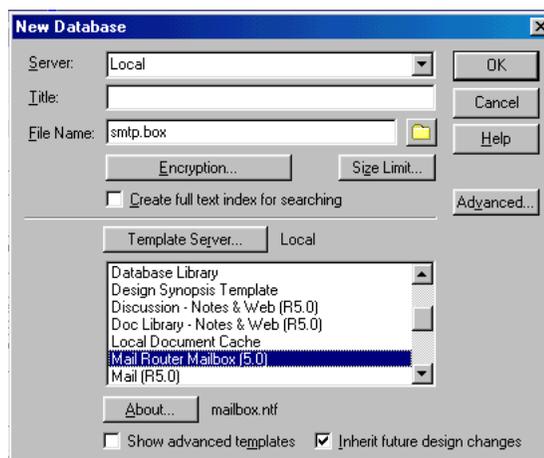


Figure 6: Create New Database

LOTUS NOTES VERSION 4.6

In most cases, the Notes Server name used is *Local*, as this will be server where SMTP mail will be configured to run. The filename for Internet Mail should be called *SMTP.BOX*. The template used for this database is *Mail Router Mailbox*, which can be selected by scrolling down the template options.

The *Mail Router Mailbox* template is a special Lotus Notes template used to automatically create a database that holds mail in transit to other servers or users. This database will manage and hold all outgoing Internet messages. Once this option has been configured, a new workspace icon will appear with a label such as *Smtpon Local*.

Setup Access Control

Every database includes an access control list (ACL), which the Notes environment uses to determine the level of access that users and servers have to a database. You must now configure the mail database *SMTP.BOX*, which was previously created with the correct access permissions, using the Access Control List screen (see Figure 7 on page 12).

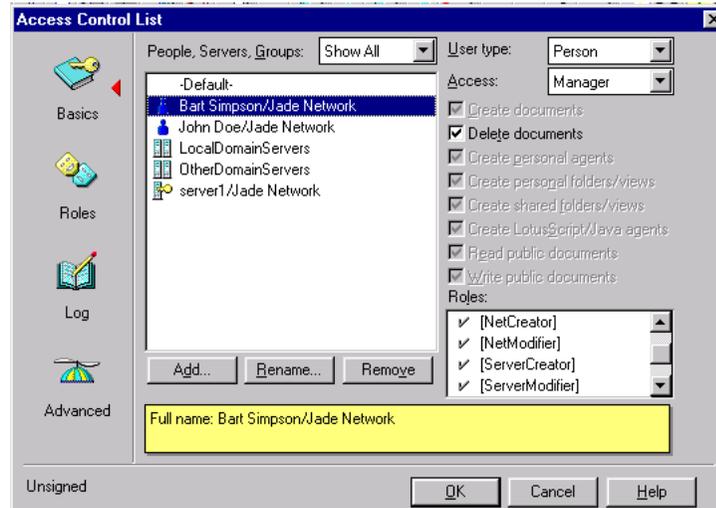


Figure 7: Setup Access Control Lists

Although the names of access levels are the same for users and servers, those assigned to users determine the tasks that these users can perform on a database. Those assigned to servers determine what information within the database these servers can replicate. In this example, we use the user *John Smith/Jade Network*. This user does not need to have complete access administrative rights. The basic requirement is that the *Access* option be set to *Manager* and with the permission to *Delete* documents. This will be the username that the Lotus Notes Connector will use to control this particular mail database in his capacity as System Administrator.

Repeat the same steps for the mail database *MAIL.BOX* and make sure that you edit the access control of that particular database. The user with access control in *MAIL.BOX* should be the same use who has access control in *SMTP.BOX*.

LOTUS DOMINO RELEASE 5

After completing these basic installation steps, your Lotus Notes Server is now ready to send and receive messages through to the Internet via the Internet Exchange Lotus Notes Connector.

Lotus Domino Release 5

This section provides instructions on how to configure Lotus Domino R5 for use with the Internet Exchange Messaging Server 7 (IEMS). The Lotus Notes Server must be setup so that it can communicate properly with IEMS. The procedures described herein must be followed before attempting to install IEMS. You should also be familiar with the configuration processes for the Lotus Notes Server. If you are not familiar with the Notes Server setup process, please refer to the Lotus Notes Server Administrator's Manual. If using previous versions of Domino, the following preliminary steps have to be taken:

- Remove the entry *SMTPMTA* in the Server Tasks option from the NOTES.INI file. This prevents default startup of the Lotus SMTP MTA.
- Delete the file SMTP.BOX created by the Lotus SMTP MTA and re-create one using the standard *mail router mailbox* template because Internet Exchange does not understand the format of the one created by the Lotus SMTP MTA.

In order to configure Lotus Domino R5 for use with Internet Exchange, you must ensure that Domino R5 has been properly installed in your machine and the NOTES.INI file has been moved to the Microsoft Windows Installation directory before installing IEMS. You will also need to start the "Lotus Notes Domino Administrator program". If you are a first-time user of the Domino R5 Server, an automated tool guides you through the initial server configuration.

To configure Lotus Domino R5, follow the step-by-step procedures provided herein to complete your configuration successfully. The following steps need to be completed:

- Pre-installation
- Create the Foreign SMTP domain document
- Establish SMTP connection document
- Add SMTP routing task to your Notes server
- Create SMTP.BOX file to hold outbound messages
- Set up the access control for SMTP.BOX and MAIL.BOX

In the process of configuring your Domino server, you will create a MAIL.BOX file on the Notes Workstation. After the initial procedures are completed, the Notes connector will be setup.

Sample Installation

In configuring the domain name and domain server for both the Internet and Notes environments, we have taken the case of an organization called Jade Network, which uses the fully qualified internet domain name of *jade.net* and operates an IEMS system with the fully qualified internet domain name of *iegate.jade.net* where *iegate* is the name of the IEMS system.

We use *ieln* as our example for the Notes domain name mapped for (*.*) which means that if Lotus Notes receives a message for a domain which is not recognized as a valid Notes domain as defined in the Public Address Book (PAB), Notes will send it to *ieln*. With the help of a foreign SMTP domain document and SMTP connection document, Internet Exchange will map *ieln* to *jade.net*. The name *ieln* is actually the virtual domain name for the Notes domain server1/Jade_Network which holds the SMTP.BOX file and the public address book. server1/Jade_Network is the example used for the Notes source server name. It is the standard way of identifying the source server where "server1" is the name of the Notes source server and "Jade_Network" is the name of the organization.

Pre-installation

Before installing Internet Exchange, make sure that Domino R5 has been properly installed and the *NOTES.INI* file (located under the C:\LOTUS\DOMINO directory of the Notes Domino server) has been moved to the Microsoft Windows Installation directory. The default location for Windows NT is C:\WINNT. Similarly, if you are installing Internet Exchange on a R5 Notes Domino Workstation, move the *NOTES.INI* file from the C:\LOTUS\nOTES directory of the Notes Domino Workstation to the Microsoft Windows Installation Directory.

After moving the *NOTES.INI* file to the Microsoft Windows Installation Directory, the Domino Server needs to be configured.

Configuring Lotus Notes R5 Domino Server for Internet Exchange

In configuring the Domino Server, first start the "Lotus Notes Domino Administrator program". If you are a first-time user of the Domino R5 Server, an automated tool guides you through the initial server configuration. From there, proceed to the Domino Administrator to manage users.

The Domino Administrator has a task-oriented multi-tab interface. A Web administration interface lets you perform basic tasks from any browser (i.e., Netscape, Internet Explorer). After you have started the "Lotus Notes Domino Administrator program", you are required to complete the following steps:

- Create the Foreign SMTP Domain Document
- Establish An SMTP Connection Document
- Add SMTP Routing Task to the Domino Server
- Create the SMTP.BOX File to Hold Outbound Messages

Create The Foreign SMTP Domain Document

To allow Notes users to send Internet email messages via Internet Exchange, a Foreign SMTP domain document needs to be created on the Domino directory. To do this, select the “Configuration” tab on the Domino Administrator program. On the left-hand pane, expand the “Messaging” folder and select the “Domains” entry (see Figure 8 on page 15).

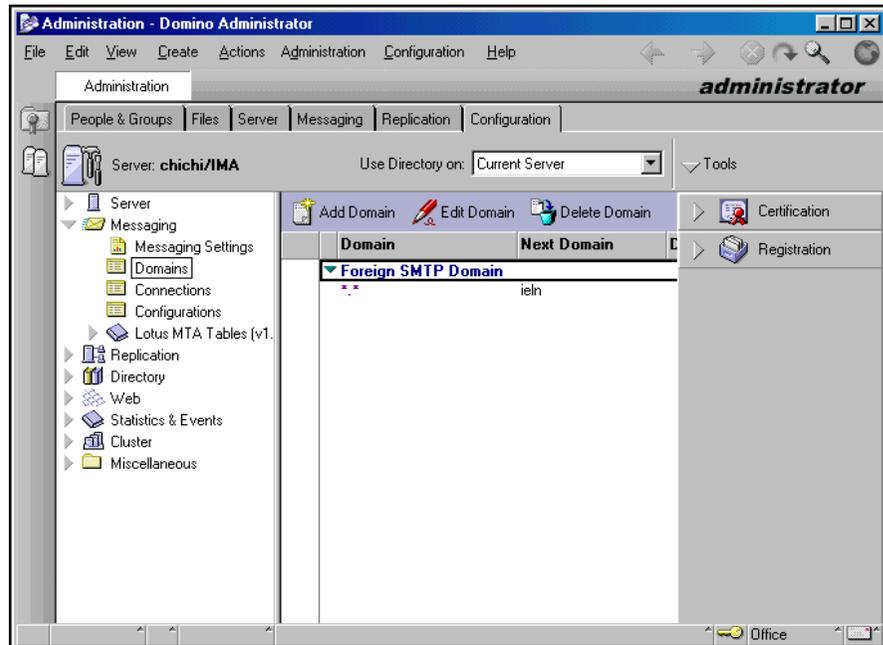


Figure 8: Foreign SMTP Domain Document Creation

To create a new Foreign SMTP domain document, click on the “Add Domain” icon, which will show the Domain document. Select “Foreign SMTP Domain” in the Domain type entry (see Figure 9 on page 16).

After selecting the *Foreign SMTP Domain* in the Domain type entry, click on the *Routing* tab. You need to specify “*.*” for the *Internet domain* field to tell the Notes router to route messages with any Internet recipient to the *SMTP.BOX* file. Internet Exchange will subsequently poll for messages from there, after which it will send the messages to the intended Internet recipients via SMTP. If you want Internet Exchange to handle the outbound traffic for only a specific Internet Domain, (i.e., *company.com*) then place *company.com* in this field. In the *Should be routed to* field, enter the name of the Notes connector (i.e., *ieln*). This field is used to specify all outgoing SMTP Mail. You may choose to call it any name you like. (see Figure 10 on page 16).

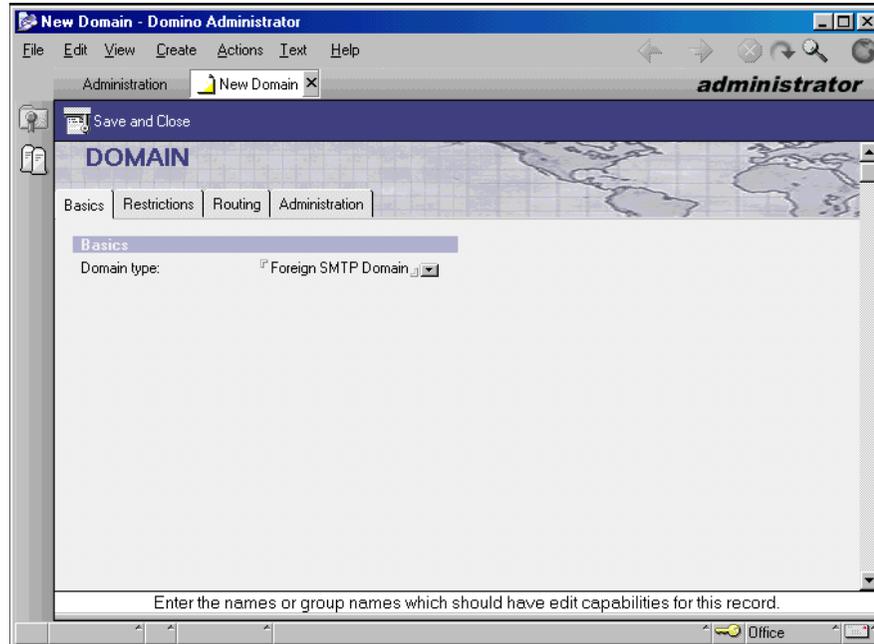


Figure 9: Configuring Foreign SMTP Domain Document

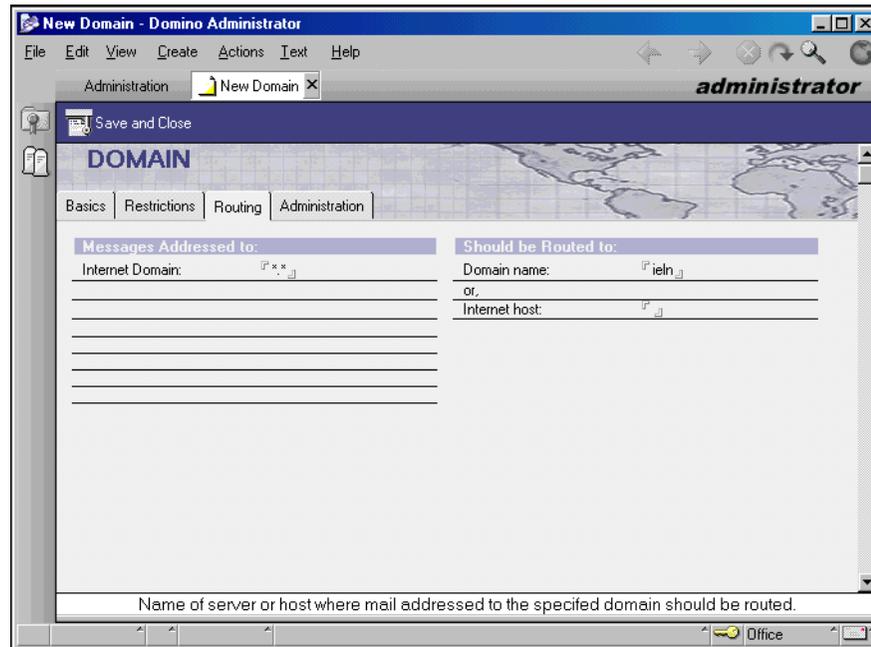


Figure 10: Configuring Foreign SMTP Domain Document - 2

Establish An SMTP Connection Document

You must establish an SMTP connection document in order to tell the Notes router where the outbound Internet mail should be routed to. From the *Messaging* folder (see Figure 8 on page 15), select the *Connections* entry and click the *Add Connection* link. A screen similar to Figure 11 will appear.

