

cc: Mail Connector Version 6

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

6

VERSION

Internet Exchange Messaging Server

IMA INTERNATIONAL MESSAGING
ASSOCIATES

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PREFACE

This is the Internet Exchange Messaging Server (IEMS) version 6 cc:Mail 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 cc:Mail Connector on your Windows machines.

The Internet Exchange cc:Mail Connector is a plug-in module that connects cc:Mail environments to the Internet. With this module, cc:Mail 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.

Note: In order to make use of the cc:Mail Connector, IEMS must be licensed for *Professional Enterprise Edition* use.

This manual is but one part of the entire IEMS 6 documentation set. It is assumed the reader of this manual understands the concepts presented in the **Internet Exchange Messaging Server 6 Principles of Operations** and the **Internet Exchange Messaging Server 6 Installation Guide**. Instructions on how to install the cc:Mail Connector are not found here, but rather in the **Internet Exchange Messaging Server 6 Installation Guide**. This manual provides the necessary information on how to configure the cc:Mail environment to interwork with IEMS, and the subsequent administration of the cc:Mail Connector.

The IEMS 6 documentation set is made up of the following volumes:

- Internet Exchange Messaging Server 6 Principles of Operation
- Internet Exchange Messaging Server 6 Site Planning Guide
- Internet Exchange Messaging Server 6 Installation Guide
- Internet Exchange Messaging Server 6 Administrator's Manual
- Internet Exchange Messaging Server 6 cc:Mail Connector
- Internet Exchange Messaging Server 6 Lotus Notes Connector
- Internet Exchange Messaging Server 6 User's Guide
- Internet Exchange Messaging Server 6 MQ API Programmers Manual

All IEMS documentation can be found either on the IEMS 6 CDROM, or downloaded from the IMA web site (<http://www.ima.com/documents/>).

This manual is organized into the following chapters:

Chapter 1, *cc:Mail Connector Architecture*

Chapter 2, *cc:Mail Site Preparation*

Chapter 3, *Configuration*

Chapter 4, *Migration Tools*

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:\IMACert.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

cc:Mail Connector Architecture

Introduction

The Internet Exchange 6 cc:Mail Connector is a plug-in module that connects cc:Mail environments to the Internet. Using this module, cc:Mail users can send and receive messages to and from the Internet, communicate with other local channels, and provide a rich migration path for moving cc:Mail users to open Internet messaging standards. As a plug-in module, the cc:Mail Connector is able to make full use of all the features offered by Internet Exchange Messaging Server, including:

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

Note: *In order to make use of the cc:Mail Connector, IEMS must be licensed for Professional Enterprise Edition use.*

System Architecture

Message Flow

Incoming messages from the Internet are retrieved by either SMTPD or the BSMTP Decoder, depending on the message type. The messages are then routed to the Message Switch, which performs a directory lookup using the Internet Exchange Directory Server to determine if the messages are intended for cc:Mail users. The Message Switch analyzes envelope information for each message and routes them to the Preprocessor, which performs Anti-virus, Anti-Spam, Disclaimer Insertion, and any other actions configured by the administrator. For each Preprocessor module configured in the system, a Channel Action Matrix is consulted to determine if the module should be applied to a given message as it passes through the system. After all necessary operations have been performed on a message (i.e. virus scans, etc.), it is routed to the MTA Shared Message Queue. CCIN then retrieves messages from the cc:Mail Channel for final delivery to cc:Mail users.

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

delivered via SMTPC.

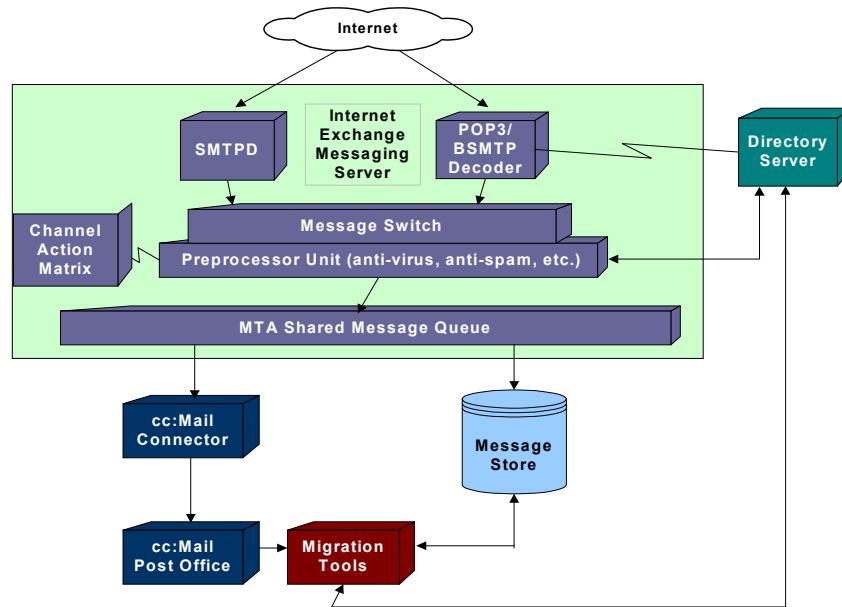


Figure 1: cc:Mail Migration Strategy

cc:Mail Post office

When cc:Mail users send mail to users on the Internet, messages are first sent to the cc:Mail remote post office assigned to the cc:Mail Connector. The cc:Mail post office that serves as the mail forwarder maintains an entry for the connector post office in its directory. Messages destined for the connector post office are temporarily stored in the connector post office mailbox, where they are later retrieved by the cc:Mail Connector.

The cc:Mail Connector is also responsible for regularly checking for inbound messages. When such messages are found, they are delivered to the forwarding post office for either final delivery to a user mailbox or for further routing within the cc:Mail environment.

Interaction with the cc:Mail post office

The Internet Exchange cc:Mail Connector communicates with cc:Mail using the VIM (Vendor Independent Messaging) libraries (DLL's). Two separate programs talk to the cc:Mail post office, one imports messages from the Internet and one exports messages from cc:Mail bound for the Internet.

INCOMING MAIL

Incoming Mail CCIN

CCIN is responsible for importing messages from the Internet, converting MIME or RFC822 messages into cc:Mail format, and delivering them to their intended recipients. It is a single threaded Win32 program that checks every 30 seconds to see if there are new messages in the local CCIN queue. New messages are first routed by the Mail Queue router from Internet Exchange Messaging Server Mail Queue to the local CCIN queue. The message envelope information is stored in the Message database (*MESG.BTR*) with the message file physically residing within the shared MQ system. The advantage of this approach is that disk space usage is reduced as message files are shared by different Internet Exchange Messaging Server channel processors.

SMTPD

The *SMTPD* module is responsible for receiving messages from the Internet via the SMTP/ESMTP protocol. It supports the ESMTP service extensions SIZE, 8BITMIME, ETRN and DSN. A multithreaded model is featured to achieve high performance and receive multiple SMTP connections simultaneously. Received messages are submitted to the Internet Exchange MTA Shared Queue.

NOTE: *For a more detailed explanation on the SMTPD Module and other IEMS channel modules, please refer to the **Internet Exchange Messaging Server 6 Principles of Operation**, and **Internet Exchange Messaging Server 6 Administrator's Manual**.*

Outgoing Mail CCOUT

CCOUT obtains messages from cc:Mail by polling the gateway post office. The system administrator determines the polling interval. *CCOUT* logs into the post office through the cc:Mail VIM interface. If messages are found, *CCOUT* delivers the messages to the Message Queue directory.

SMTPC

The SMTPC module is responsible for delivering messages from the Internet Exchange MTA to the Internet using the SMTP/ESMTP protocol. An efficient queuing strategy is utilized for fast message delivery.

NOTE: *For a more detailed explanation on the SMTPC Module and other IEMS channel modules, please refer to the **Internet Exchange Messaging Server 6 Principles of Operation**, and **Internet Exchange Messaging Server 6 Administrator's Manual**.*

INTERNAL DATABASES

Internal Databases

The Internet Exchange cc:Mail Connector uses several Btrieve databases to store internal message and peer information:

MESG.BTR

Stores the message's envelope, priority value, and status information.

PEER.BTR

Stores the SMTP Domain Profile configuration information, such as the queue run interval, queue run size, maxSMTPSessions, maxMsgPerSession, and retryPeriod for each peer domain.

MAGIC.BTR

Stores the MIME mapping configuration.

CHAPTER 2

cc:Mail Site Preparation

Preparing the cc:Mail Post Office

The cc:Mail Connector requires that a gateway post office be established within the cc:Mail environment. IEMS will exchange messages through this gateway post office when retrieving messages from cc:Mail and when delivering into the cc:Mail environment. To create a gateway post office for cc:Mail, perform the following steps:

Start up cc:Mail's administration utility. To do this, go to the MS-DOS environment and change your current working directory to the directory containing the administration utility program. (e.g. c:\ccadmin). Type *admin* and then press *Enter*. The cc:Mail Administrator login screen will appear (see Figure 2 on page 7).

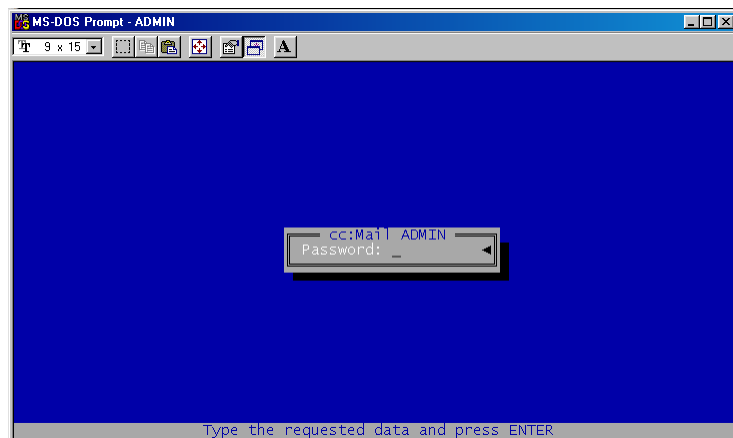


Figure 2: cc:Mail Administrator Login

Type the password for the post office and press *Enter*. The cc:Mail Administration Interface main Menu will appear (see Figure 3 on page 8).