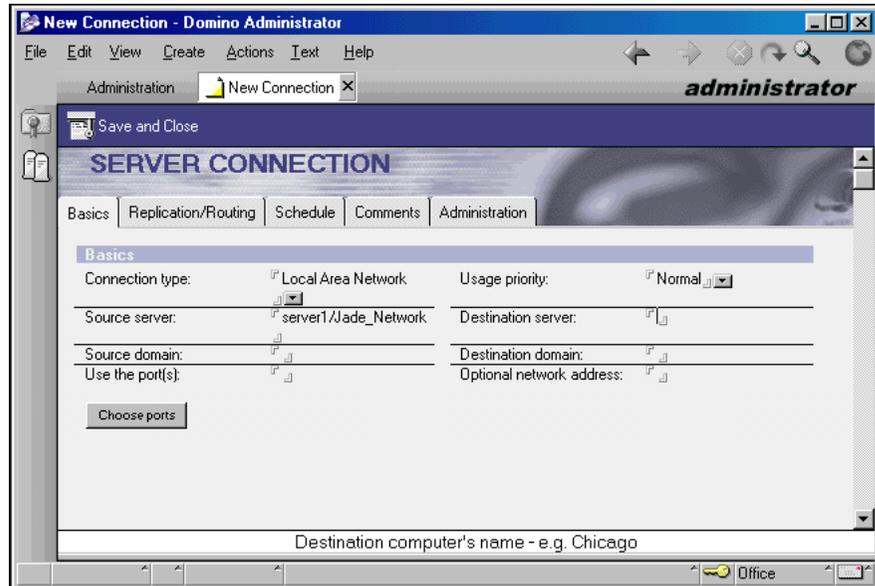


Figure 11: Establishing An SMTP Connection Document

The Server connection provides information to Lotus Notes on how to route Internet Mail by defining the *Connection Type* as SMTP. The Source Server and Source domain is the Notes Server and Domain from which mail is sent. The Destination Server and Destination Domain is the location to which all Source Mail is routed. In the following example we have given this the name *ieln*, the same name that we defined earlier as the domain in the *Should Be Routed To* field. This will route the mail to the Internet Exchange Noes connector and send it via the Internet. The Domain Name setting is case sensitive which means you must adhere to exactly the same case syntax that you have used before. The Source Server must be the name of the system/Notes Domain, which we named as *server1/Jade_Network*. The Destination Server, the Destination Domain, the Source Server name can be called anything as long as they are called the same. It will not influence the setting of Internet Exchange at all if you change the name to anything else. Make sure it is the same name you used in the Domain settings. If you already have this set up from a previous installation, you will most likely only need to add an additional *Routing Task*, which would be SMTP Mail Routing. Next "Save" and "Close" the menu.

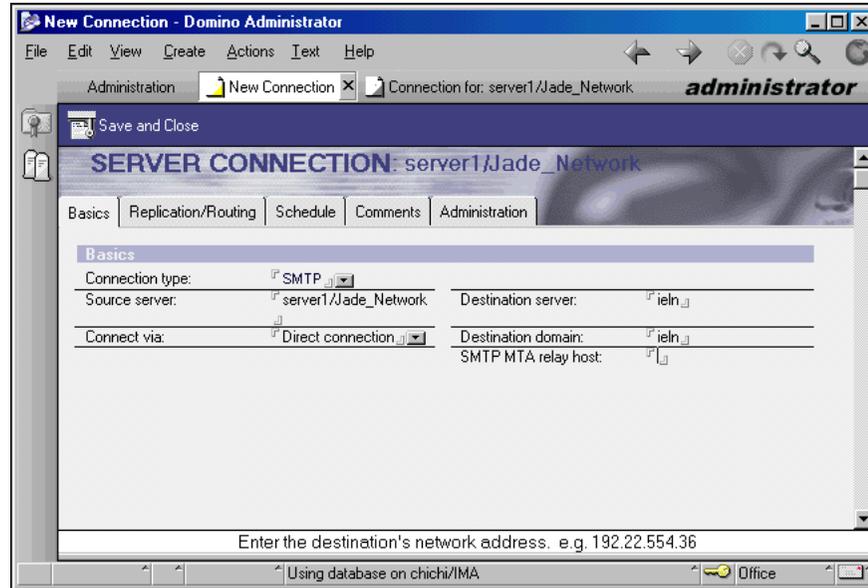


Figure 12: Location of The SMTP.BOX File

Under the *Basics* tab, select *SMTP* as the connection type. The source server name is the name of the server where the *SMTP.BOX* file resides. As shown in Figure 12, the source server name is *server1/Jade_Network*. In case you have multiple Notes servers under the same Notes domain, put the name of the Notes server where the *SMTP.BOX* file is located. In the *Connection via* field, select *Direct connection*. On the right hand side, enter the name of the foreign SMTP domain name in the *Destination server* and *Destination domain* field entries, which in this case should be *ieln* as configured in the first step. Next, click the *Replication/Routing* tab to continue with the configuration.

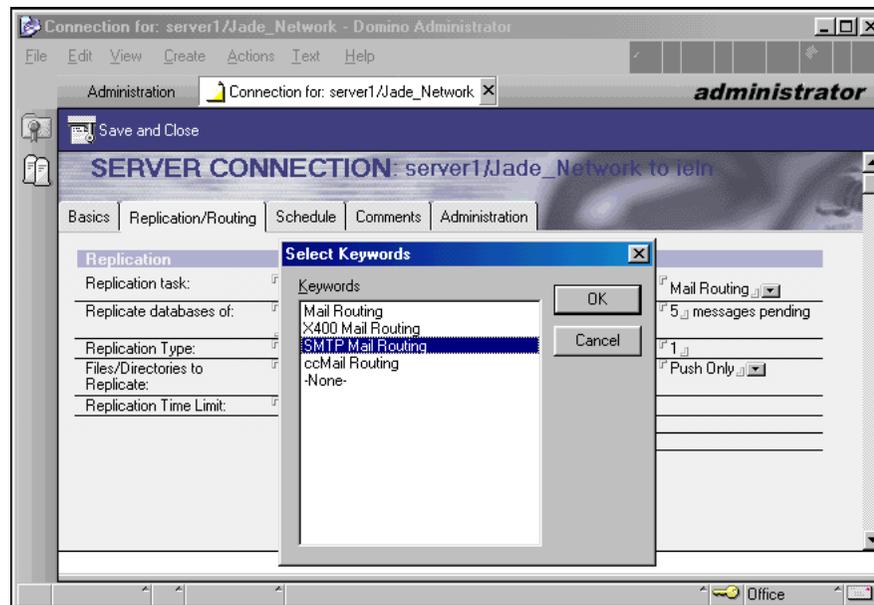


Figure 13: Changing the “Routing task” to “SMTP Mail Routing”

LOTUS DOMINO RELEASE 5

The next step configures mail routing. As shown in Figure 13, go to the *Routing* section and change the *Routing task* field to *SMTP Mail Routing*. Click “Save” and “Close” to save the settings. See Figure 14 for results.

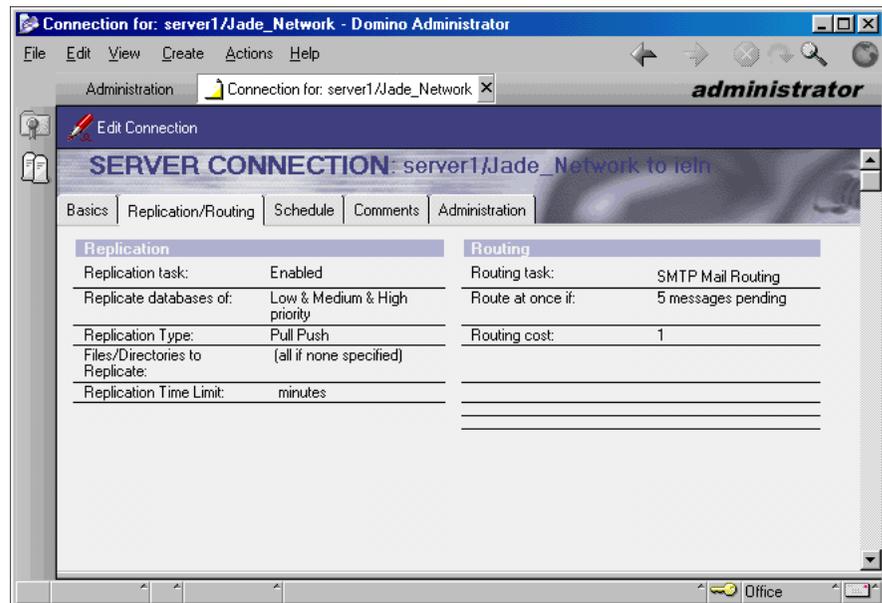


Figure 14: SMTP Mail Routing Settings

Add SMTP Routing Task to The Domino Server

The last modification to be made in the server address book is to add *SMTP mail routing* to the server task. To accomplish this, select *Server* from the left pane and then select *All Server Documents* folder in the same pane as shown in Figure 15.

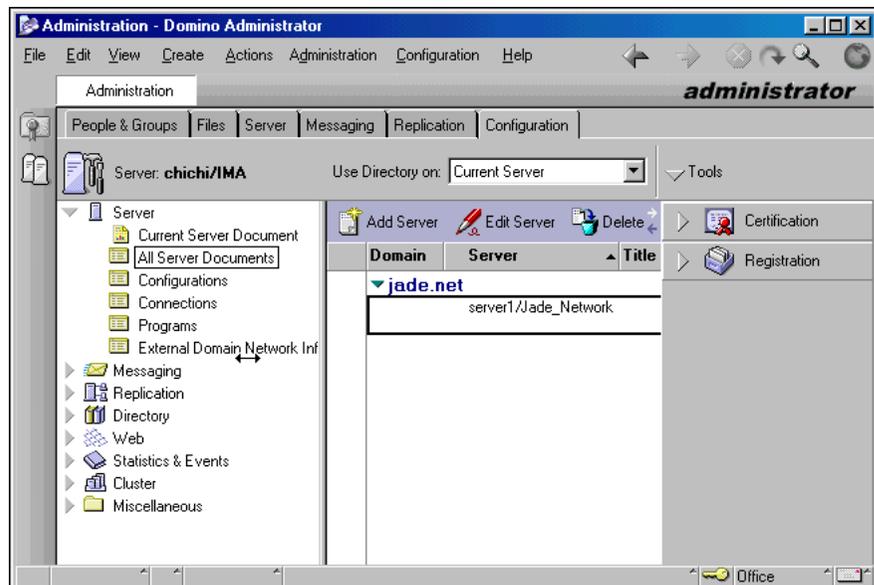


Figure 15: Adding an SMTP Routing Task to The Domino server

LOTUS DOMINO RELEASE 5

In case there are multiple Domino servers, select the server where the file *SMTP.BOX* resides. Double click on the server name, which should present you with the server configuration page.

The server configuration page (see Figure 16 on page 20) now shows that the *SMTP Mail Routing Task* has been added to the server *server1/Jade_Network*. Click “Save” and “Close” to save the changes. This completes the configuration of the server address book.

The next step is to create the *SMTP.BOX* file on the Notes server to which Internet Exchange will be connected.

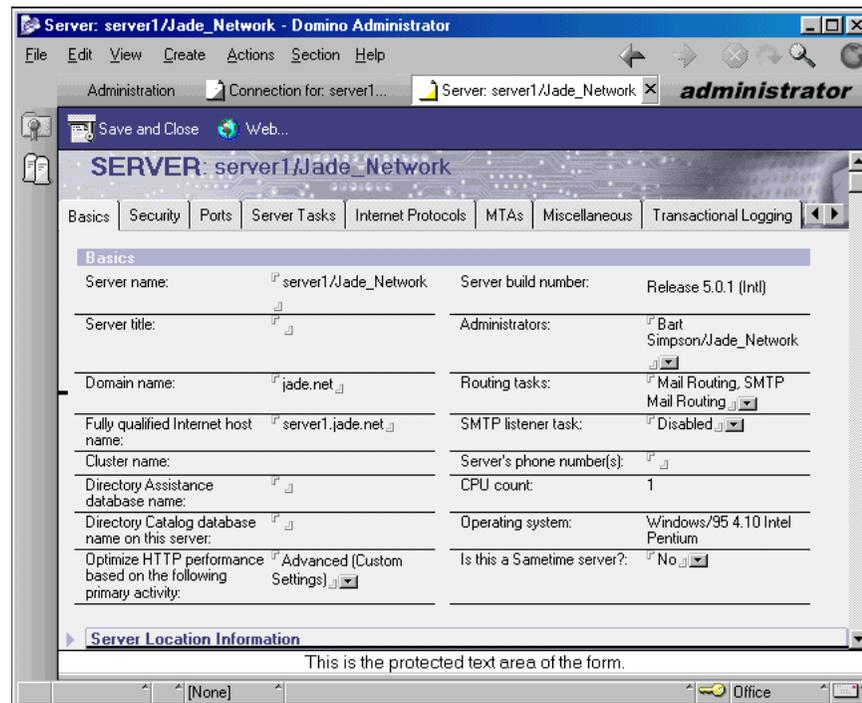


Figure 16: Completed Configuration of The Server Address Book

Create The SMTP.BOX File to Hold Outbound Messages

Bring up the Notes client on the Notes server to which Internet Exchange will be connected to. Go to the *File* menu and select *Database*. Next, select *Create* to create a new database. A dialog box as shown in Figure 17 will appear.

In most cases, the Notes Server is Local as this will be the server where the SMTP mail is being configured to run. The filename for Internet Mail should be called *SMTP.BOX*. The template used for this database is *Mail Router Mailbox* which can be selected by scrolling down through the template options.

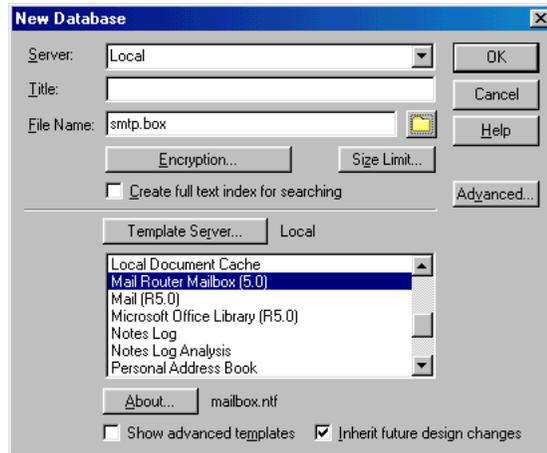


Figure 17: Creating SMTP.BOX For Outbound Messages

The Mail Router Mailbox is a special Notes template used to automatically create a database that holds mail in transit to other servers or users. This database manages and holds all outgoing Internet mail for IEMS.