Choose *Manage Mail Directory* (as shown in the example) and press *Enter*. A new screen for adding or selecting users will appear (see Figure 4 on page 8).

Type the name of the new gateway post office¹ (e.g. Internet) in the field provided and press *Enter*.

1. The 32-bit VIM Libraries from Lotus are needed by IEMS 6 to access the cc:Mail Post Office.

PREPARING THE CC:MAIL POST OFFICE

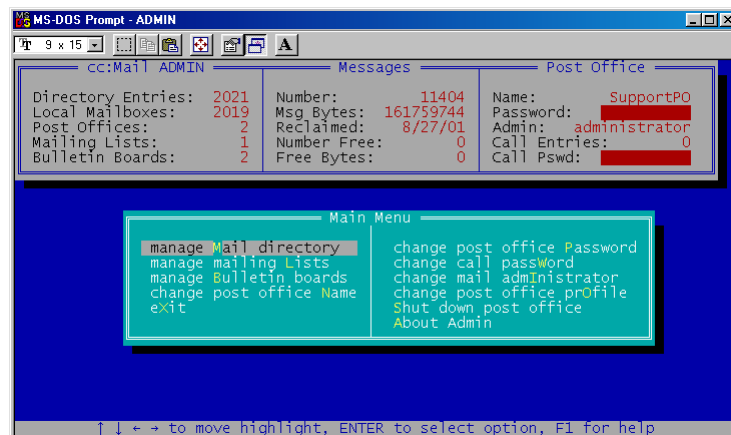


Figure 3: cc:Mail Administrator's Main Menu

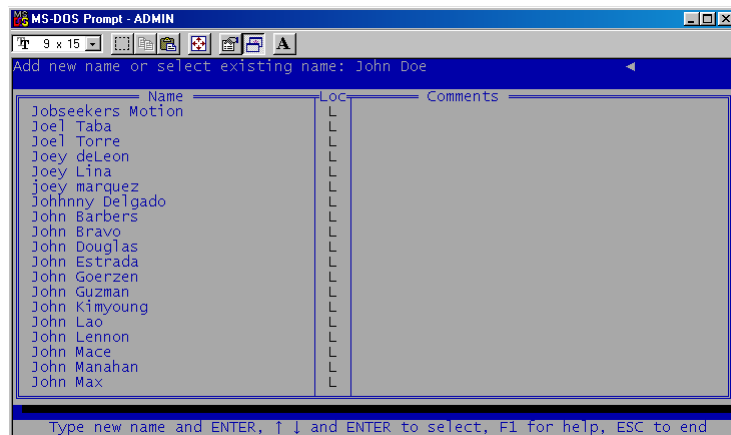


Figure 4: Adding New cc:Mail Users

In the next screen (see Figure 5 on page 9), you will be asked to enter the location status of the new post office. Type "P" for post office and press *Enter*.

The next screen (see Figure 6 on page 9) allows you to enter a comment describing the new post office (e.g. "Internet Exchange post office"). This field is optional and may be left blank. Press *Enter* to add the new post office to the menu.

INSTALLING THE CC:MAIL CONNECTOR

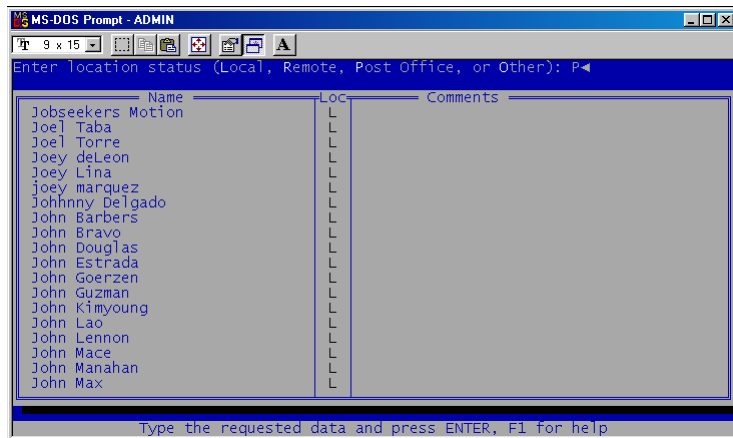


Figure 5: cc:Mail Post Office Identification

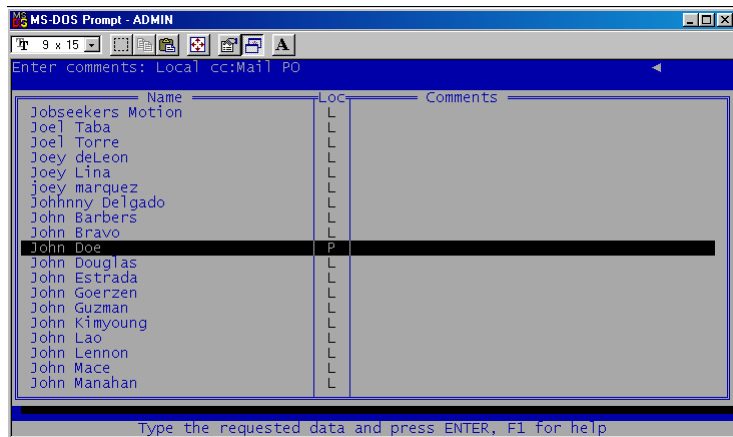


Figure 6: Adding Comments to cc:Mail Directory Entries

After verifying that the above information is correct, press *Enter* followed by *Esc* to return to the main menu. Then press *x* followed by *Enter* to save the configuration and exit the cc:Mail Administrator's Interface.

Installing the cc:Mail Connector

Once the cc:Mail post office is setup to talk to IEMS, as described above, IEMS, with the cc:Mail connector is ready to be installed. Procedures for the installation of IEMS, together with the cc:Mail connector can be found in the **Internet Exchange Messaging Server 6 Installation Guide**.

Before you can run the IEMS 6 cc:Mail connector, cc:Mail users need to be registered with the IEMS Directory, and the cc:Mail connector configured. Detailed information on the operation of the cc:Mail Connector can be found in Chapter 3.

CHAPTER 3

Configuration

Post Office

The IEMS 6 cc:Mail Connector is configured through the standard IEMS web based interface. For information on how to bring this up and login, please refer to the **Internet Exchange Messaging Server 6 Administrator's Manual**. After logging in as the Administrator account, the cc:Mail Connector settings can be viewed and modified.

The cc:Mail connector communicates with the cc:Mail network through a cc:Mail Post Office entry in a local Post Office. To configure the cc:Mail Post office, click on the *Post Office* link on the cc:Mail Connector screen (see Figure 7 on page 11). The Post Office Configuration screen will appear (see Figure 8 on page 12).



Figure 7: cc:Mail Connector

Internet post office name

The name which IEMS uses to log into the cc:Mail Post Office. This name must exist in the cc:Mail directory, and must be defined as a Post Office. Although any unique name may be used here, it is recommended that *Internet* be used for clarity.

Local post office name

The name of the post office that IEMS will log into to retrieve messages.

Local post office path

The path/directory where the cc:Mail post office resides. If the post office is on a shared network, it is suggested that a drive letter mapping is given instead of a UNC path.

The screenshot shows the 'Configure Post Office' web interface. At the top, there is a navigation bar with links: Home, News, Updates, Support, About, Version 6. Below this is a secondary navigation bar with links: Directory, MTA, Preprocessor, SMTP, Distribution List, BSMTP, Message Store, cc:Mail, Notes, License. The main content area is titled 'Configure Post Office' and contains several form fields:

- Internet post office name:
- Local post office name:
- Local post office path:
- Local post office password:
- Local mail administrator:
- VIM character set:

At the bottom of the form are three buttons: Submit, Reset, and Help. On the left side, there is a sidebar menu titled 'cc:Mail Connector Controls' with the following items: Post Office (highlighted), Schedule, Options, Japanese language support, Domain mapping, Mime table Configurations, Peers Capabilities, and Internet PO Queue Status.

Figure 8: Post Office Configuration

Local post office password

The password needed to access the cc:Mail post office.

Local mail administrator

The administrator who will receive system messages generated by either the cc:Mail connector or other parts of the Internet Exchange messaging system. Whenever CCIN receives a mail addressed to “postmaster”, CCIN tries to deliver that message to the cc:Mail user defined in this field.

VIM character set

This special option allows system administrator to enable Japanese character set support when running the cc:Mail Connector on a Japanese OS with Japanese VIM installed. For non-Japanese version of the 32-bit VIM library, you should select CP1252. Otherwise an error message will be displayed, indicating that the VIM library does not support the Japanese character set.

After entering all information required by the system, click on the *Submit* button to implement the settings or click on the *Reset* button to clear all fields.

Schedules

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

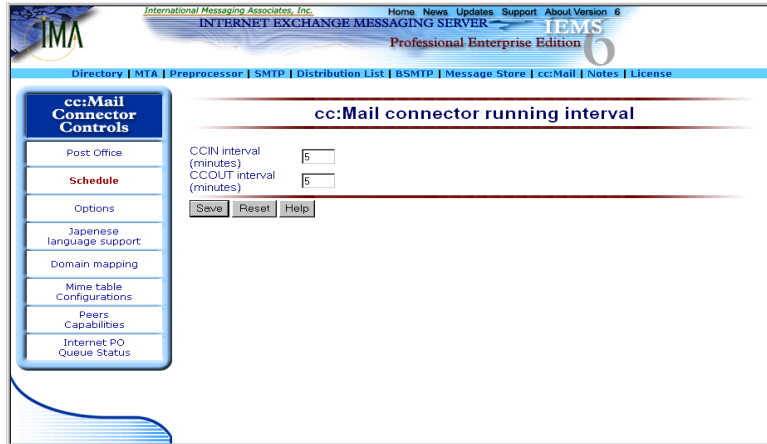


Figure 9: cc:Mail Connector Running Interval

CCIN Interval

Interval (in minutes) for CCIN to check the cc:Mail Queue for messages waiting to be imported to the cc:Mail Post Office.

CCOUT Interval

Interval (in minutes) for CCOUT to check the cc:Mail Internet Post Office for messages waiting to be exported to the Internet.

Options

To configure the cc:Mail Connector’s various options, click on the *Options* link on the cc:Mail Administration interface. A user interface for configuring the cc:Mail Connector’s features will appear (see Figure 10 and Figure 11).

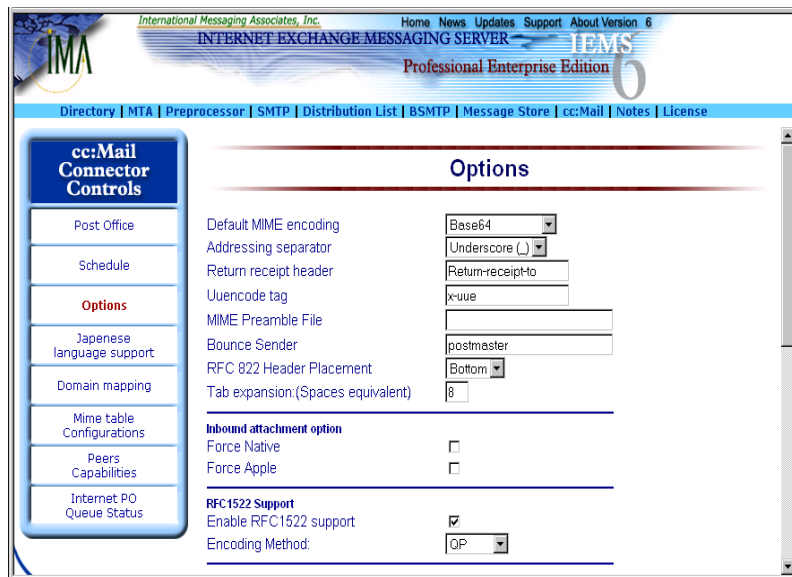


Figure 10: cc:Mail Connector Options

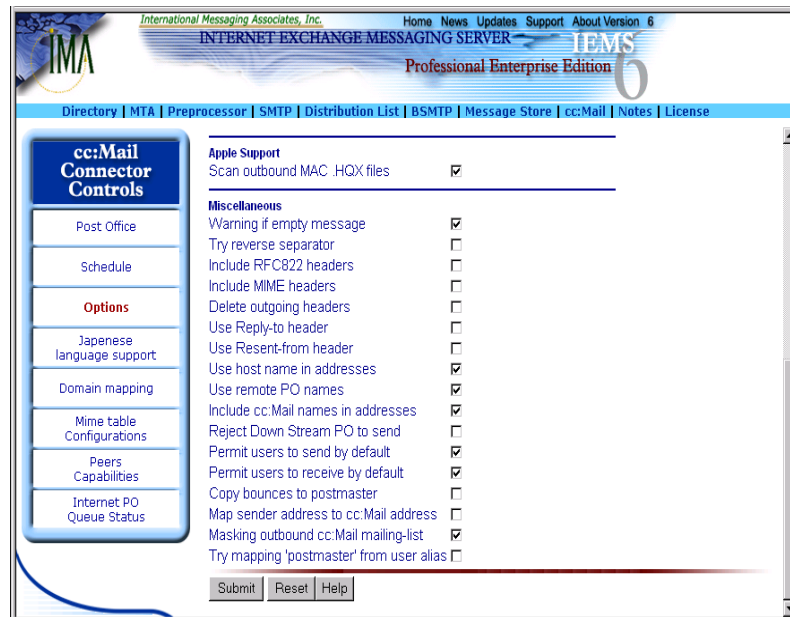


Figure 11: cc:Mail Connector Options (2)

General Options

Default MIME encoding

When encoding cc:Mail messages, CCOU uses the MIME encoding information configured into Internet Exchange (see “MIME Table Configuration” on page 21 for details). When a non-Macintosh file with an unknown or non-existent extension is encountered, it is encoded using the default binary encoding. The system administrator must choose the appropriate entry based upon the capabilities of those sites with which IEMS communicates most of the time. Base64 is preferable for communicating with MIME-capable sites. UUENCODE should be specified as the default encoding method if the gateway is to communicate with many sites that are not MIME-compliant. However, as UUENCODE/UUDECODE is not part of the MIME specification, its widespread use is discouraged.

Addressing separator

When constructing Internet addresses for cc:Mail users without an explicit entry in the IEMS Directory, all spaces are converted to underscores by default (spaces are not valid in Internet mail addresses). Since some sites prefer to use dots instead of underscores, this option allows the administrator to choose between the two. Following are some examples of how an email address for the user Bill Smith is registered in the Post Office:

Bill_Smith_at_Main_PO

or

Bill.Smith.at.Main.PO

OPTIONS

If an existing separator is found in the name to be translated, this will be doubled. For example:

Bill_Smith

becomes

Bill__Smith

if the separator in use 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. There are problems involved with this approach however. Sendmail uses the header to request notification of message delivery at the transport level, while 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 cc:Mail Connector that settled upon the same value to use.

UUencode tag

CCOUT generates an "x-uee" tag in the content-transfer-encoding header by default when an outbound MIME uuencoded message is processed. However, some electronic mail agents require the tag "x-uuencode" in the message header. This entry field is used to change the tag name.

MIME Preamble File

MIME multipart messages contain an initial section known as the preamble, where a short optional text useful to non-MIME gateways and user agents can be stored. This section resides between the RFC822 headers and the first MIME body part. If this option identifies an existing file, the contents of this file are used as the preamble in outgoing messages. If this option either set to a nonexistent file or disabled, no preamble is used.

Bounce Sender

When messages are bounced, the user defined in this field receives notification, which is generated by the MTA, to warn of undeliverable mail. A copy of the message is included in the notification. The default is Postmaster (highly recommended).

RFC 822 Header Placement

This option determines where the RFC822 headers will be attached from an incoming message (i.e. before the first attachment or after the last).

Tab expansions (Spaces equivalent)

The number of spaces used to replace tab characters in incoming text messages. If set to zero, tabs will not be replaced. Since some cc:Mail clients have trouble displaying tab characters, this option allows such characters to be replaced by spaces.

OPTIONS

Force Native

By enabling this option, inbound Macintosh attachments (in BinHex, Mac-MIME or uuencoded AppleSingle format) are stripped of their header and resource fork before being attached to messages in the cc:Mail Post Office. If this is not done, some applications (like Excel 4 for Windows) may refuse to open the resulting file.

Force Apple

By enabling this option, inbound non-Macintosh attachments are given a dummy header and converted into AppleSingle cc:Mail format before being attached to messages in the cc:Mail Post Office. The type and creator are obtained from the MIME table prepared with the Configure MIME box.

Enable RFC1522 support

When this option is enabled, CCOU encodes any message header containing non-ASCII characters according to the definition of RFC 1522 (MIME part II, Message Header Extensions for Non-ASCII Text).

Encoding method

It is possible to choose between Quoted-printable or Base 64 as methods for encoding non-ASCII character in message headers. If the gateway is intended mainly to handle European characters, it is recommended to use Quoted-printable. Base 64 is recommended for Japanese or any double-byte character-set environment.

Scan outbound MAC .HQX files

In outgoing messages, this option checks whether the message body contains files in BinHex format. If such files are found, it uses the information in the header to prepare the proper MIME headers.

Miscellaneous**Warning if empty message**

This option prompts empty outbound messages to trigger a warning to the local postmaster. The warning text is:

Warning: your message went out the cc:Mail gateway with an empty message body. If you intentionally sent an empty message, disregard this warning. If you included a reply in an old header body part, it was purged. Key headers from the message that was sent follow.

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: This works only if there is no entry in the IEMS Directory and an Enterprise (unlimited) cc:Mail license is installed.

OPTIONS

Include RFC822 headers

In normal operation, CCIN discards RFC822 headers after messages have been imported into cc:Mail. This option allows all such headers to be retained in messages as separate attachments.

Include MIME headers

In normal operation, CCIN discards MIME bodypart headers after they have been processed. This option allows all such headers to be retained in messages as separate attachments. This is not normally required, but it can be useful if the incoming message type cannot be identified. A separate text item will be added for each MIME bodypart, which can result in a large number of MIME header text items.

Delete outgoing headers

When a MIME message is imported into cc:Mail, and either RFC822 and/or MIME headers are included, extra text items are created containing these headers. When such messages are resent out to the Internet, these text items are not useful and often confuse the recipient. Enabling this option automatically deletes these header attachments from outgoing messages.

Use Reply-to header

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 cc:Mail 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 header

If a "Resent-From:" header was present in the incoming message, it is used for the cc:Mail From field instead of the "From:" header. This option allows 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 remote PO names

This option determines whether outgoing cc:Mail addresses with no entry in the IEMS Directory appear as:

user_at_Post_Office@host.domain

or

user@host.domain

The second format is much tidier. To ensure that replies to this message will be returned to the sender, there must be an entry in the gateway Post Office for the user. This is easily accomplished by using the Lotus ADE (Automatic Directory Exchange). If this is not the case, incoming messages to these addresses are bounced since cc:Mail has no way to route the messages internally to the correct recipient.

OPTIONS

Include cc:Mail names in addresses

Turning this option off removes the cc:Mail user name from Address field, leaving only the user's Internet address. The default is ON. For example:

Name included: `Jonathan_Smith@jade.net (Jonathan Smith)`

Name not included: `Jonathan_Smith@jade.net`

Reject Down Stream PO to send

Enabling this option prevents users at the downstream post office to send messages to the Internet. Thus, only users from local Post Offices can send messages to the Internet.

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: *Enterprise license is required for this option.*

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: *Enterprise license is required for this option.*

Copy bounces to postmaster

Enabling this option directs all bounced messages to the local postmaster as well as the original sender of the message. This can be useful in monitoring IEMS for problems.

Map sender address to cc:Mail address

Enabling this option prompts Internet Exchange to attempt to map a sender's Internet address to a valid cc:Mail user address. If a match is found CCIN replaces the Internet address in the From: header with the corresponding cc:Mail user name

Masking outbound cc:Mail mailing list

If this option is enabled, CCOUT will ignore any mailing list entries when generating message headers. This means that if a message is addressed to a mailing list and to addresses external to the mailing list, only the mailing list recipients will be able to see the entire list of recipients, while the external addressees will not receive indication that the message was also sent to a cc:Mail mailing list. This option is also useful for avoiding duplicate replies being sent to the same cc:Mail recipient(s) if that recipient is also addressed in the cc:Mail mailing list.

Try mapping 'postmaster' from user alias

Messages addressed to the Postmaster are sent by default to the "local mail postmaster". Enabling this option allows the system administrator to map "postmaster" to another user. If no valid entry is found, IEMS uses the local postmaster name for mail delivery.