Select the *Mail Router Mailbox (5.0)* template to create the *SMTP.BOX* file. Give it a meaningful title (i.e. Internet Mailbox), which suits your system requirements. Make sure that the database file is named *SMTP.BOX* and is created in the Domino server *DATA* directory. Click "OK" to create the database after having entered all the necessary details.

Note: *When upgrading from Domino R4.x with the SMTPMTA running, it is essential to disable SMTPMTA on the Domino server. To do this, issue the command "tell smtpmta quit" on the Notes server console. Next, remove SMTPMTA from SERVERTASKS in the NOTES.INI file. Later, delete the SMTP.BOX file created by SMTPMTA and re-create a new SMTP.BOX file as stated above.*

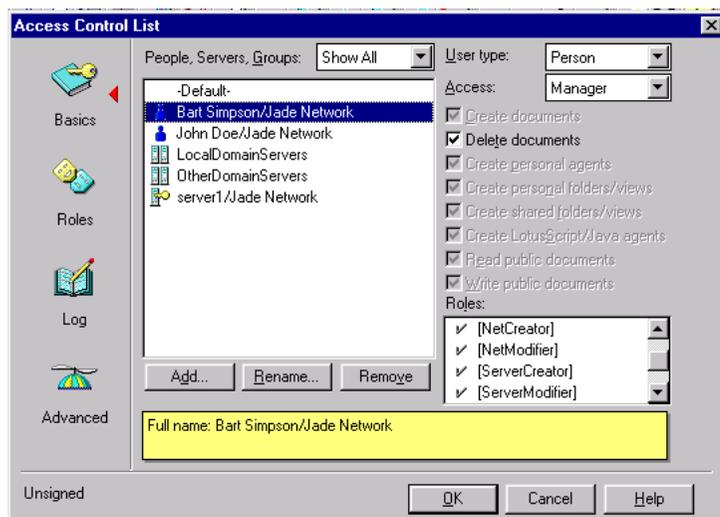


Figure 18: SMTP.BOX and MAIL.BOX Access Control

Set Up Access Control For SMTP.BOX And MAIL.BOX

Every database includes an Access Control List (ACL) which Domino uses to determine the level of access that users and servers have to a database. The mail database SMTP must be configured with correct access permissions. The ACL dialog box is in File/Database/Access Control once you have selected your new database (*SMTP.BOX*). Although the names of access levels are the same for users and servers, those assigned to users determine the tasks that users can perform on a database while those assigned to servers determine what information within the database the servers can replicate. Internet Exchange uses the USER.ID/SERVER.ID file to access *SMTP.BOX* and *MAIL.BOX* files on the Domino Server. It is, therefore, very important to setup the appropriate access for the owner of the Notes ID file. Internet Exchange requires *Manager* level access with the *Delete Documents* flag enabled to import/export mail. To configure, bring up the *Access control* setting dialog box for both *SMTP.BOX* and *MAIL.BOX* files on the Notes server. Add the owner's name to the Access Control List, whose ID file will be used by Internet Exchange. (See Figure 18 for details).

In this example, we have entered the user "Bart Simpson/Jade_Network". The requirement is that the Access be set to Manager and with the permission to Delete documents. This step is important as this will be the user that Internet Exchange uses to control this particular mail database. Repeat the steps for the mail database *MAIL.BOX* and make sure that you are editing the access control of that particular database. The User with access control in *MAIL.BOX* should be the same with access control as *SMTP.BOX*. In this case, it should be *server1/Jade_Network*. After performing all these basic installation steps, the Domino server is ready to send mail to the Internet via Internet Exchange.

Running IEMS On a Domino 5 Workstation

Creating the MAIL.BOX File

When installing Internet Exchange on a Notes Workstation, you will need to repeat the steps mentioned above in order to create all the necessary settings. In addition, you need to create a *MAIL.BOX* file on the Notes Workstation. The usage of *MAIL.BOX* on a Notes Workstation is for bouncing mail generated by *NOTESOUT* (outbound process) directly back to the Notes mail sender. To create a *MAIL.BOX* file, select *File* from the Notes Workstation Menu (see Figure 19 on page 23). Go to *Database* and select *Create*. The following dialog box will be displayed:

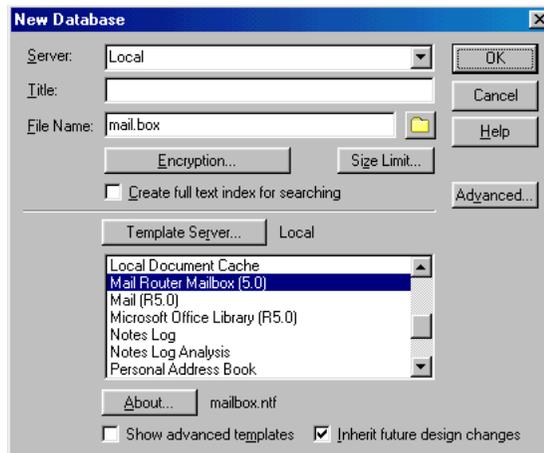


Figure 19: MAIL.BOX File Creation On Notes Workstation

Select the *Mail Router Mailbox (5.0)* template to create this database file. The file name must be *MAIL.BOX* which should be located in the *DATA* directory on the Notes workstation.

Setting up the Notes connector

Make sure that all the steps mentioned above have been completed before attempting to set up the Notes Connector. Ensure that the Notes Server where the Internet Exchange will be connected to is up and running. Run **notessetup.exe** from the Internet Exchange installation directory (default is C:\Program Files\lma\Internet Exchange). A configuration screen will appear (see Figure 20 on page 23).

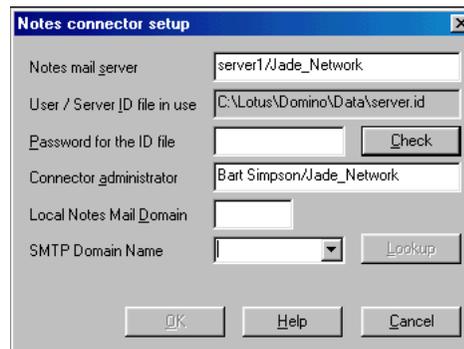


Figure 20: Notes Connector Setup

The fields *Notes Mail Server*, *User/Server ID file in use*, and *Connector administrator* should be set up automatically and coincide with your Lotus Domino Server or Workstation installation.

However, you will still need to specify values (see the following table) for the following fields: “Password for the ID file”, “Local Notes Mail Domain”, and “SMTP Domain Name”. In this case, you may supply the following values for the said fields:

CONNECTOR SET UP FIELDS	VALUES
Notes Mail Server	server1/Jade_Network
User/Server ID File in Use	bart.id
Password for the ID file	*****
Connector Administrator	Bart Simpson/Jade_Network
Local Notes Mail Domain	Corporate
SMTP Domain Name	ieln

Once you have entered the password, click on the *Check* button. Confirmation that the password entered is correct will be shown. Once verified, click *Save* to save the settings in the configuration file. After completing the fields, a screen similar to Figure 21 is shown:

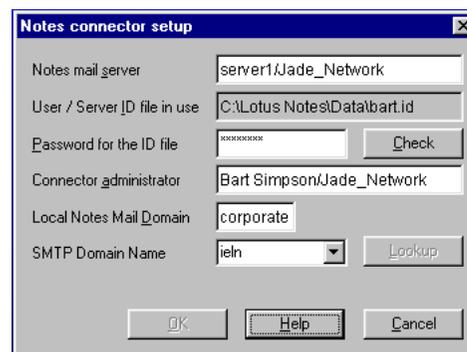


Figure 21: Completed Notes Connector Setup

Next, go to the Internet Exchange web administration interface for Notes connector configuration. Select the *Notes Connector* button on the web administration interface (see Figure 22 on page 25).

International Messaging Associates Home News Updates Support About Version 7
Internet Exchange Messaging Server IEMS 7
Professional Enterprise Edition

Directory | Server Controls | MTA | SMTP | Distribution List | Message Store | cc:Mail | Notes | License

Notes Connector

Notes Domain Configuration

Schedule

Options

Japanese Language Support

Domain Mapping

Mime Table Configuration

Peers

Notes to ASCII Form Mappings

Notes Items Filter

SMTP Box Monitor

Configure Notes Domain

Notes Mail Server: server1/Jade_Network

Local Mail Domain: Jade_Network

ID file in use: C:\Lotus\Notes\Data\bart.id

Password for the ID file: *****

Notes administrator: Bart Simpsons/Jade_Network

SMTP Domain Name: ieln

Include SMTP Domain Name in addresses

Submit Reset Help

Figure 22: Configuring Notes Domain

In this screen, you must specify values for Notes Mail Server. In this example, it should be server1/Jade_Network. Click on the *Submit* button to save the changes. The configuration is now set and you can run the *NotesIn* and *NotesOut* modules from the Program menu.

CHAPTER 3

Configuration

Notes Domain

The IEMS 7 Lotus Notes Connector is configured through the standard IEMS web interface. For information on how to bring this up and login, please refer to the **Internet Exchange Messaging Server 7 Administrator's Manual**. After logging in as the Administrator account, the Lotus Notes Connector settings can be viewed and modified.

On the main configuration screen for the Notes Connector (Figure 23), click on the *Notes domain configurations* tab. A screen to configure the Notes Domain will appear (Figure 24).

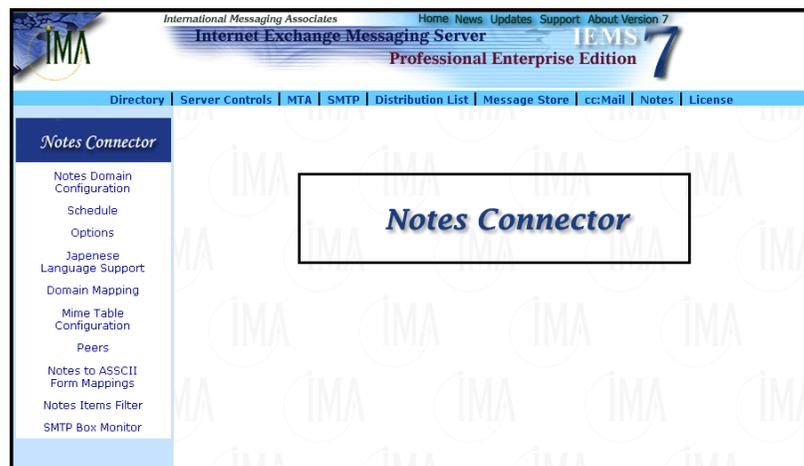


Figure 23: Main Notes Connector Configuration Page

Notes Mail Server

The name of the Notes Server that the Notes Connector attaches itself to.

Local Mail Domain

The local Notes Mail Domain name that the Notes connector will connect to. The Mail Domain name is created automatically in the server during the first installation of the Notes Server.

ID file in use

The name of the ID file specified in the entry *KeyFileName=* of the *NOTES.INI* file. The Notes Connector uses the owner of this ID file to access *SMTP.BOX* and *MAIL.BOX* in the Notes Server. Normally, this file is created in the data directory of the Lotus Notes Server/Workstation during installation process. If *KeyFileName* does not contain any path information, the Notes Connector appends the data directory specified in *Directory=* with

NOTES DOMAIN

NOTES.INI as the prefix, e.g.

c:\notes\data\user.id for standard Notes Workstation Installation
 c:\notes\data\server.id for standard Notes Server Installation

Password for the ID file

The password for the ID file specified above. The password appears as a row of asterisks (****) for security reasons.

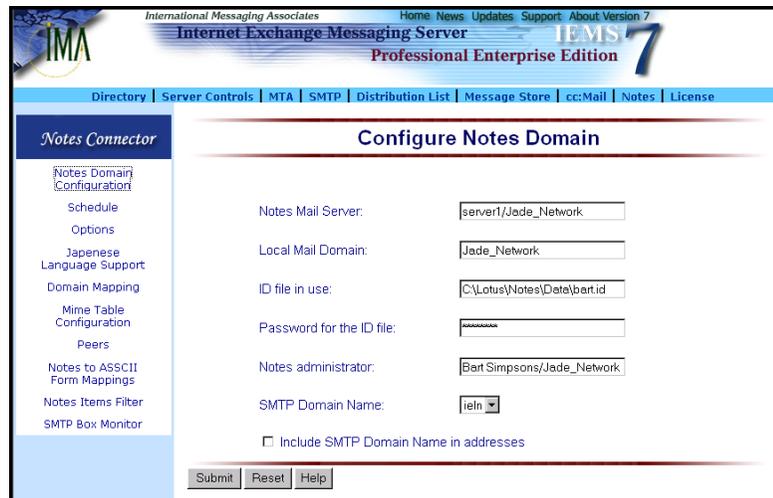


Figure 24: Notes Domain Configuration

Notes administrator

The user name for the Notes Connector administrator. By default, the Notes Connector uses the owner of the ID file specified above as the name of the administrator. This is also the alias for the Internet Postmaster. All Internet sites are required to support the Postmaster alias. When the Notes Connector (*NOTES.INI*) receives a message addressed to Postmaster, it is sent to this Notes user.

SMTP Domain Name

This is the domain name defined in the Foreign SMTP Domain document of the Notes Public Address Book. Select the domain name to which the connector is attached. This allows multiple SMTP servers to run on the same Notes environment.

Include SMTP Domain Name in addresses

When this option is enabled, the selected SMTP domain name is appended to the inbound message Internet addresses. This allows replies to be sent by the Notes Connector if the Notes system contains more than one SMTP domain, e.g.

user@company.com@ieln

when this option is enabled, and

user@company.com

when this option is disabled.

Schedules

The Notes connector checks with the Notes server at regular intervals for new messages to send from or deliver to the Notes network. These intervals can be scheduled per the requirements of the site. To configure the Notes scheduling, click on the Schedules link on the Notes Connector screen (see Figure 7 on page 11). The Notes Connector Running Interval screen will appear (see Figure 9 on page 13).

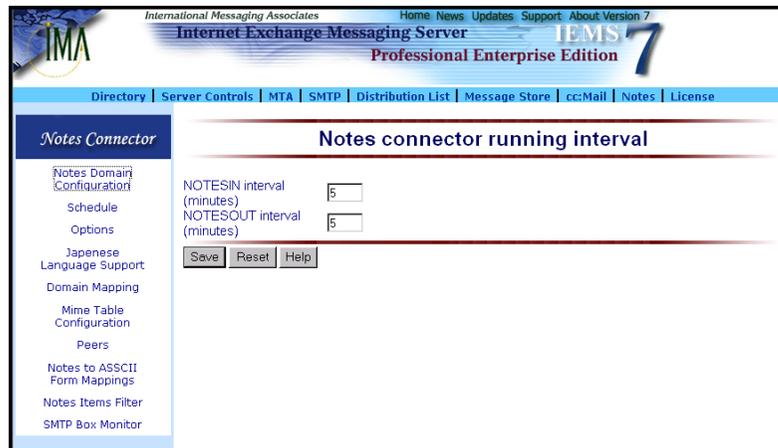


Figure 25: Notes Connector Running Interval

NotesIn Interval

Defines the interval in minutes for the NotesIn module to check the Notes queue for messages waiting to be imported to the *MAIL.BOX* on the Notes server.