JAPANESE LANGUAGE SUPPORT

Japanese Language Support

To configure Japanese language support, click on the *Japanese Language Support* link. The Japanese Language Support screen will appear (see Figure 12 on page 19):

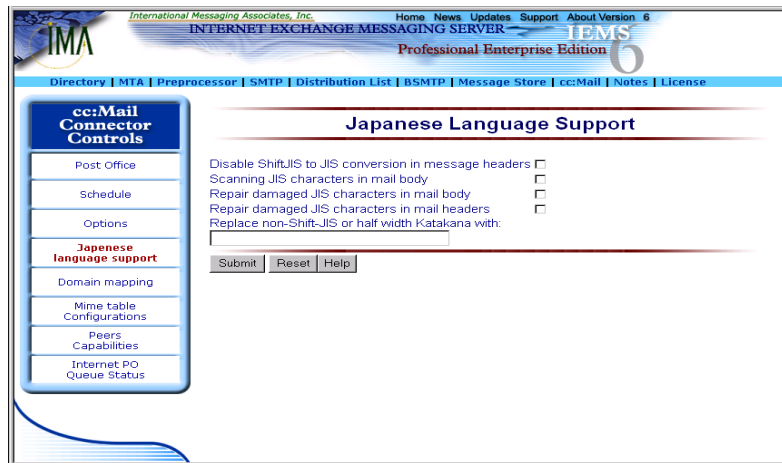


Figure 12: Japanese Language Support

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 bi-directional 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 cc:Mail. The default is "Enabled" if the local character set is ISO-2022-JP. For other character sets, this option is disabled.

Repair damaged JIS characters in mail body

If this option is enabled, CCIN attempts to recover JIS messages without ESC 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, CCIN can attempt a recovery of JIS characters without ESC characters. By default, the automatic recovery of ISO-2022-JP escape sequences lacking the ESC characters will not be attempted.

Replace non-Shift-JIS or half width Katakana

This field defines a string (e.g. "invalid character mark") with which to replace any non Shift-JIS or half-width Katakana characters that the 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

Domain Mapping

Domain mapping allows for the creation of Internet-style subdomains within the local cc:Mail environment. The subdomains are mapped to cc:Mail Post Offices (connected to the router through to the main PO) which are hidden from the Internet by the gateway. This style of Post Office-to-Internet subdomain name mapping is useful when remote Post Offices are communicating with the gateway and the cc:Mail Post Office routing information needs to be maintained across the gateway interface. Domain configuration automatically updates the Domain Mapping Database (*CCPOD.BTR*), which stores mappings between cc:Mail Post Offices and Internet subdomains.

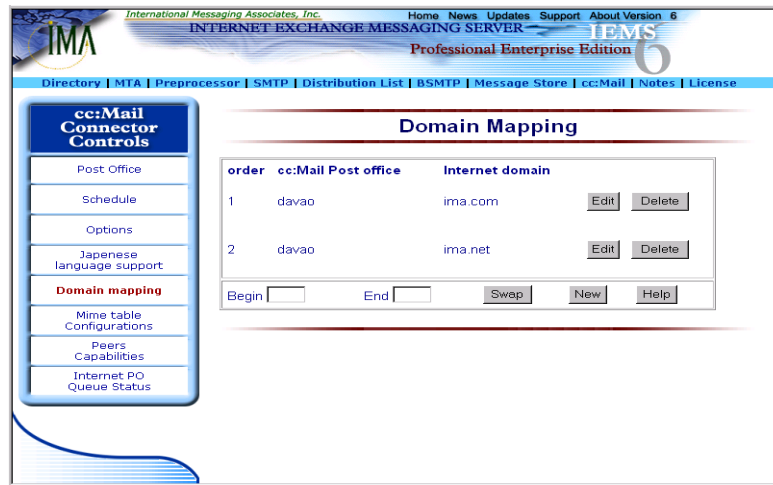


Figure 13: Domain Mapping Configuration

The configuration interface lists all available mappings in a table form. At the end of each row, an *Edit* button and a *Delete* button are provided. The *New* button at the bottom of the table is used by the system administrator to create new mappings. The number *Order* shows the ordering of the records in the database. In the case that two different cc:Mail post offices are mapped to a single Internet domain, the one with a smaller order value will be used.

Swapping domain orders

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 cc:Mail post offices 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 cc:Mail Connector and are immediately sent to the cc:Mail environment.

Creating new mappings

To create new mappings, click on the *New* button. The Domain Mappings screen will then appear (see Figure 14 on page 21).

MIME TABLE CONFIGURATION

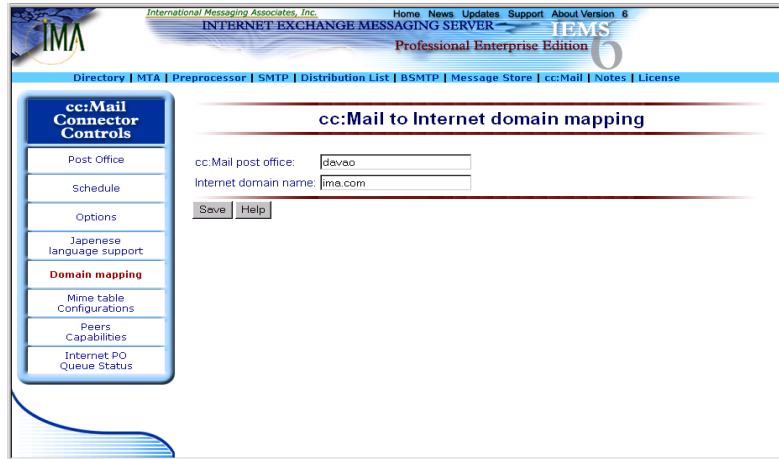


Figure 14: Domain mappings

Enter the name of the cc:Mail Post Office and the new Internet domain name in the text boxes provided. Then click on the *Add* button to include the new mapping in the database.

MIME Table Configuration

When cc:Mail 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 cc:Mail Connector provides the system administrator full control over how file attachments are encoded for messages originating within the cc:Mail environment. An internal database (*MAGIC.BTR*) is 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.

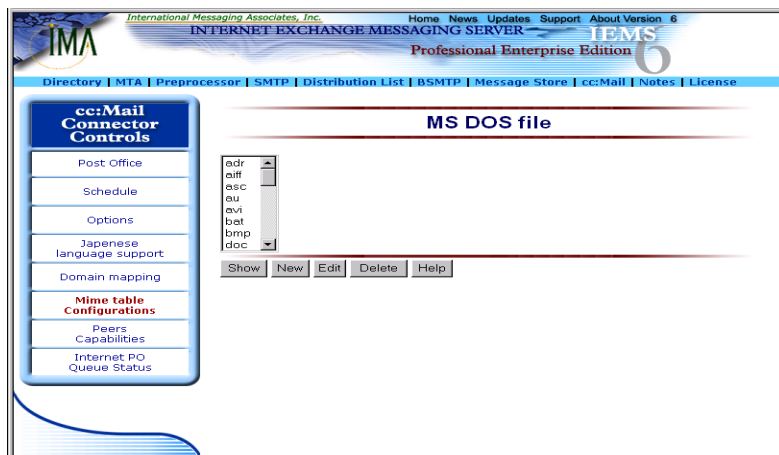


Figure 15: MIME Mapping Configuration

PEER DOMAINS

The MIME configuration screen (see Figure 15 on page 21) allows the administrator to modify the manner in which the connectors handles specific file types and to extend its abilities by adding new file types. IEMS comes configured 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 Content type and sub-type, Content descriptions and encoding method (see Figure 16 on page 22). For Macintosh's users, you can define also 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.

To create a new mapping, click the *New* button. The same configuration screen but with blank values 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 clicks *Delete* to remove that mapping from the database.

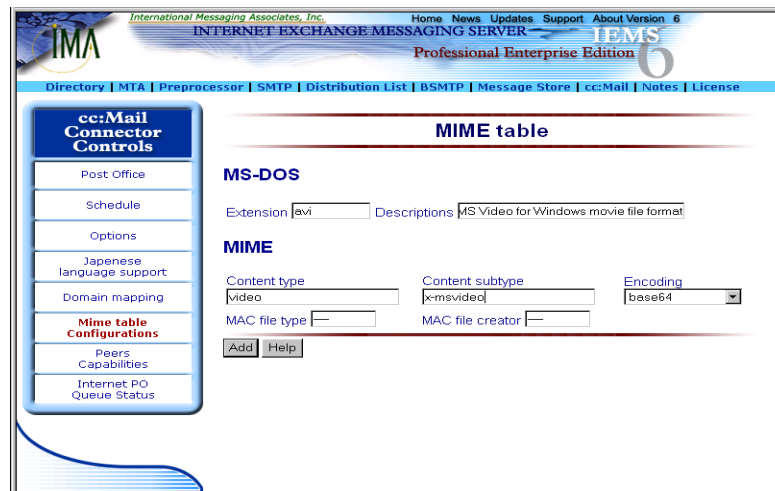


Figure 16: MIME Type Attributes Configuration

Peer Domains

Please see the "Peer Domain Configuration" section in the Preprocessor chapter of the **Internet Exchange Messaging Server 6 Administrator's Manual** for details on how to configure Peer Domains.

INTERNET PO QUEUE STATUS

Internet PO Queue Status

Messages sent by cc:Mail users are stored in the Internet Post Office 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 cc:Mail Internet PO Queue Monitor screen (see Figure 17 on page 23).

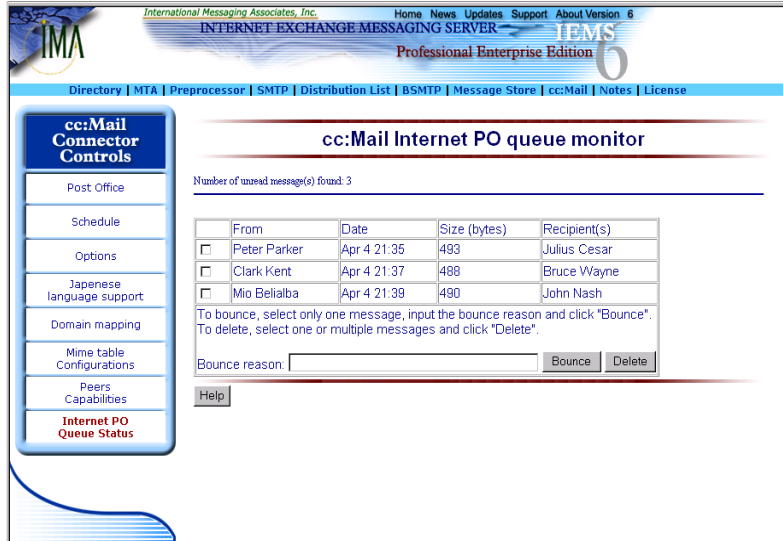


Figure 17: cc:Mail Internet PO Queue Monitor

This screen displays the messages present in the cc:Mail Internet Post Office 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 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 (IEMS). These tools assist IT managers in migrating existing cc:Mail customers to the IEMS open messaging environment. Two main migration tools are employed: the cc:Mail Address Book Converter and the cc:Mail Mailbox Converter.

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

cc:MAIL ADDRESS BOOK CONVERTER**cc:Mail
Address
Book
Converter**

The cc:Mail Address Book Converter converts the address book information from the cc:Mail directory to a format supported by the Directory Server. For cc:Mail environments having thousands of users, defining each user in the Directory is a significant administrative burden. The cc:Mail Address Book Converter provides the system administrator with a means for creating Internet email addresses for cc:Mail users using a simple interface.

The cc:Mail Address Book Converter also allows migration of cc:Mail users to the Internet Exchange Message Store. The system administrator can select all cc:Mail users in the post office and create corresponding entries for these users in the Internet Exchange Directory and Message Store simultaneously. The cc:Mail Mailbox Converter can then be run to replicate messages intended for cc:Mail users to the IEMS Message Store. cc:Mail users can then access their mailbox via any IMAP4- or POP3-capable mail clients, or the IEMS Web Mail client.

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

System Requirements

To run the cc:Mail Address Book Converter, the following IEMS and cc:Mail modules must first be installed:

- Internet Exchange Directory Server
- Internet Exchange Message Store
- cc:Mail Post Office
- VIM32 Interface

For the proper installation and setup of the above modules, refer to Chapter 4 of this manual.

**Running the
cc:Mail
Address
Book
Converter**

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

RUNNING THE CC:MAIL ADDRESS BOOK CONVERTER

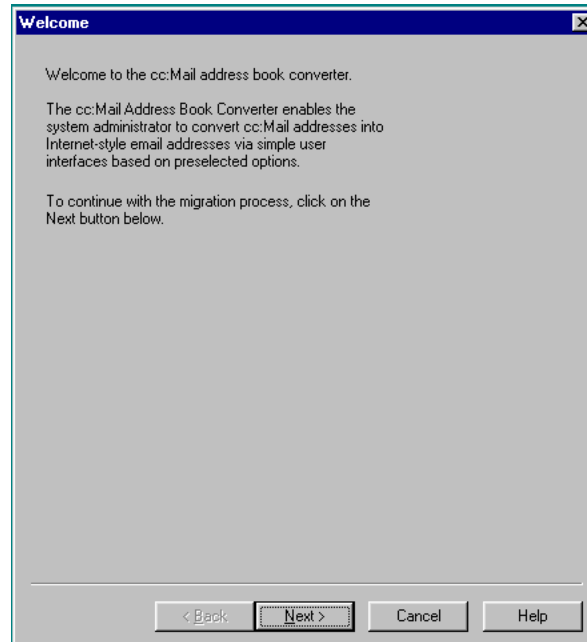


Figure 18: Welcome Page

Click on the Next button. A new screen for entering information required by the Internet Exchange Directory Server and Message Store will appear (see Figure 19 on page 27).

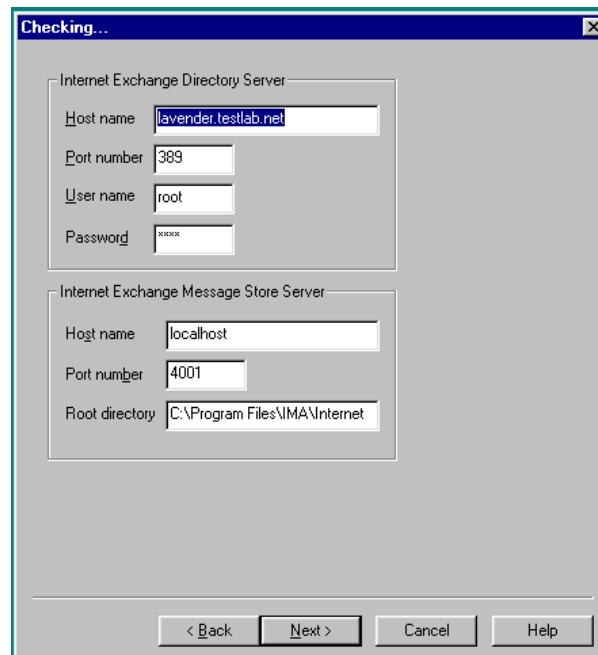


Figure 19: Directory Server and Message Store

RUNNING THE CC:MAIL ADDRESS BOOK CONVERTER**Internet Exchange Directory Server**

The following parameters are required by the cc:Mail 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 cc:Mail Address Book Converter are running on the same machine, you may enter "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 to log in to the Internet Exchange Directory Server.

Password

The password to be provided by the user logging into the Internet Exchange Directory Server.

Internet Exchange Message Store Server

The following parameters are required by the cc:Mail 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 cc:Mail Address Book Converter are running on the same machine, you may enter "localhost" in this field.

Port Number

This is 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 all information needed by the cc:Mail Address Converter to connect to the Internet Exchange Directory Server and Message Store is entered, click on the *Next* button. The screen to enable the cc:Mail Address Book Converter to access the cc:Mail Post Office will appear (see Figure 20 on page 29).

RUNNING THE CC:MAIL ADDRESS BOOK CONVERTER

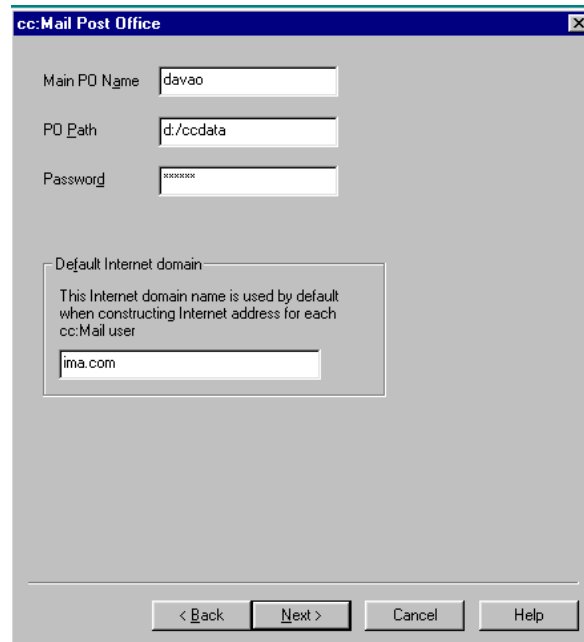


Figure 20: cc:Mail Post Office

cc:Mail Post Office

The following cc:Mail Post Office parameters are required by the cc:Mail Address Book Converter to ensure successful address conversion:

Main PO Name

The name of the cc:Mail Post Office that you are going to log on to. This cc:Mail Post Office stores information on the users that you will migrate to the Message Store.

Default Internet Domain

The domain name that will be appended to a user's new email address after the conversion. The Address Book Converter converts the cc:Mail 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 cc:Mail address is *Jim Morisson at Main PO*, his email address after conversion will become *jim_morisson@ima.com*.

After you have entered all information needed by the cc:Mail Address Converter to connect to the cc:Mail Post Office, click on the *Next* button. The cc:Mail User List screen for selecting cc:Mail users to be migrated will next appear (see Figure 21 on page 30).

RUNNING THE CC:MAIL ADDRESS BOOK CONVERTER

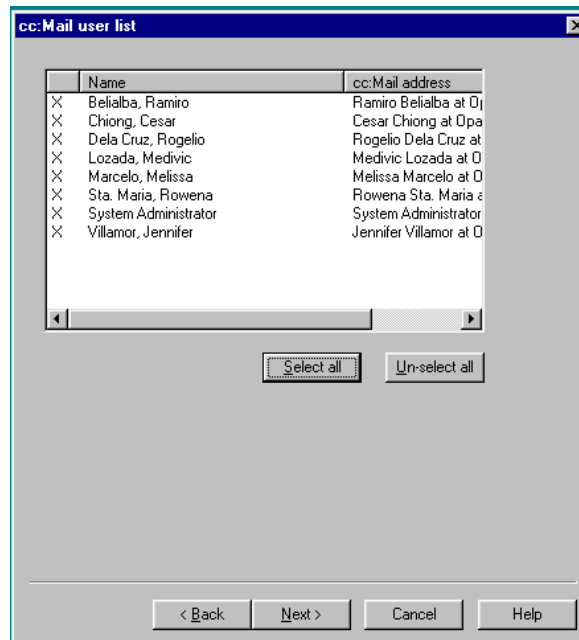


Figure 21: cc:Mail User List

cc:Mail Users' List

To convert all entries in the cc:Mail address book 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 get to the Address Conversion Rules screen (see Figure 22 on page 31).