NotesOut Interval

Defines the interval in minutes for the NotesOut module to check the *SMTP.BOX* on the Notes server for messages waiting for delivery to the Internet.

Options

Many options can be configured for the Notes connector. To configure these, click on the *Options* button on the main web configuration screen for the Notes Connector. A new page for setting the desired options will appear (see Figure 26 and Figure 27)

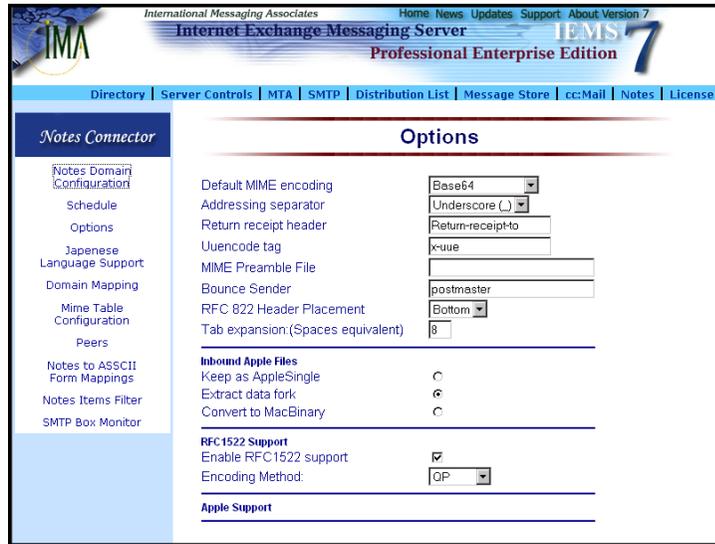


Figure 26: Configuring Notes Connector Options (1)

General Options

Default MIME encoding

When encoding Lotus Notes messages, *NOTESOUT* uses the MIME encoding information configured into Internet Exchange (see “MIME Table Configuration” on page 37 for details). When a non-Macintosh file with an unknown or non-existent extension is encountered, it is encoded using the default binary encoding. For talking to MIME capable sites, base64 is preferable, while other sites might be able to handle uuencoded files more efficiently.

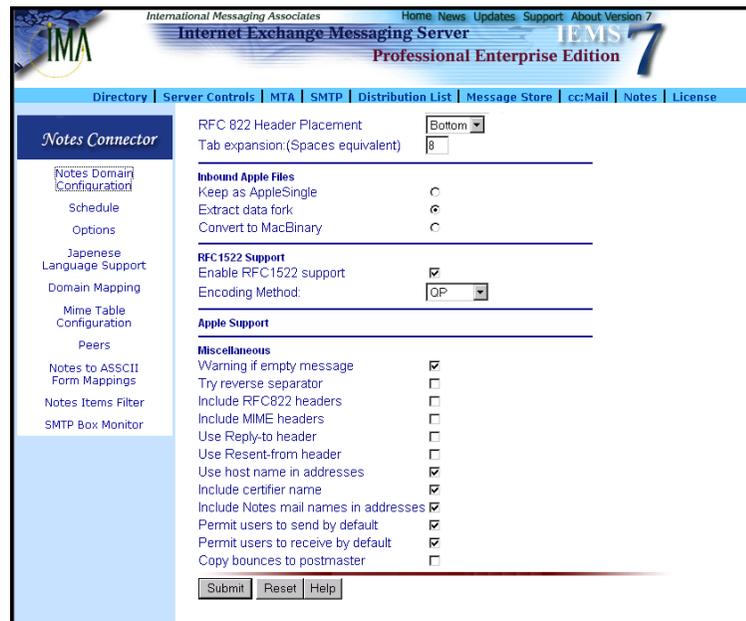


Figure 27: Configuring Notes Connector Options (2)

Address separator

When no match is found in the Directory Server, *NOTESOUT* constructs a default address by converting any spaces in the Lotus Notes address to this separator. The allowed entries are the dot (.) and underscore (_), e.g. the Lotus Notes address

Bill Smith/Sales

becomes either

Bill_Smith/Sales

or

Bill.Smith/Sales

If an existing separator is found in the name to be translated, this will be doubled, e.g.

Bill_Smith

becomes

Bill__Smith

if the separator used is the underscore.

Return receipt header

This parameter specifies the value of the Internet "Return Receipt" header. Using the default value of "Return-Receipt-To:", this allows compatibility with older versions of the UNIX Sendmail program and the Lotus SMTPLINK product. However, there are problems involved with this approach. Sendmail uses the header to request notification of message delivery at the transport level, while Lotus SMTPLINK uses it to signify that the message has been opened (and possibly read) by the recipient.

Choosing a different value will not only solve this problem but will also ensure that the return receipt function is portable only between the Internet Exchange Notes Connector that settled upon the same value to use.

Uuencode tag

By default, Internet Exchange generates MIME uuencode messages with x-uu in the Content-transfer-encoding header. However, it is reported that some email agents require x-uuencode in the header instead. Use this entry to change the name of the uuencode header.

MIME preamble file

MIME messages contain an optional MIME preamble area, where a short message useful to non-MIME gateways and user agents can be stored. This section resides between the RFC-822 headers and the first MIME body part. If this option is set to point to an existing file, the contents of this file will be used as the MIME preamble in outgoing messages. If this option is disabled or set to a nonexistent file, no preamble is used.

OPTIONS

Bounce sender

When a message is bounced (sent back to the message originator), the user defined in this field receives a bounced notification generated by the MTA to warn of undeliverable mail; a copy of the message is included in the notification. The default of *Postmaster* is highly recommended.

RFC822 Header placement

Specifies where to place the RFC-822 headers in the Notes mail body. Applies only if the option *Include RFC822 Headers* is enabled.

Tab expansion

The number of spaces used to replace a single tab. For example, if this parameter is configured to 8, eight spaces will be used instead of a tab for all incoming text messages. A value of zero indicates no tab expansion.

Inbound Apple Files

Keep as AppleSingle – inbound Macintosh file attachments will be kept as AppleSingle format after decoding.

Extract data fork – only the data fork of the Macintosh file attachment will be used after decoding.

Convert to MacBinary – the decoded MAC MIME file attachment will be converted to MacBinary II format before it is exported to the Notes server.

Enable RFC1522 support

When this option is enabled, *NOTESOUT* encodes any message headers containing non-ASCII text as defined by RFC 1522 (MIME part II, Message Header Extensions for Non-ASCII Text).

Encoding method

This option allows the administrator to choose between Quoted-printable or Base 64 for encoding non-ASCII characters in headers. It is suggested to use Quoted-printable if the gateway is to handle European characters, while Base 64 should be used on Japanese or any double-byte character set environments.

Miscellaneous**Warning if empty message**

This option is for the cc:Mail Connector only.

Try reverse separator

This option allows both address separators (dot/underscore) to be tried with incoming addresses during default address translation. This is useful if the local site changes its preferred separator and still wishes addresses with the old separator to be valid.

Note: *The default address translation is performed when there is no entry for the given Notes user in the IEMS Directory, and an unlimited Notes Connector license is installed.*

OPTIONS

Include RFC822 headers

In normal operation, Internet Exchange discards RFC-822 headers after they have been processed. This option allows such headers to be added to incoming messages as pop-up text in the Notes mail body.

Include MIME headers

In normal operation, Internet Exchange discards MIME bodypart headers after they have been processed. All MIME headers can be included by activating this option. This is not normally required, but it can be useful if the incoming message type cannot be identified. A pop-up text will be added for each MIME bodypart in the Notes mail body.

Use Reply-to headers

This option makes use of the *Reply-to:* field by copying it to the *From:* field on all incoming mail. Otherwise this information is lost, as Notes has no concept of *Reply-to:* fields. The use of this option will result in the loss of the original *From:* field, if this field is different from the *Reply-to:* field.

Use Resent-from headers

In earlier versions of Internet Exchange, if an Internet *Resent-From:* header was present on the incoming message, its value was used for the Lotus Notes *From:* field instead of the one in the Internet message *From:* header. This option supports this function, allowing messages forwarded through some UNIX mailers like Pine to be turned on or off as needed. The use of this option will result in the loss of the original *From:* field, if this field is different from the *Resent-from:* field.

Use host name in addresses

Setting this option configures outgoing mail to the form

user@host.domain

where 'host' is the local Internet host name, and 'domain' is the local Internet domain name of the gateway. Some sites however prefer to hide the local host name, sending all mail out with the address form

user@domain

If this is required, this option should be turned off. In addition, the local domain should be added to the alternate host name/domain list. This ensures that incoming mail of this form is recognized as local. All MX records for this domain should be forwarded to Internet Exchange.

Include certifier name

If there no address mapping for outbound Notes addresses is found in the Directory Server, default mapping will be used. If the certifier name is not required for the Internet address, this option should be turned off, e.g.

certifier name included : *John_Smith/Sales/Jade@jade.net*
certifier name not included: *John_Smith@jade.net*

Include Notes mail names in addresses

Enabling this option includes Lotus Notes names in the comment part of outgoing Internet addresses, e.g.

Jonathan_Smith@jade.net (Jonathan Smith)

Permit users to send by default

If send permission is not enabled for a user in the Alias Database and Directory Database, this option determines whether the user can send messages to the Internet.

Note: *This option is available only if an unlimited Notes Connector license is installed.*

Permit users to receive by default

If receive permission is not set for a user in the alias database, this option determines whether that user can receive messages from the Internet.

Note: *This option is available only if an unlimited Notes Connector license is installed.*

Copy bounces to postmaster

By enabling this option, copies of all bounced messages are automatically sent to the local postmaster. This is useful in monitoring the connector for problems.

Japanese Language Support

To configure the options for Japanese language support, click on the *Japanese Language Support* button on the main web configuration screen for the Notes Connector. The following screen will appear:

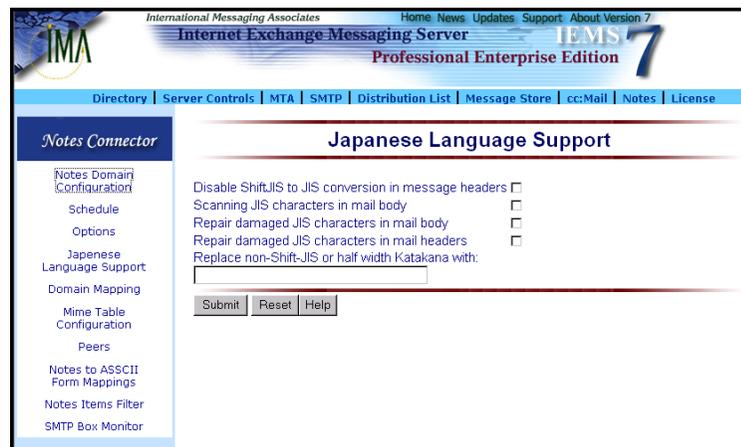


Figure 28: Configuring Japanese Language Support

Disable Shift-JIS to JIS conversion in message headers

The conversion between Shift-JIS and ISO-2022-JP also affects message headers. Should this cause problems, it is possible to disable the bidirectional conversion between 8-bit JIS and 7-bit JIS character sets in message headers by activating this option. The conversion then takes place by default.

Scanning JIS characters in mail body

Enabling this option prompts the message text to be converted from 7-bit JIS to Shift-JIS before being exported to Notes. The default is *Enabled* if the local character set is ISO-2022-JP, and *Disabled* for other character sets.

Repair damaged JIS characters in mail body

If this option is enabled, the connector (*NOTESIN*) attempts to recover JIS messages without Escape characters (ESC, ASCII code 27 – some mail transport agents filter them out). This feature uses heuristic criteria, and might produce incorrect results in certain cases. The default is *Enabled* if the local character set is ISO-2022-JP.

Repair damaged JIS characters in mail headers

If the escape characters in a message have been removed by other mail routers or MTA's, Notes Connector (*NOTESIN*) can attempt a recovery of JIS characters without ESC characters. By default, the automatic recovery of ISO-2022-JP escape sequences that lacks the escape character will not be attempted.

Replace non-Shift-JIS or half width Katakana

This parameter defines a string (e.g. *invalid character mark*) with which to replace any non Shift-JIS or half-width Katakana characters that the Notes Connector fails to identify during outbound message conversions. If the field is left empty, the gateway copies the original message content to the outbound message.

Domain Mapping

The database (*LNPOD.BTR*) stores mappings between Lotus Notes Hierarchical certifier names and Internet subdomains. The use of such mappings allows cleaner Internet addresses.

To configure the options for domain mapping, click on the *Domain mapping* button on the main web configuration screen for the Notes Connector. The following screen will appear:

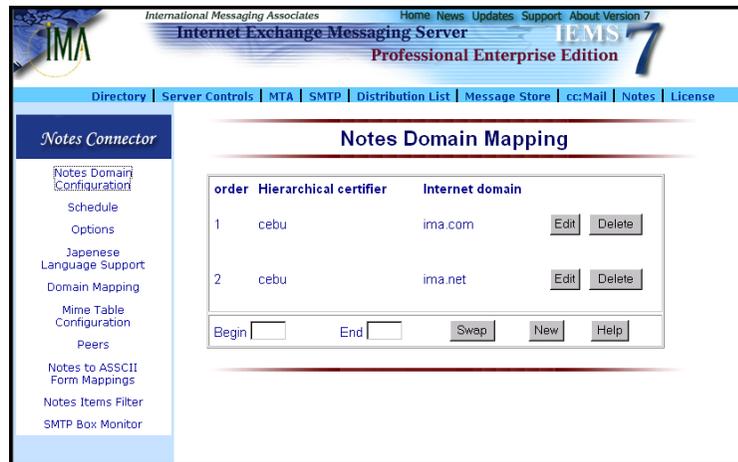


Figure 29: Configuring Notes Domain Mapping

Creating new domain mappings

To create a new domain mapping, click on the *New* button. A new screen for creating new domain mappings will appear (see Figure 30).

Enter the hierarchical certifier name (e.g. *ima*) and the Internet domain name (e.g. *cuenca.ima.com*) in the fields provided. Then click on the *Add* button to save the new mapping.

The mappings are displayed in a table form. Each row contains the name of the certifier and the corresponding Internet domain name. At the end of each row, two buttons namely *Edit* and *Delete* are displayed (see Figure 29). In the beginning of each row, the number order shows the position of each record in the database. It is possible that two certifiers are mapped to the same Internet domain name. If this is the case, the Notes connector uses the first entry (a smaller order number) for address mapping.

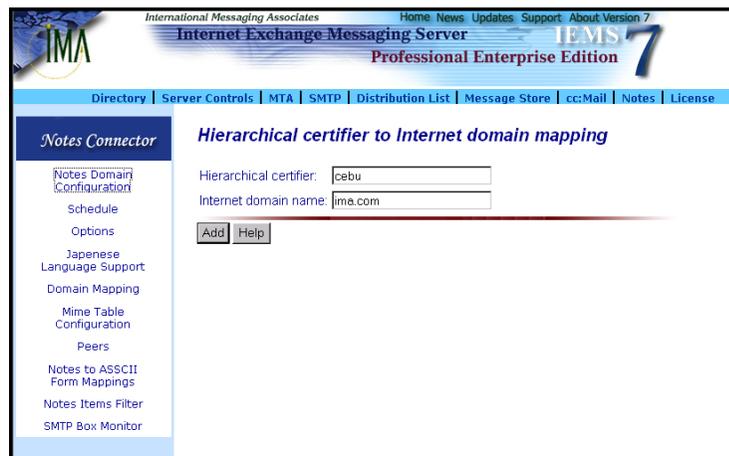


Figure 30: Creating New Domain Mapping

MIME TABLE CONFIGURATION**Swapping domain mappings**

You can change the ordering by putting the two order numbers in Begin and End box respectively. After that, you need to click the *Swap* button. The new order will then be updated and showed on the screen. Internet Exchange automatically uses the first mapping on the list in case two Notes certifiers are mapped to a single Internet domain.

With this feature, the machine running IEMS can be known by several FQDNs. All messages addressed to users at hosts included in the mappings table are considered local when received by the Notes Connector and are immediately sent to the Notes environment.

Editing domain mapping

To edit an existing record, click the *Edit* button for that particular domain mapping (see Figure 29). A Web-based interface for changing domain mapping properties will then appear.

Deleting domain mappings

To remove an existing record, click the *Delete* button for that particular domain mapping (see Figure 29). It will then be removed from the database.

MIME Table Configuration

When Notes users send messages containing attachments to recipients on the Internet, it is necessary to encode the message and attachments according to the MIME standard. The MIME standard provides a framework for both the encapsulations of attachments within a single message, as well as the encoding of these attachments.

The Notes Connectors gives the system administrator full control over how file attachments are encoded for messages originating within Notes. An internal database (*MAGIC.BTR*) is used to provide the mapping between DOS file extensions and MIME content type/subtype and encoding methods. Information is also maintained for communicating with Macintosh computers.

To configure the MIME options, click on the *MIME table configurations* button on the main web configuration screen for the Notes Connector. The following screen will appear:

MIME TABLE CONFIGURATION

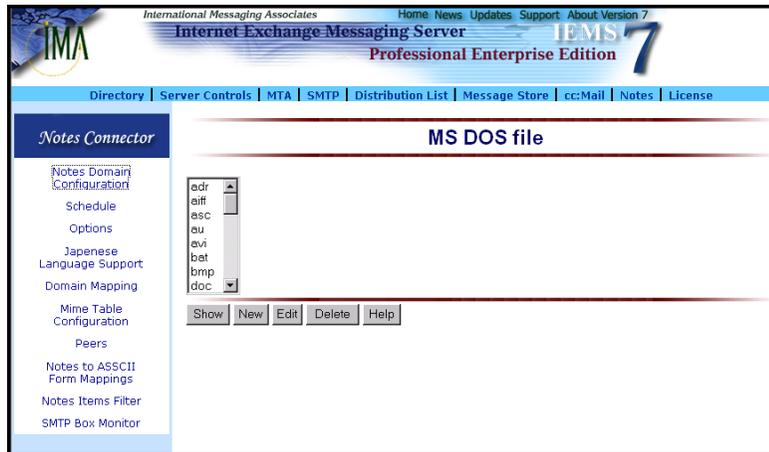


Figure 31: Configuring MIME Table

The MIME configuration screen allows the administrator to modify the manner in which the connector handles specific file types and extends its abilities by adding new file types. Internet Exchange comes with the standard set of MIME types and subtypes as defined by the Internet Assigned Numbers Authority (IANA) pursuant to RFC-1590 (Media Type Registration Procedure). This set, which is periodically updated, is available at:

ftp://ftp.isi.edu/in-notes/iana/assignments/media-types/media-types

The front end of the MIME table configuration shows a list of available file extensions that are stored in the database file. You can select any one of the entry and click the *Show* button to display the associated attributes including the content type and sub-type, content descriptions, and encoding methods (see Figure 32). For Macintosh's users, you can also define the *MAC Finder* (Type and Creator) values there. Notice that the *Type* and *Creator* values are case sensitive. If you see "----" in *Type* and/or *Creator* field, it means that these two values are not used.

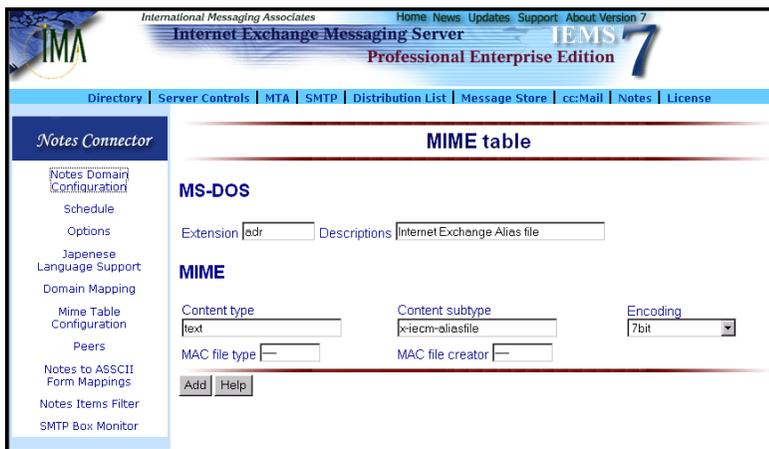


Figure 32: Configuring MIME Table - 2

To create a new mapping, click on the *New* button on the MIME Table Configuration Page. The same configuration screen as Figure 32 but with blank fields will be displayed. To modify an existing record, select the file extension and click the *Edit* button. You can then change all the attributes except the file extension. Select an entry and click *Delete* to remove that mapping from the database.

Peer Capabilities

Please see the “Peer Domain Configuration” section in the Preprocessor chapter of the **Internet Exchange Messaging Server 7 Administrator’s Manual** for details on how to configure Peer Domains.

Notes to ASCII Form Mappings

All Notes mail documents are composed of two parts: the *FORM* note and the *DATA* note. The *FORM* note contains the definition of each field in the mail document. These fields can be static text, images, or binary attachments. However, all of these fields are stored as binary information under the Lotus Notes environment. As a result, the Notes connector requires the form templates so that the *NOTESOUT* can export the information to the right fields in a pre-defined format in the Internet email message.

The database (*FORMS.BTR*) resides under the *FORMS* subdirectory of Internet Exchange Installation stores the mappings of the Notes Form template name and the corresponding ASCII form file (with extension *.FRM*). The following screen allows configuration of this database.

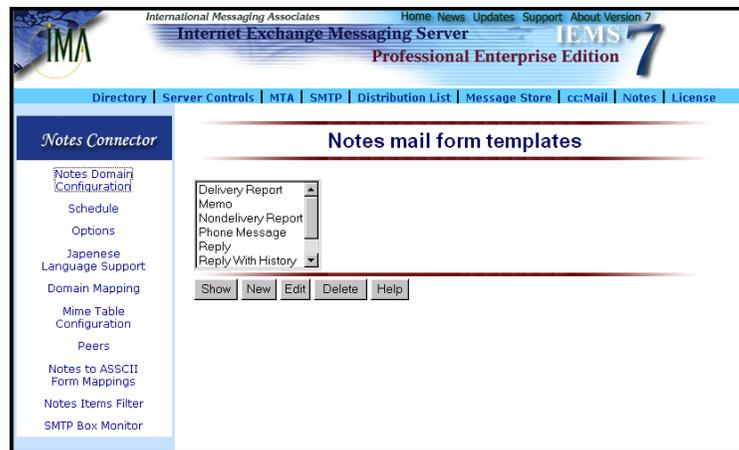


Figure 33: Notes Mail Form Template

On the screen, a list of available Notes mail form name stored in the database is shown. You can click the *Show* button to display the corresponding ASCII form name. Press the new button *New* to create a new record or select a Notes form name from the list and click *Edit* to modify the settings (Figure 33). To remove an existing entry, highlight that particular entry and click on the *Delete* button to remove that form template from the database.

NOTES ITEM FILTER

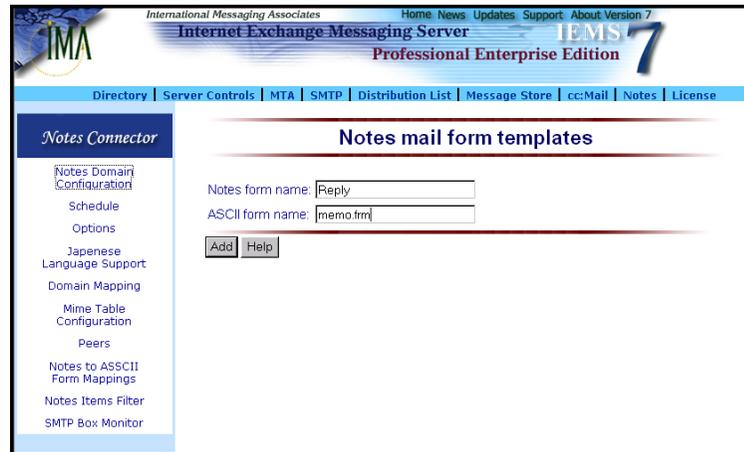


Figure 34: Notes Mail Form Template

Notes Item Filter

When there is no mapping of a Notes form to any ASCII form templates available in the system, *NOTESOUT* uses the generic field export functions to convert the outbound mail body. A database (*ITEMS.BTR*) residing under the *FORMS* subdirectory of the connector installation is used. The screen below allows configuration of this database file.

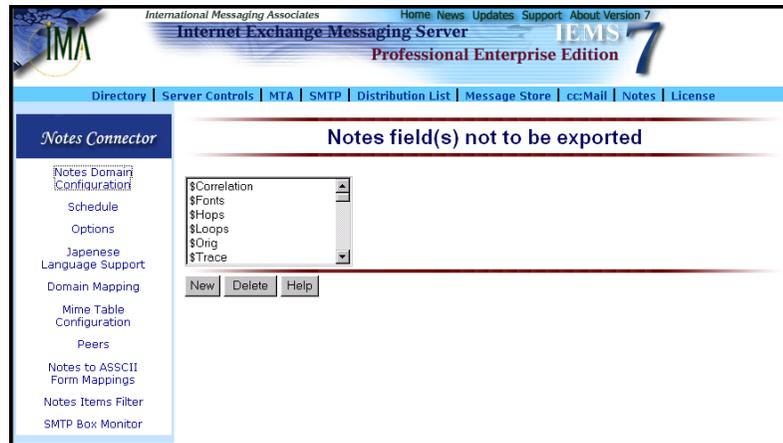


Figure 35: Notes Items Filter

The screen displays all the Notes item names that *NOTESOUT* should not export in outbound messages. To create a new entry, click on the *New* button and a screen configuring which Notes fields should not be exported will appear (see Figure 36). To remove an existing record from the database, select the name of that entry in the list box and click on the *Delete* button.

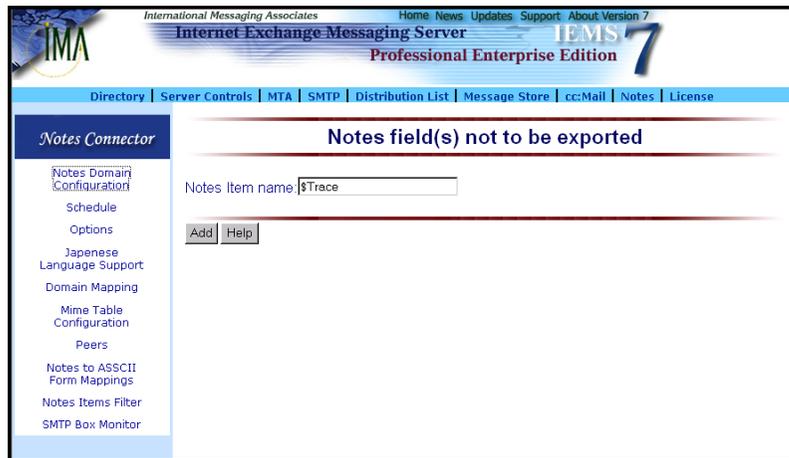


Figure 36: Notes Items Filter

SMTP.BOX Monitor

Messages sent by Notes users are stored in the *SMTP.BOX* queue before being picked up by Internet Exchange. To check the status of this queue, select the Internet PO Queue Status button on the left menu frame. This brings up the SMTP.BOX Queue Monitor screen (see Figure 37 on page 41).

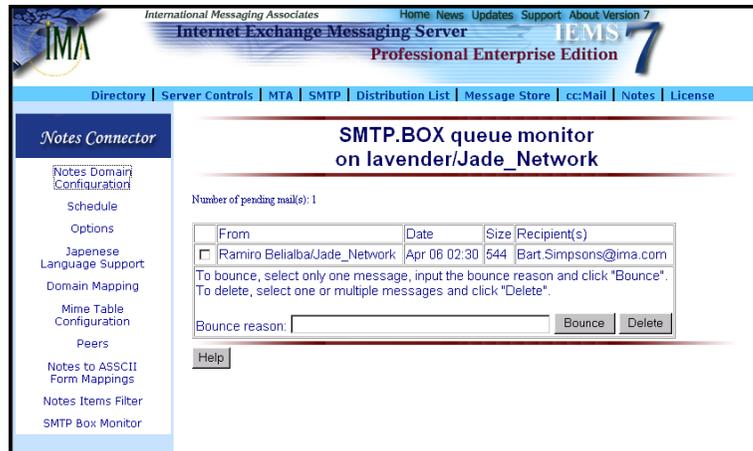


Figure 37: SMTP.BOX Queue Monitor

This screen displays the messages present in the Notes *SMTP.BOX* awaiting delivery to the Internet. The message sender, time of submission, message size, and recipient addresses are displayed for each message.

For each message in the queue, the administrator has the added option of bouncing or deleting the message. The act of “bouncing” a message effectively sends the message back to the message sender and terminates any further routing of the message. This can be useful in situations where the

SMTP.BOX MONITOR

administrator detects a message in the queue that was accidentally sent, or otherwise should not be present.

To bounce a message or messages, simply select the appropriate message(s), enter an optional reason for the bounce (text that will be sent back to the sender), and then click the Bounce button. To delete messages from the queue, select the appropriate message(s) for deletion, and then click the Delete button.