Address Conversion Rules

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

Local part

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

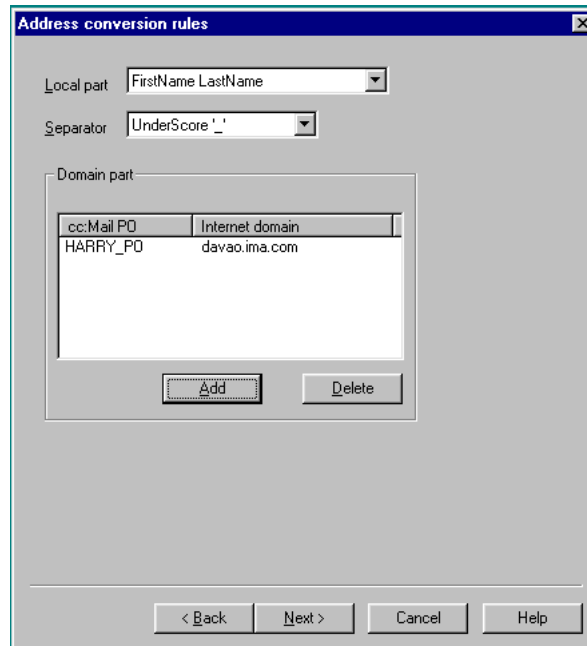


Figure 22: Address Conversion Rules

The cc:Mail Address Book Converter converts cc:Mail user names 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 the space in cc:Mail addresses. This is required as 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 post office-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 cc:Mail post office

RUNNING THE CC:MAIL ADDRESS BOOK CONVERTER

name, the default Internet domain name will be used. To add a new post office-to-Internet subdomain mapping, click on the *Add* button. A dialog box for creating a new mapping will appear (see Figure 23 on page 32). Enter the PO name and the Internet domain in the textboxes provided then click on the *OK* button to add the new post office-to-Internet subdomain mapping.



Figure 23: Adding New Domain Mappings

After selecting the address conversion rules desired, click on the *Next* button to go to the Internet Exchange 3.x Upgrade screen (see Figure 24 on page 32).

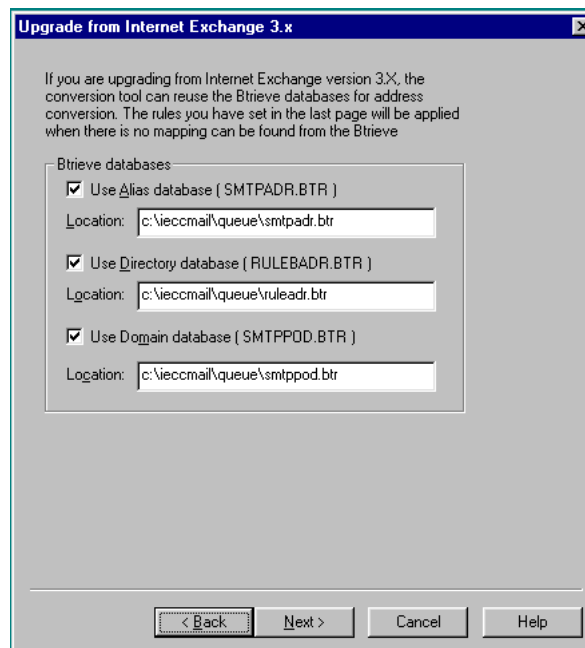


Figure 24: Upgrading From Internet Exchange 3.x

Upgrading From Internet Exchange 3.x

The Address Book Converter is programmed to detect if Internet Exchange 3.x is already installed. If detected, the converter checks for the alias database, directory database, and domain database files and displays the names and locations of these files. If you do not want to reuse any Internet Exchange 3 databases, check the appropriate boxes. Then click on the *Next* button to view the results of the conversion process (see Figure 25 on page 33).

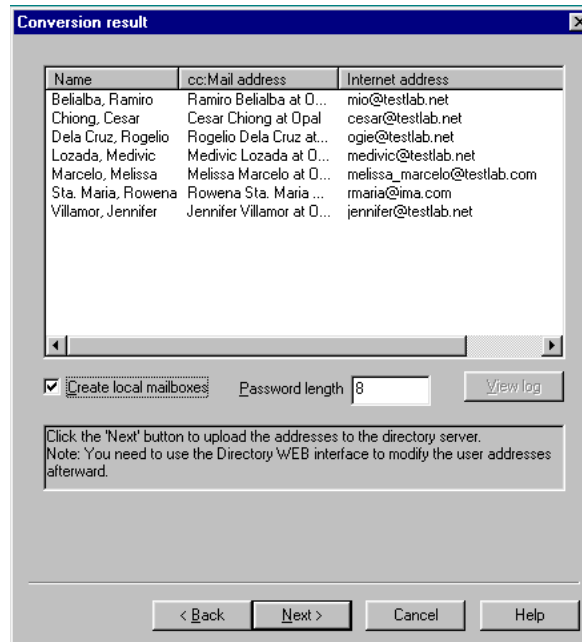


Figure 25: Conversion Results

Address Conversion Results

The Conversion Results screen displays the names of the users whose cc:Mail addresses have been successfully converted. It also displays their respective cc:Mail and Internet-style email addresses. The system administrator is presented with options to create local mailboxes and specify the password length for the users.

Create local mailboxes

When selected, the Address Book Converter creates local mailboxes for the selected users in the local Message Store. Otherwise, the users will only be registered in the IEMS Directory.

Password length

The system administrator can specify the length of the password to be used by users accessing the Message Store. By default, a random password based on the cc:Mail user name is created automatically when registering a cc:Mail user in the local mailbox system. The password length can vary from one to 16 characters.

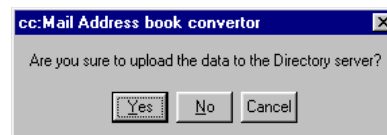


Figure 26: Upload of Selected Users Confirmation

RUNNING THE CC:MAIL ADDRESS BOOK CONVERTER

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 26 on page 33). Click on the *Yes* button to upload the information to the Directory Server.

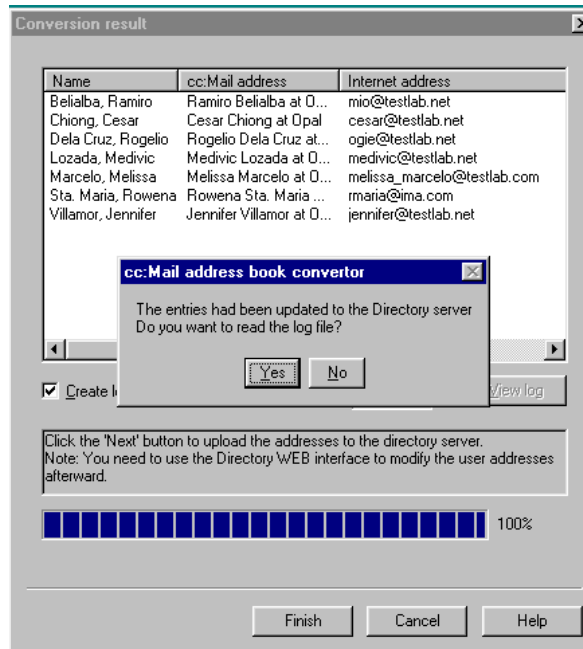


Figure 27: Log File View Option

After clicking on the *Yes* button, a new dialog box will appear (see Figure 27 on page 34), 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 28 on page 34).

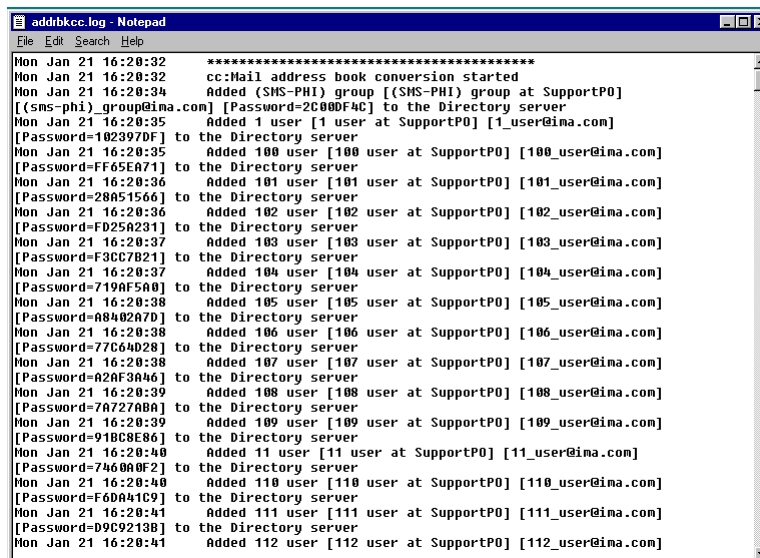


Figure 28: Address Book Conversion Log File

Address Book Conversion Log File

If there were any errors encountered during the conversion process, these errors are 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.

cc:Mail Mailbox Converter

The Internet Exchange cc:Mail Mailbox Converter is used for migrating cc:Mail users to the Internet Exchange Message Store. First, each mail message is independently exported from the cc:Mail PO using the Lotus VIM (Vendor Independent Messaging) API. Messages are then converted into a single part MIME message (if the cc:Mail message contains only 1 item) or to a Multipart/Mixed MIME message (if the cc:Mail message contains multiple items). The conversion steps are defined as follows:

- Convert cc:Mail notepart item into TEXT/PLAIN MIME body. The conversion tool assigns the character set of the TEXT/PLAIN item to the pre-configured value.
- If the character set is pre-configured to ISO-2022-JP, the notepart item will be converted from 8bit to 7bit JIS based on ISO-2022-JP format.
- The conversion tool converts cc:Mail attachments into appropriate MIME types.
- If an attachment is in AppleSingle format, the attachment is converted as MacMime Applesingle (base64 encoded) MIME body. This is stated under the assumption that the user will use MacMime complaint IMAP/POP3 agent to access the mailbox.
- All the user address in the cc:Mail headers (To:, CC:, and BCC) are converted into standard RFC822 complaint address formats.
- The conversion tool retains the directory structure as laid out in the cc:Mail PO.

RUNNING THE CC:MAIL MAILBOX CONVERTER

System Requirements

To run the cc:Mail Address Book Converter, the following IEMS and cc:Mail modules must first be installed:

- Internet Exchange Directory Server
- Internet Exchange Message Store
- cc:Mail Post Office
- VIM32 Interface

For the proper installation and setup of the above modules, refer to the **Internet Exchange Messaging Server 6 Installation Guide**.