CHAPTER 4

Migration Tools

The ever-decreasing gap between corporate Intranets and the global Internet has opened the door to seamless electronic communication. Using open, Internet-based standards, corporate users can now exploit the richness of the Internet to communicate with other users within their company as well as customers, partners, and suppliers all over the world. These standards enable the formation of a rich set of messaging, directory, and collaboration services that work inside and outside the company. To seize this growing business opportunity, companies need to move from legacy messaging systems to systems based on such standards. Among these are:

- Simple Mail Transfer Protocol (SMTP)
- Multipurpose Internet Mail Extensions (MIME)
- Internet Message Access Protocol version 4 (IMAP4)
- Batch SMTP (BSMTP)
- Lightweight Directory Access Protocol (LDAP)
- Post Office Protocol version 3 (POP3)

Moving from legacy systems to open, Internet-based systems means migrating a variety of information, which includes the following:

- Messages
- Attachments
- Folders and folder hierarchy
- Distribution lists
- Private address books
- Archives and bulletin boards
- Address book / directory

During the migration period users typically need to access information in both the legacy systems as well as the new open systems. To make migration as simple as possible IMA has incorporated several migration tools into the Internet Exchange Messaging Server 7 (IEMS). These tools assist IT managers in migrating existing Lotus Notes customers to the IEMS open messaging environment. Two main migration tools are employed: the Notes Address Book Converter and the Notes Mailbox Converter.

NOTE: *Before running the Notes Mailbox Converter, run the Notes Address Book Converter first to ensure proper mailbox conversion.*

NOTES ADDRESS BOOK CONVERTER

Notes Address Book Converter

The Notes Address Book Converter converts the address book information from the Notes environment to a format supported by the IEMS Directory Server. For Notes environments that have thousands of users, defining each user in the IEMS Directory creates a big administrative burden. The Notes Address Book Converter provides the system administrator with a means for defining Notes users in the Directory Server without the hassles commonly associated with such a task. It is designed to perform the following functions:

- Map Notes mail user addresses to Internet-style email addresses.
- Register and create new local mailbox users
- Assign an initial password for each local mailbox user

The Notes Address Book Converter allows migration of Notes users to the Internet Exchange mailbox. A user interface enables the system administrator select one or all users in the Notes mail server and create corresponding entries for these users in the IEMS Directory and local mailbox simultaneously. The system administrator can then run the Notes Mailbox Converter to replicate messages intended for Notes users in the local mailbox. These users can access the local mailbox via IMAP4- or POP3-capable mail clients.

Aside from providing system administrators with a tool for moving address book information to the IEMS Directory and migrating Notes users to the Internet Exchange mailbox, the Notes Address Book Converter also enables existing Internet Exchange 3.x users to reuse the User Alias Database (*SMT-PADR.BTR*) and Domain Database (*SMTPPOD.BTR*). Once the entries in these database are stored successfully in the Directory Server, all address mappings are carried out using the user's record as seen in the IEMS Directory.

System Requirements

To run the Notes Address Book Converter, the following IEMS 7 modules must first be installed:

- Internet Exchange Directory Server
- Internet Exchange Message Store
- Lotus Notes Server and Public Address Book (PAB)

For the proper installation and setup of the above modules, refer to the **Internet Exchange Messaging Server 7 Installation Guide**, and the **Internet Exchange Messaging Server 7 Administrator's Manual**.

Running the Notes Address Book Converter

To run the Notes Address Book Converter, go to the **Internet Exchange 7** start-up programs menu and place your pointer over the Notes Connector icon. The icons for the various Notes Connector components will appear. Click on the *Notes Users Migration* icon to view the following screen:

NOTES ADDRESS BOOK CONVERTER

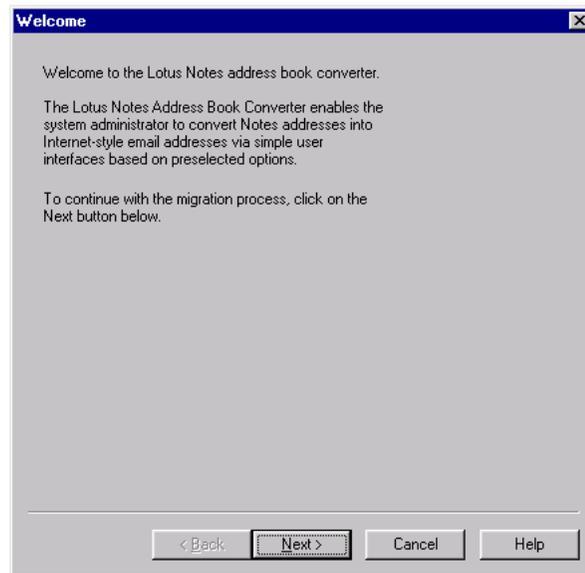


Figure 38: Welcome Page

Click on the Next button. A new screen for entering information required by the Internet Exchange Directory Server, Message Store Server, and Mail Delivery Agent Server will appear (see Figure 39).

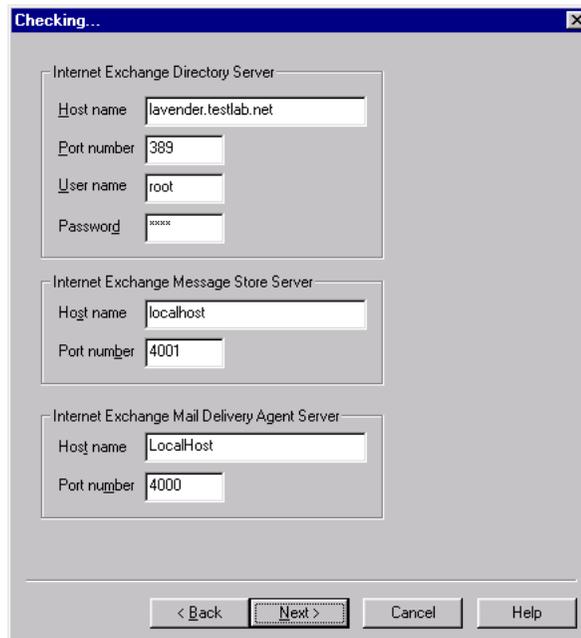


Figure 39: IEMS Directory and Message Store Servers

NOTES ADDRESS BOOK CONVERTER**Internet Exchange Directory Server**

The following parameters are required by the Notes Address Book Converter to ensure successful address conversion:

Host Name

The TCP/IP host name of the machine that runs the Internet Exchange Directory Server. If the Directory Server and the Notes Address Book Converter are running on the same machine, you may specify "LocalHost" in this field.

Port Number

By default, LDAP uses TCP/IP port 389 to listen for incoming connection requests. For security purposes, some sites may want to change this value. Enter the desired port number in this field.

User Name

The name of the user who wants to log in to the Internet Exchange Directory Server.

Password

The password to be provided by the user who wants to log in to the Internet Exchange Directory Server.

Internet Exchange Message Store Server

The following parameters are required by the Notes Address Book Converter to ensure successful address conversion:

Host Name

The host name of the machine that runs the Internet Exchange Message Store. If the Message Store Server and the Notes Address Book Converter are running on the same machine, you may specify "LocalHost" in this field.

Port Number

The TCP/IP port that the Message Store Server listens on. By default, the value for this field is 8000.

Root Directory

The directory where all local user mailboxes are created and stored.

After you have entered all information needed by the Notes Address Converter to connect to the Internet Exchange Directory Server and Message Store, click on the *Next* button. A new screen that will enable the Notes Address Book Converter to access the Lotus Notes PAB will appear (see Figure 40).

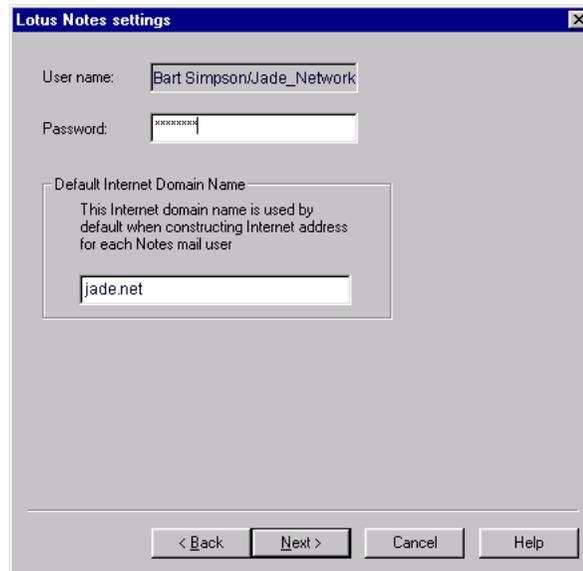


Figure 40: Lotus Notes Settings

Lotus Notes Settings

The following Notes environment parameters are required by the Notes Address Book Converter to ensure successful address conversion:

User name

The name of the user specified in the *KeyFileName* entry in the *NOTES.INI* file.

Password

The password needed to access the PAB in the Lotus Notes Server.

Default Internet Domain Name

This is the domain name that will be used by the new Internet-style email address after the conversion process. The Notes Address Book Converter converts the Notes user name to the local part of the Internet email address (RFC-822 format). Thus, it needs to assign an Internet domain name to the new address. For example, if you enter *ima.com* in this field for a user named *Jim Morisson* whose email address in the Notes PAB is *Jim Morisson/Sales@Sales*, his email address after conversion will become *jim_morisson@ima.com*.

After you have entered all information needed by the Notes Address Converter to connect to the PAB, click on the *Next* button. A new screen for selecting Notes users to be migrated will appear (see Figure 41 on page 48).

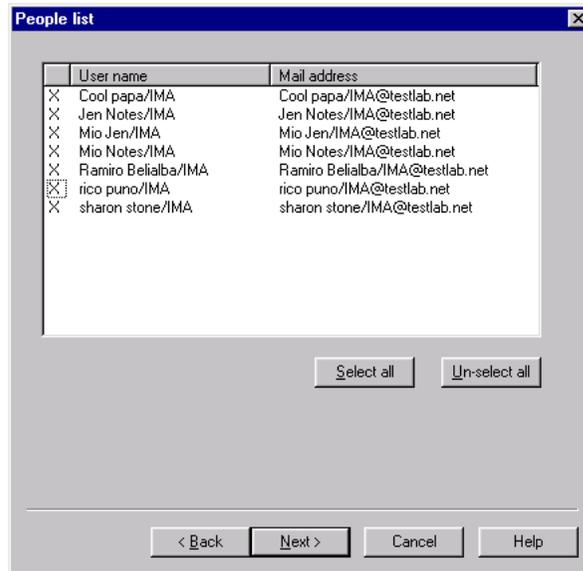


Figure 41: Lotus Notes Users' List

Notes Users' List

To convert all entries in the Notes PAB to Internet-style email addresses, click on the *Select all* button. To select individual entries, move the mouse pointer at the beginning of each name that you want to convert. Then click the left button to select/unselect the entry. After selecting the entries to be converted, click on the *Next* button to go to the next screen (see Figure 42 on page 48).

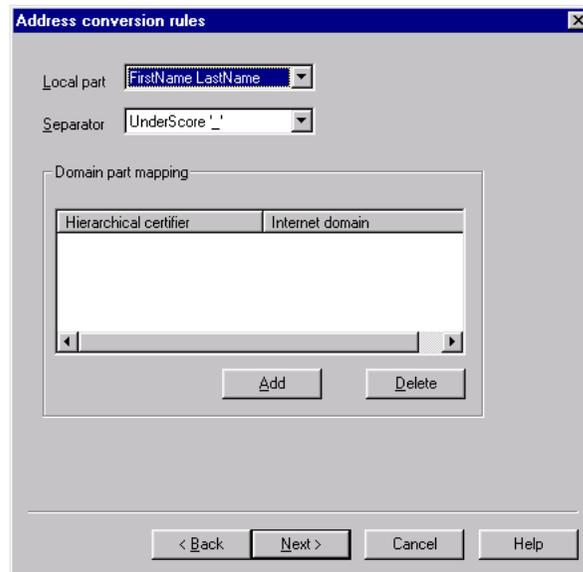


Figure 42: Addressing Rules Definitions

Address Conversion Rules

This screen provides the system administrator with a tool for implementing address conversion rules for the Notes users to be migrated.

Local part

This refers to the string before the “@” sign used in Internet email addresses. If the address is *jim_morisson@ima.com*, the local part is *jim_morisson*.

The Notes Address Book Converter converts the Notes user name based on the rules defined by the system administrator in this field. There are nine formats for the system administrator to choose from:

- FirstName LastName
- FirstName MI LastName
- FI LastName
- FI MI LastName
- LastName FirstName
- LastName FirstName MI
- LastName FI
- LastName FI MI
- FirstName LI

Separator

The separator is used to replace any space in the Notes user name. This is required because the space character (ASCII code 32) is an invalid character in Internet email addresses. There are three options to choose from: Dot, UnderScore or No Separator.

Domain part

This field is for defining the hierarchical certifier-to-Internet subdomain mapping. The subdomain mapping is used to construct the domain part of Internet email addresses. When no mapping is found for a particular Notes server, the default Internet domain name will be used. To add a new hierarchical certifier-to-Internet subdomain mapping, click on the *Add* button. A dialog box for creating a new mapping will appear (see Figure 43). Enter the hierarchical certifier and the Internet domain in the textboxes provided then click on the *OK* button to save the new mapping.

After selecting the address conversion rules desired, click on the *Next* button to go to the next screen (see Figure 44 on page 50).



Figure 43: Pop-up Box for Creating New Mappings

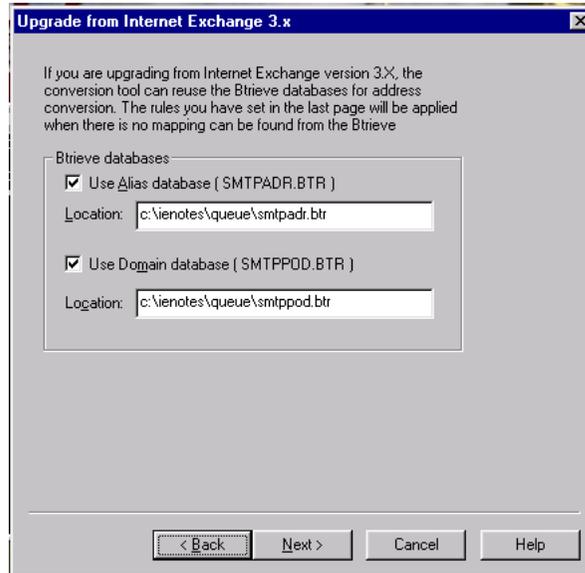


Figure 44: Reusing Btrieve Databases

Upgrade from Internet Exchange 3.x

The Notes Address Book Converter is programmed to detect if you have Internet Exchange 3.x installed on your machine. If Internet Exchange 3.x is detected, the converter checks for the alias database and domain database files and displays the names and locations of these files. If you do not want to reuse any of those databases in IEMS 7, uncheck the appropriate boxes. Then click on the Next button to view the results of the conversion process (see Figure 45).