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

Running the cc:Mail Mailbox Converter

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

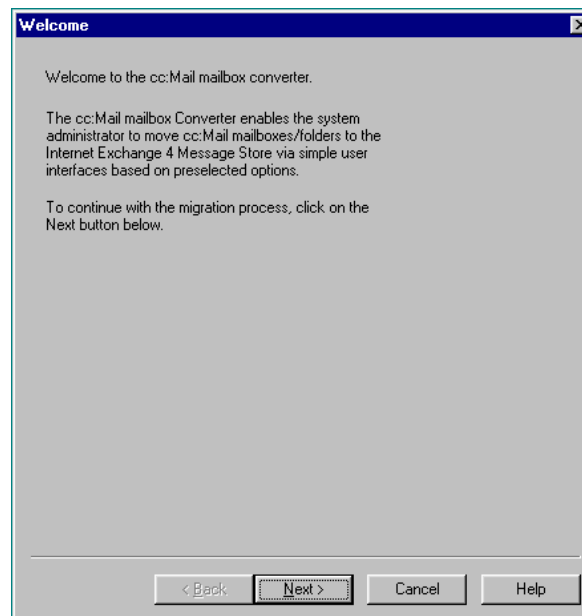


Figure 29: Welcome Page

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.

RUNNING THE CC:MAIL MAILBOX CONVERTER

Internet Exchange Directory Server

The following parameters are required by the cc:Mail Address Book Converter to ensure successful address conversion (see Figure 30 on page 37):

Host Name

The TCP/IP host name of the machine that runs the Internet Exchange Directory Server. If the Directory Server and the cc:Mail 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.

The screenshot shows a configuration window titled "Checking...". It is divided into three sections, each with a title and several input fields:

- Internet Exchange Directory Server:**
 - Host name: lavender.testlab.net
 - Port number: 389
 - User name: root
 - Password: masked with asterisks
- 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 of the window are four buttons: "< Back", "Next >", "Cancel", and "Help".

Figure 30: Mailbox Converter Configuration

User Name

The name of the user to login to the Internet Exchange Directory Server.

Password

The password to be provided by the user to login to the Internet Exchange Directory Server.

Internet Exchange Message Store Server

The following parameters are required by the cc:Mail Address Book Converter to ensure successful address conversion (see Figure 30 on page 37):

Host Name

The host name of the machine that runs the Internet Exchange Message Store. If the Message Store Server and the cc:Mail Address Book Converter

RUNNING THE CC:MAIL MAILBOX CONVERTER

are running on the same machine, you may specify “localhost” in this field.

Port Number

This is the TCP/IP port that the Message Store Server listens on. By default, the value is 8000.

Root Directory

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

After all information needed by the cc:Mail Address Converter to connect to the Internet Exchange Directory Server and Message Store is entered, click on the *Next* button. A new screen that will enable the cc:Mail Address Book Converter to access the cc:Mail Post Office will appear (see Figure 20 on page 29).

Internet Exchange Mail Delivery Agent Server

The following parameters are required by the cc:Mail Address Book Converter to ensure successful address conversion (see Figure 30 on page 37):

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 may specify “localhost” in this field.

Port Number

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

After all information needed by the cc:Mail Mailbox Converter to connect to the Internet Exchange Directory Server, Message Store Server, and Mail Delivery Agent Server is entered, click on the *Next* button. The *Select Migration Mode* screen will next appear (see Figure 31 on page 39).

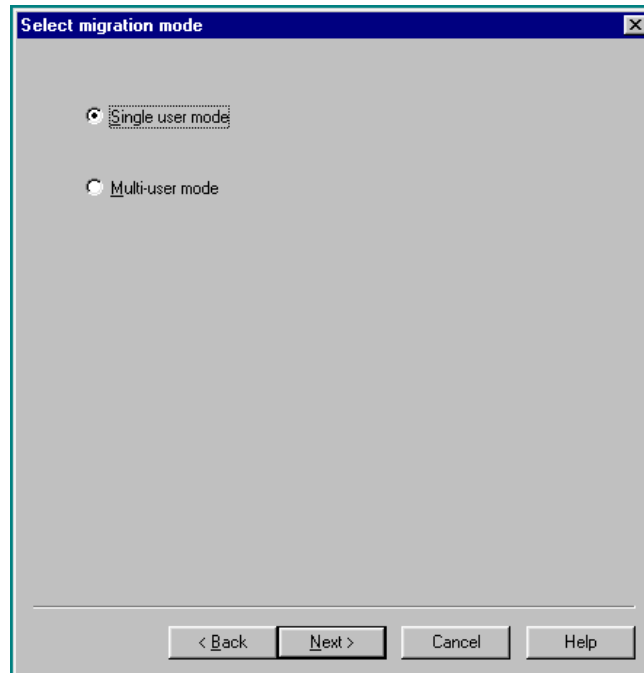


Figure 31: Select Migration Mode

Select Migration Mode

The system administrator is provided with two options for migrating cc:Mail users' mailboxes/folders to the Message Store - single and multiuser modes.

Single user mode

In the single user mode, the cc:Mail Mailbox Converter converts a single cc:Mail user mailbox at a time.

Multiuser mode

If this conversion mode is selected, the cc:Mail Mailbox Converter converts several cc:Mail user mailboxes simultaneously.

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

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

Single-user Migration Mode

If you opted to use the single user mode, a new page for entering a user's cc:Mail mailbox and local mailbox attributes will appear (see Figure 32 on page 40).

RUNNING THE CC:MAIL MAILBOX CONVERTER

Figure 32: Single-User Migration Mode

cc:Mail

The following parameters are required by the cc:Mail 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 cc:Mail Post Office.

PO path

The directory where information held by the cc:Mail Post Office can be found, i.e. "d:\ccdata."

Password

The password used by the cc:Mail administrator to access the local cc:Mail Post Office. For security reasons, the password will appear as a row of asterisks.

Local Mailbox

The following local mailbox parameters are required by the cc:Mail 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 Internet Exchange Message Store by the cc:Mail Address Book Converter.

Email address

The email address of the user whose mailbox will be converted as it is

RUNNING THE CC:MAIL MAILBOX CONVERTER

entered in the Internet Exchange Message Store by the cc:Mail 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 proceed with the conversion.

Migration Options

The Export Options screen below (see Figure 33 on page 41) allows the system administrator with to choose the option(s) for converting the user's mailboxes/folders.

Export Inbox

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

Export all folders

This option tells the Mailbox Converter to export the messages found in all the folders in the user's cc:Mail directory. Typically, these are the *Trash*, *Drafts*, and *Message Log* folders. The Mailbox Converter preserves the folder structure when the messages 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.

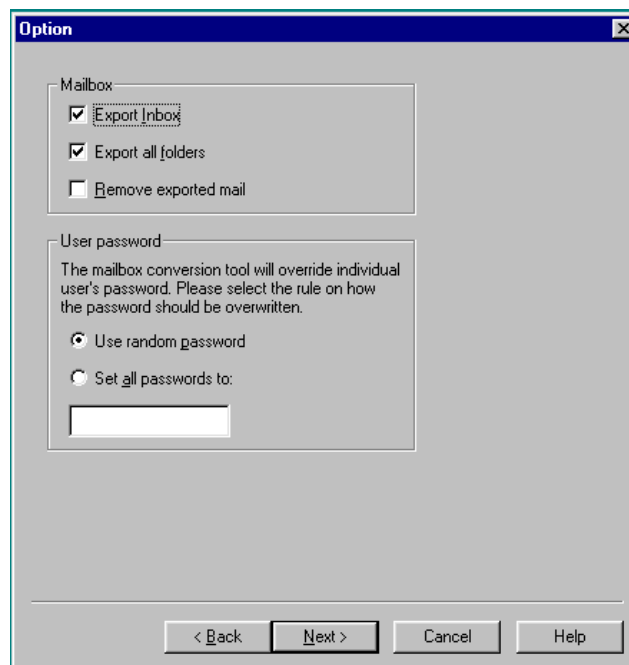


Figure 33: Export Options

RUNNING THE CC:MAIL MAILBOX CONVERTER

Remove exported mail

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

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

Mailbox Conversion Summary

The Conversion Options Summary screen (see Figure 34 on page 42) 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 35 on page 43).

After the conversion is complete, a dialog box appears, giving the system administrator the option to view the conversion log file (see Figure 36 on page 43). is again given the option to view the log file.

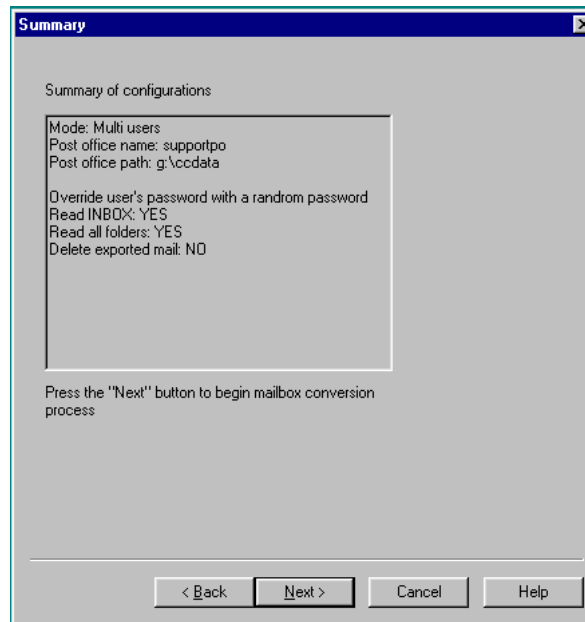


Figure 34: Conversion Options Summary

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 cc:Mail Mailbox Conversion utility and complete the conversion process by clicking on the *Finish* button (see Figure 38 on page 44). In this screen, the system administrator is again given the option to view the log file.