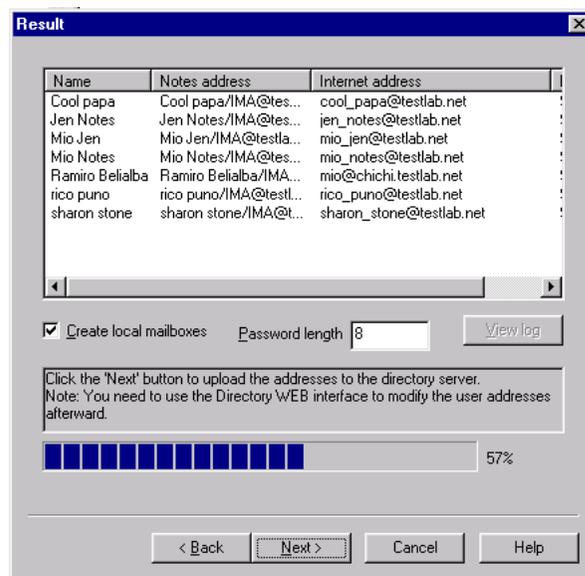


Figure 45: Address Book conversion result

Address Book Conversion Result

The next screen displays the names of the users whose Notes addresses have been successfully converted. It also displays their respective Notes and Internet-style email addresses. The interface also provides the system administrator with options to create local mailboxes and specify the password length for the users.

Create local mailboxes

If you check this option, the Address Book Converter will create local mailboxes for the selected users in the local mailbox server. Otherwise, the users will only be registered in the Directory Server.

Password length

This box allows the system administrator to specify the length of the password that will be used by the users to access the local mailbox system. By default, a random password based on the Notes user name is created automatically when registering a Notes user in the local mailbox system. The password length can vary from one to 16 characters.

Click on the Next button. A dialog box asking for confirmation to upload the selected user and related information to the Internet Exchange Directory Server will appear (see Figure 46). Click on the Yes button to upload the information to the Directory Server.

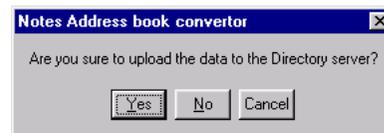


Figure 46: Upload Selected Users Confirmation

After clicking on the Yes button, a new dialog box will appear (see Figure 47 on page 52), which provides the system administrator with the option to read the log file. Click on the Yes button to view the log file (see Figure 48 on page 52). Clicking on the *NO* button will invoke another screen for completing/canceling the conversion process. To complete the conversion, click on the *Finish* button. This screen also provides the system administrator to view the address book conversion log file.

NOTES ADDRESS BOOK CONVERTER

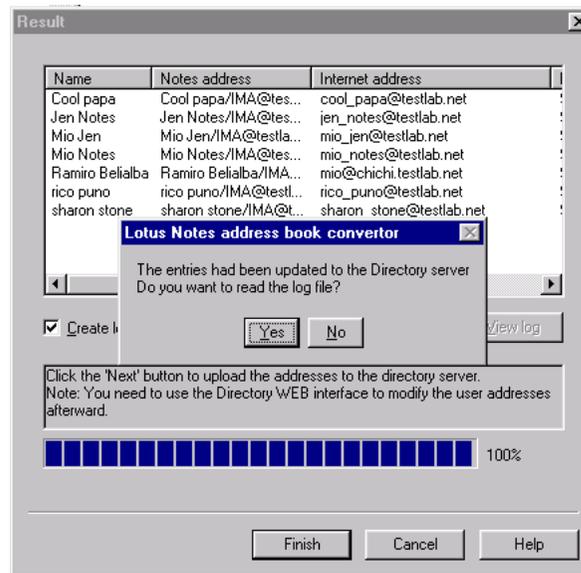


Figure 47: Pop-up Box for Viewing Log File

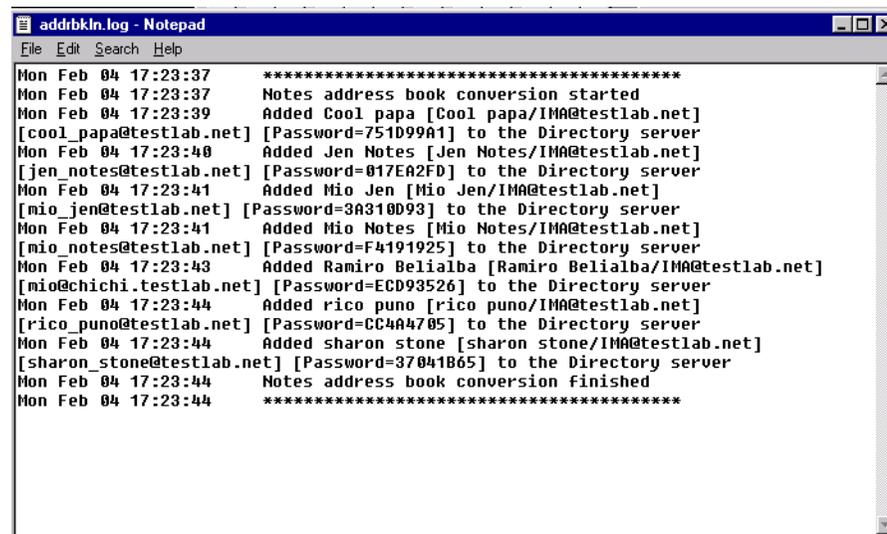


Figure 48: Address Conversion Log File

Address Book Conversion Log File

If there were any errors encountered during the conversion process, these errors will be indicated in log file. It is important to save this log file in a secure location if you have enabled the *Create local mailboxes* option since it contains user passwords for logging to the Message Store via IMAP4- and/or POP3-capable clients. The system administrator will provide each user with the password for his/her local mailbox.

NOTES MAILBOX CONVERTER

Notes Mailbox Converter

The Internet Exchange Notes Mailbox Converter is a tool for migrating Lotus Notes users to the Internet Exchange local mailbox system. It is designed to move existing mailboxes and folders (as well as the messages they contain) from the Notes local environment to the Internet Exchange Message Store.

System Requirements

To run the Notes Address Book Converter, the following IEMS 7 modules/software must first be installed:

- Internet Exchange Directory Server
- Internet Exchange Message Store
- Internet Exchange Message Delivery Agent Server
- Notes Address Book Converter
- Notes users' mailbox file
- Notes C++ API Interface 2.0

For the proper installation and setup of the above modules, refer to the **Internet Exchange Messaging Server 7 Installation Guide** and the **Internet Exchange Messaging Server 7 Administrator's Manual**.

NOTE: *It is extremely important to run the Notes Address Book Converter first before running the Notes Mailbox Converter. Otherwise, there will be no address mapping stored in the Directory Server and the Mailbox Converter will only apply default address mapping on the Notes address during mailbox conversion.*

Running the Notes Mailbox Converter

To run the Notes Mailbox Converter, go to the **Internet Exchange 7** start-up programs menu and place your pointer over the Notes Connector icon. The icons for the various Notes Connector components will appear. Click on the *Notes Mailboxes Migration* icon to view the following screen:

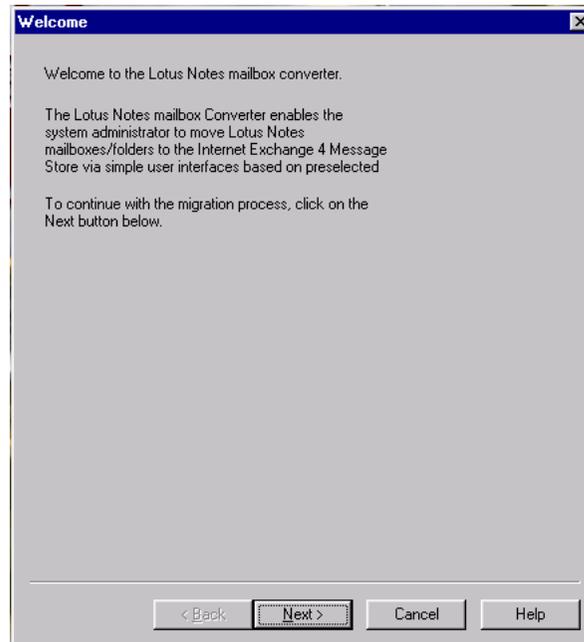


Figure 49: Welcome Page

Click on the Next button. A new screen for entering information required by the Internet Exchange Directory Server, Message Store Server, and Mail Delivery Agent Server will appear.

Internet Exchange Directory Server

The following parameters are required by the Notes Mailbox Converter to ensure successful address conversion (see Figure 50 on page 55).

Host Name

The TCP/IP host name of the machine that runs the Internet Exchange Directory Server. If the Directory Server and the Notes Mailbox Converter are running on the same machine, you may specify "LocalHost" in this field.

Port Number

By default, LDAP uses TCP/IP port 389 to listen for incoming connection requests. For security purposes, some sites may want to change this value. Enter the desired port number in this field.

User Name

The name of the user who will log in to the Internet Exchange Directory Server.

Password

The password to be provided by the user who will log in to the Internet Exchange Directory Server.

The screenshot shows a 'Checking...' dialog box with three sections for server configuration:

- Internet Exchange Directory Server:** Host name: lavender.testlab.net, Port number: 389, User name: root, Password: [masked].
- Internet Exchange Message Store Server:** Host name: localhost, Port number: 4001.
- Internet Exchange Mail Delivery Agent Server:** Host name: LocalHost, Port number: 4000.

At the bottom, there are buttons for '< Back', 'Next >', 'Cancel', and 'Help'. The 'Next >' button is currently selected.

Figure 50: IEMS Directory, Message Store and Mail Delivery Agent Servers

Internet Exchange Message Store Server

The following parameters are required by the Notes Mailbox Converter to ensure successful address conversion (see Figure 50):

Host Name

The host name of the machine that runs the Internet Exchange Message Store. If the Message Store Server and the Notes Mailbox Converter are running on the same machine, you may specify "LocalHost" in this field.

Port Number

The TCP/IP port that the Message Store Server listens on. By default, the value for this field is 8000.

Root Directory

The directory where all local user mailboxes are created and stored.

Internet Exchange Mail Delivery Agent Server

The following parameters are required by the Notes Mailbox Converter to ensure successful address conversion (see Figure 50):

Host name

The TCP/IP host name of the machine that runs the Internet Exchange Mail Delivery Agent Server. If the Mail Delivery Agent Server resides on the same machine, you can specify "LocalHost" in this field.

NOTES MAILBOX CONVERTER

Port Number

The TCP port number that the Internet Exchange Mail Delivery Agent Server listens to. By default, the port number is 4000.

After you have entered all information needed by the Notes Mailbox Converter to connect to the Internet Exchange Directory Server, Message Store Server, and Mail Delivery Agent Server, click on the Next button. A new screen for specifying the location of NOTES.INI file will appear.

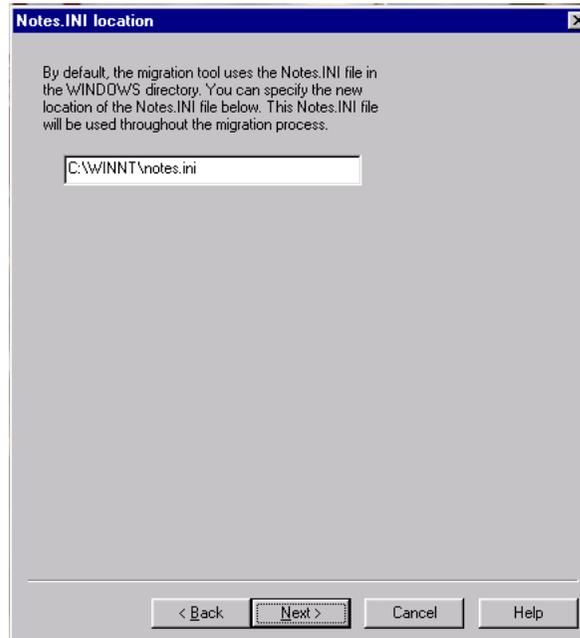


Figure 51: *Notes.INI* File Path Specification

If you plan to run the Notes Mailbox Converter on a user workstation, it is possible that machine is being shared by several Notes users. In this case, each user has his/her own copy of the NOTES.INI file.

The *Notes.INI* location screen (see Figure 51 on page 56) enables the system administrator specify the location of *NOTES.INI* file for a certain user, in case that the initialization file for that user contains special settings. By default, the *NOTES.INI* file under the Windows directory is used. Click on the *Next* button to continue.

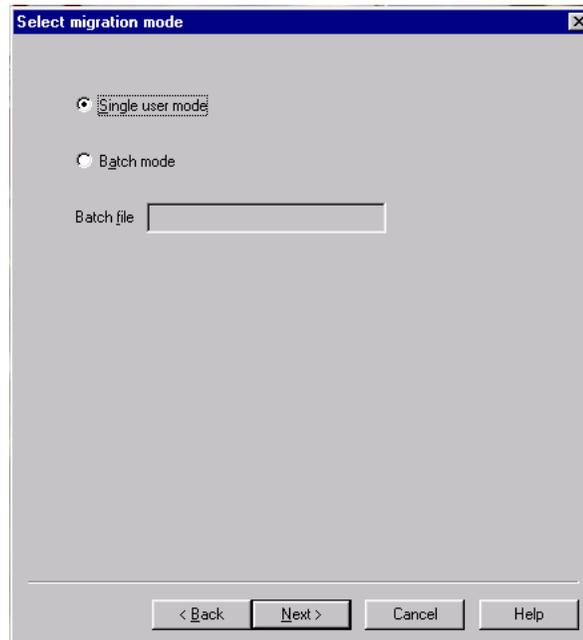


Figure 52: Mailbox Migration Mode Selection

Select Migration Mode

The system administrator is provided with two options for migrating Notes users' mailboxes/folders to the Message Store (see Figure 52 on page 57). These are the single user and multiuser modes.

Single user mode migration

In the single user mode, the Notes Mailbox Converter converts a single Notes user mailbox at a time.

Batch file migration

If this conversion mode is selected, the Notes Mailbox Converter converts several Notes user mailboxes simultaneously using a batch file that contains the appropriate conversion commands.

NOTE: *It is recommended that you familiarize yourself first with the functions of the Notes Mailbox Converter by using the single user mode. When you are already familiar with the converter's operations, you may switch to the batch file mode.*

After selecting the conversion mode desired, click on the *Next* button.

Single User Mode

If you opted to use the single user mode, a new page for entering a user's Notes mailbox and local mailbox attributes will appear (see Figure 53 on page 58).

Figure 53: Connecting to The Notes Mailbox

Lotus Notes Parameters

The following parameters are required by the Notes Mailbox Converter to continue with the conversion process.

User name

The name of the user whose mailbox will be converted as it is entered in the Notes PAB.

ID File

This is needed by the Notes Mailbox Converter to access the mailbox file.

Password

The password for the user name. This also needed by the converter to access the mailbox file.

Mail server

The name of the Notes mail server that holds the mailbox file to be accessed by the converter.

Mailbox file

The Notes mailbox file that contains the mailboxes/folders to be migrated by the converter to the Message Store.

Local mailbox

The following local mailbox parameters are required by the Notes Mailbox Converter to continue with the conversion process:

NOTES MAILBOX CONVERTER

User name

The name of the user whose mailbox will be converted as it is entered in the Internet Exchange Message Store by the Notes Address Book Converter.

Email address

The email address of the user whose mailbox will be converted as it is entered in the Internet Exchange Message Store by the Notes Address Book Converter.

NOTE: Click the *Lookup* button on the screen to verify if there is already a valid mailbox in the Message Store for the user. This will also prompt the Mailbox Converter to look for the user's email address as it is entered in the Message Store.

After entering all the information required in this screen, click on the *Next* button to go to the next screen and proceed with the conversion.

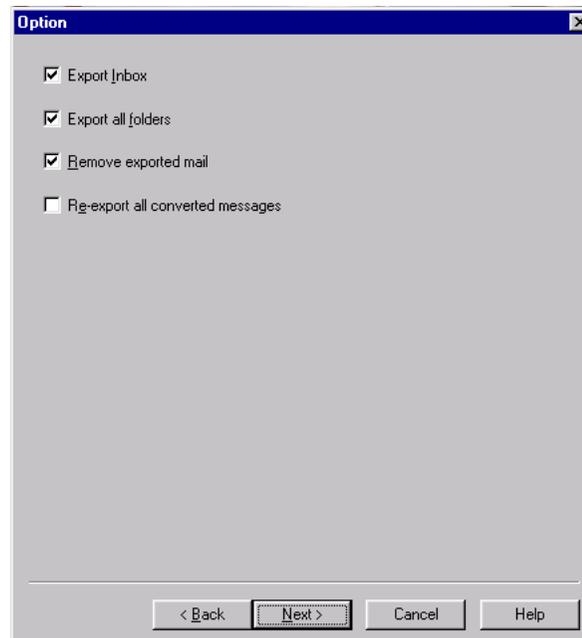


Figure 54: Selecting Migration Options

Migration Option

The screen above (see Figure 54) allows the system administrator with to choose the option(s) for converting the user's mailboxes/folders.

Export Inbox

This option tells the Notes Mailbox Converter to export all the messages in the Notes user's INBOX to the local Message Store.

Export all folders

This option tells the converter to export the messages found in all the folders in the mailbox file. Typically, these are the *Trash*, *Drafts*, and *Message Log* folders. The Mailbox Converter preserves the folder structure when the mes-

NOTES MAILBOX CONVERTER

sages are submitted to the Message Store. If these folders do not exist in the user's home directory in the Message Store, the Mail Delivery Agent will create them.

Remove exported mail

When this option is enabled, the converter deletes the messages in the user's Notes mailbox that have been exported successfully to the Message Store.

After selecting the options desired, click on the *Next* button to continue.

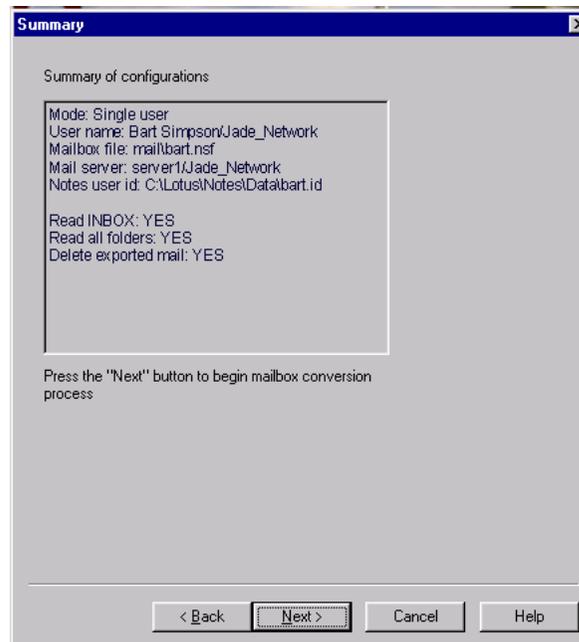


Figure 55: Conversion Summary

Mailbox Conversion Summary

The screen above (see Figure 55) displays the conversion options that the system administrator selected in the previous screens. Click on the *Next* button to proceed with the conversion. A new screen that displays a status bar indicating the progress of conversion will appear (see Figure 56 on page 61).

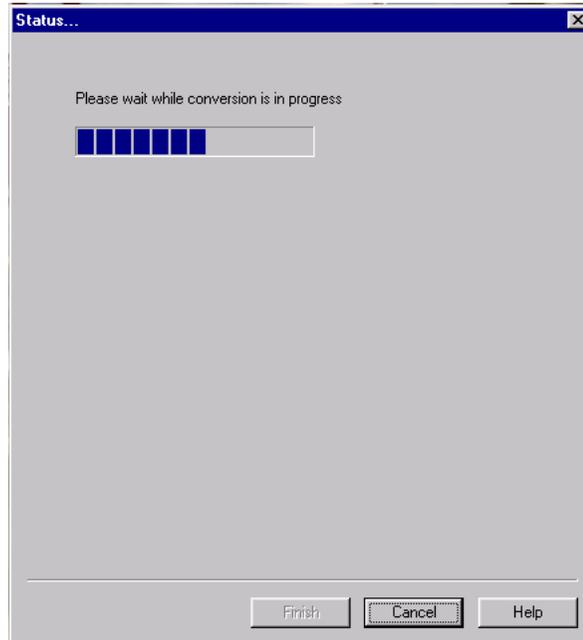


Figure 56: Conversion Status

After the conversion has been completed, a dialog box will appear (see Figure 57), giving the system administrator the option to view the conversion log file (see Figure 58 on page 62). To view the log file, click on the *Yes* button. If you click on the *No* button, a new screen will appear asking you to close the Notes Mailbox Converter and complete the conversion process by clicking on the *Finish* button. In this screen, the system administrator is again given the option to view the log file.

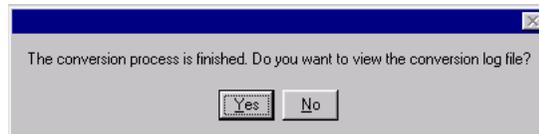
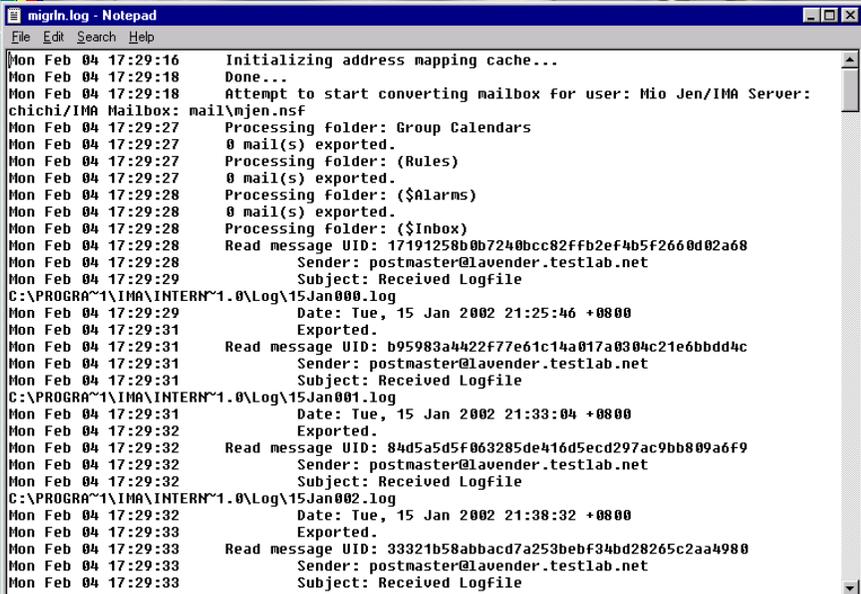


Figure 57: Pop-up Box For Viewing Log File

Mailbox Conversion Log File

The log file (see Figure 58) displays information recorded during the conversion, such as the name of the user mailbox, the UID, sender, subject line, and date of each message, the password used to login to the Notes server, and the time the Mailbox Converter was started. The log file also indicates if there are any problems were encountered during the conversion.



```

migrIn.log - Notepad
File Edit Search Help
Mon Feb 04 17:29:16 Initializing address mapping cache...
Mon Feb 04 17:29:18 Done...
Mon Feb 04 17:29:18 Attempt to start converting mailbox for user: Mio Jen/IMA Server:
chichi/IMA Mailbox: mail\mjjen.nsf
Mon Feb 04 17:29:27 Processing folder: Group Calendars
Mon Feb 04 17:29:27 0 mail(s) exported.
Mon Feb 04 17:29:27 Processing folder: (Rules)
Mon Feb 04 17:29:27 0 mail(s) exported.
Mon Feb 04 17:29:28 Processing folder: ($Alarms)
Mon Feb 04 17:29:28 0 mail(s) exported.
Mon Feb 04 17:29:28 Processing folder: ($Inbox)
Mon Feb 04 17:29:28 Read message UID: 17191258b0b7240bcc82ffb2ef4b5f2660d02a68
Mon Feb 04 17:29:28 Sender: postmaster@lavender.testlab.net
Mon Feb 04 17:29:29 Subject: Received Logfile
C:\PROGRAM~1\IMA\INTERN~1.0\Log\15Jan000.log
Mon Feb 04 17:29:29 Date: Tue, 15 Jan 2002 21:25:46 +0800
Mon Feb 04 17:29:31 Exported.
Mon Feb 04 17:29:31 Read message UID: b95983a4422f77e61c14a017a0304c21e6bbdd4c
Mon Feb 04 17:29:31 Sender: postmaster@lavender.testlab.net
Mon Feb 04 17:29:31 Subject: Received Logfile
C:\PROGRAM~1\IMA\INTERN~1.0\Log\15Jan001.log
Mon Feb 04 17:29:31 Date: Tue, 15 Jan 2002 21:33:04 +0800
Mon Feb 04 17:29:32 Exported.
Mon Feb 04 17:29:32 Read message UID: 84d5a5d5f063205de416d5ecd297ac9bb809a6f9
Mon Feb 04 17:29:32 Sender: postmaster@lavender.testlab.net
Mon Feb 04 17:29:32 Subject: Received Logfile
C:\PROGRAM~1\IMA\INTERN~1.0\Log\15Jan002.log
Mon Feb 04 17:29:32 Date: Tue, 15 Jan 2002 21:38:32 +0800
Mon Feb 04 17:29:33 Exported.
Mon Feb 04 17:29:33 Read message UID: 33321b58abbacd7a253bebf34bd28265c2aa4980
Mon Feb 04 17:29:33 Sender: postmaster@lavender.testlab.net
Mon Feb 04 17:29:33 Subject: Received Logfile

```

Figure 58: Mailbox Conversion Log File

Batch File Migration

If you are already familiar with the Notes Mailbox Converter, you may find it handy to write a batch file for converting multiple mailboxes stored in different Notes servers simultaneously. A batch file is a simple ASCII text file. Each line contains a conversion command and is terminated by a CRLF pair. In each line, you can define the user name, post office path, password, and conversion option. Following is a list of batch file options and their descriptions.

/N=<User Name>

This refers to the name of the Notes user whose mailbox(es) will be converted (e.g. /N=Jerry Garcia/IMA).

/I=<NOTES INI file>

This is the path for the Notes.INI file (e.g. /I=C:\windows\notes.ini).

/M=<Mail domain>

This is the domain name of the owner of the mailbox to be exported (e.g. /M=MAIL).

/D=<ID file name>

This refers to the ID file that must be used for that mailbox file (e.g. C:\notes\data\user.id).

/P=<password>

This is the password for the ID file specified in the command line (e.g. /P=password1).

NOTES MAILBOX CONVERTER

/S=<Notes server>

This refers to the Notes server where the mailbox to be migrated resides. If this parameter is not found, the Notes Mailbox Converter assumes that the mailbox resides on the local machine (e.g. /S=central.ima.com\IMA).

/F=<mailbox file>

This is the name of the mailbox to be migrated (e.g. /F=mailjerrygarcia.nsf).

/INBOX=Y/N

This parameter tells the Notes Mailbox Converter whether to read all messages in the INBOX or not. If the value is set to "Y", the converter will read all messages in the INBOX. If this parameter is missing, the converter exports the entire INBOX by default.

/ALLFOLDERS=Y/N

This parameter tells the Notes Mailbox Converter whether to read the messages in all of the Notes user's mailbox or not. If the value is set to "Y", the converter will read the messages in all mailbox folders. If this parameter is missing, the converter exports all folders by default.

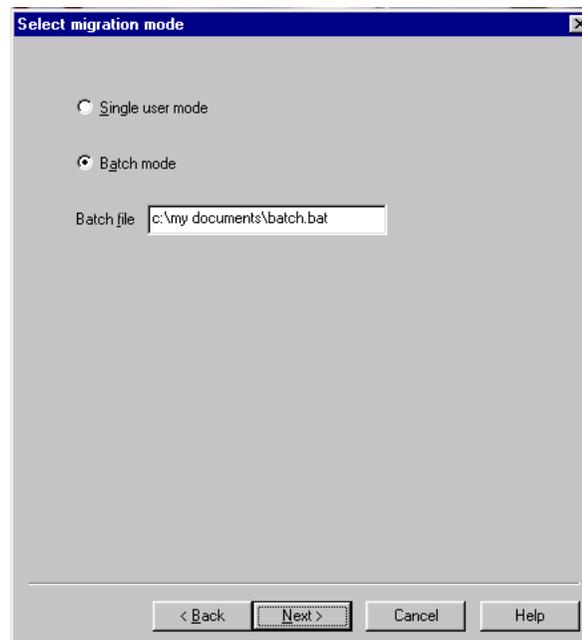


Figure 59: Running Batch File Migration Mode

/DELETE=Y/N

This parameter tells the Notes Mailbox Converter whether to delete converted messages in the Notes mailbox/folders or not after those messages have been exported successfully to the Message Store. If the value is set to "Y", the converter will delete all exported messages. If this parameter is missing, the converter will not delete exported messages by default.

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Following is an example of a batch file:

```
/N=Jim Brown/IMA /M=IMA /D=c:\notes\data\jimbrown.id /I=c:\winnt\notes.ini /  
P=1234567 /S=central.ima.com/IMA /F=mail\jimbrown.nsf /INBOX=Y /ALL-  
FOLDERS=N /DELETE=N
```

After you have created a batch file, you are now ready to export mailboxes/folders to the IEMS 7 Message Store via batch file processing. To do this, enable the *Use batch file* option in the multi-user mode migration screen (see Figure 59 on page 63). Then enter the path for the batch file in the text box provided. Click on the *Next* button to begin the migration process.

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