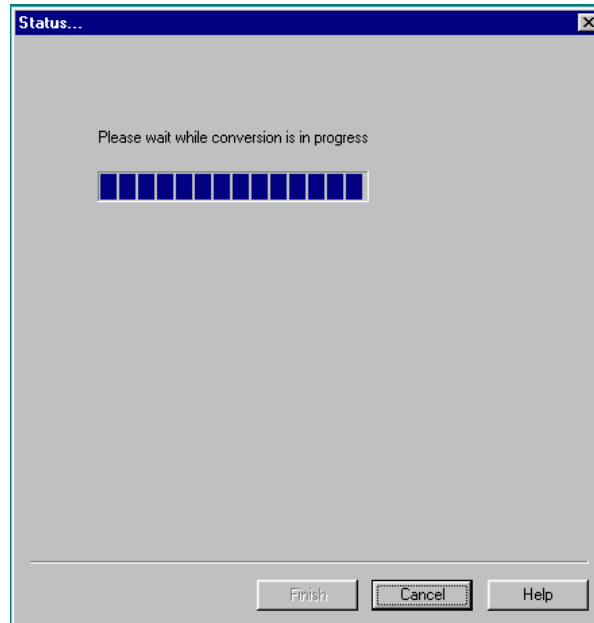


Figure 35: Conversion Status

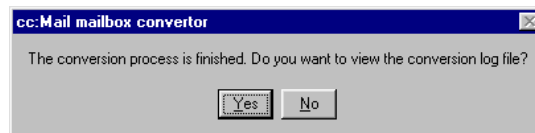
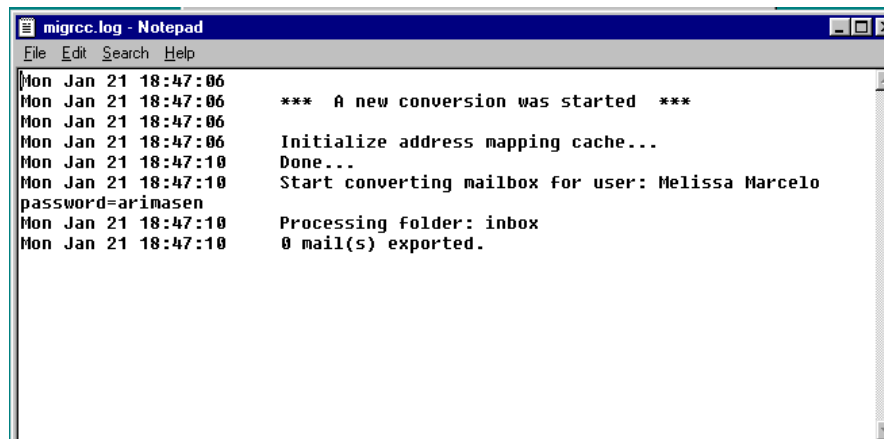


Figure 36: Log File Viewing Option

Mailbox Conversion Log File

The log file (see Figure 37 on page 44) 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 cc:Mail Post Office, and the time the Mailbox Converter was started. The log file also indicates if the any problems were encountered during the conversion.



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Figure 37: Mailbox Conversion Log File

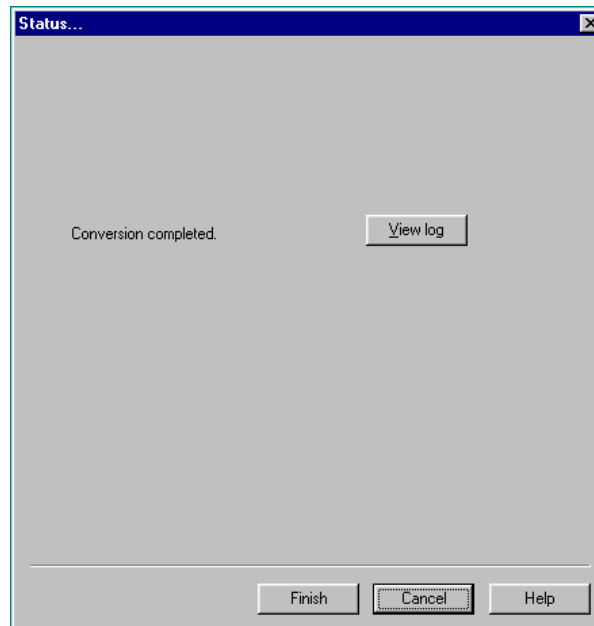


Figure 38: Completing or Canceling Migration

Multi-user Migration Mode

If you opted to use the multi-user mode, the Multi-User Migration Mode page for entering a user's cc:Mail mailbox and local mailbox attributes will appear (see Figure 39 on page 44).

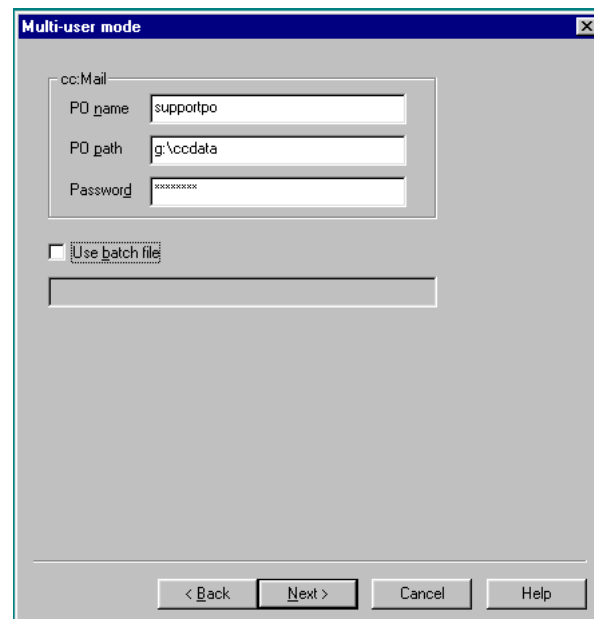


Figure 39: Multi-User Migration Mode

RUNNING THE CC:MAIL MAILBOX CONVERTER

PO name

The name of the cc:Mail Post Office that the cc:Mail Mailbox Converter will connect to move mailboxes/folders to the Local Message Store.

PO path

The directory where information held by the cc:Mail Post Office can be found, i.e. "d:\ccdata."

Password

The password used by the cc:Mail administrator to access the local cc:Mail Post Office. For security reasons, the password will appear as a row of asterisks.

Use Batch File

When you are already familiar with the features of the cc:Mail Mailbox Converter, you may write a batch file for configuring multiple mailboxes simultaneously (see section on batch-mode migration for a detailed explanation of how batch file processing works).

After entering all the necessary parameters, click on the *Next* button to continue with the migration process.

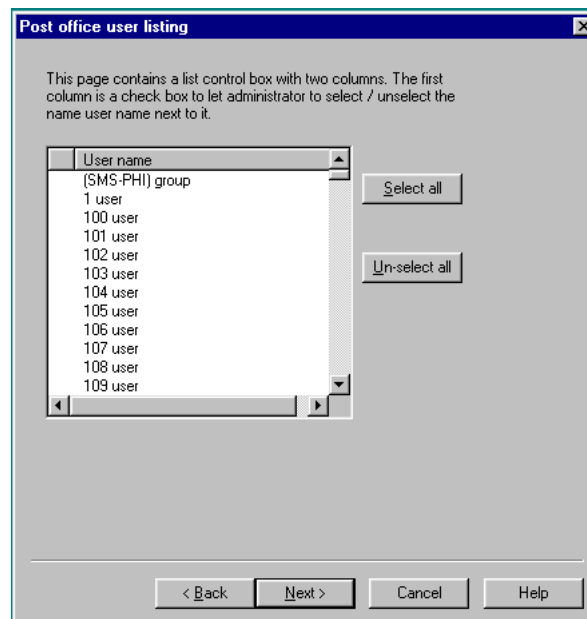


Figure 40: Selecting User Mailboxes for Migration

The next screen (see Figure 40 on page 45) displays the users in the cc:Mail Post Office that the cc:Mail Mailbox Converter has successfully accessed. At least one user must be selected for migration. To select all users, click on the *Select all* button. Click on the *Next* button to continue.

In the next screen (see Figure 41 on page 46), the system administrator is given the option to select which mailboxes/folders to migrate and to set the password(s) for the users.

RUNNING THE CC:MAIL MAILBOX CONVERTER

Export Inbox

This option tells the Mailbox Converter to export all the messages in each cc:Mail user's INBOX to the local Message Store.

Export all folders

This option tells the Mailbox Converter to export the messages found in all the folders in each user's cc:Mail directory. Typically, these are the *Trash*, *Drafts*, and *Message Log* folders. The Mailbox Converter preserves the folder structure when the messages 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 enabled, the converter deletes the messages in the user's cc:Mail mailbox that have been exported successfully to the Message Store.

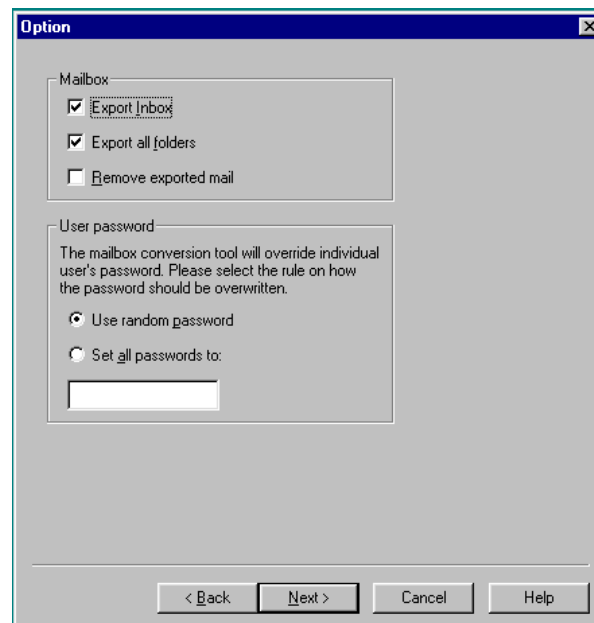


Figure 41: Folder Migration Options

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

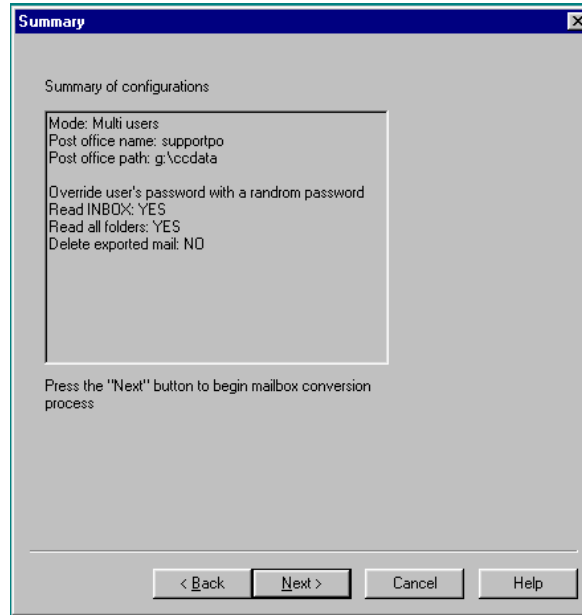


Figure 42: Conversion Options Summary

Mailbox Conversion Summary

The Conversion Options Summary screen (see Figure 42 on page 47) 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 43 on page 47).

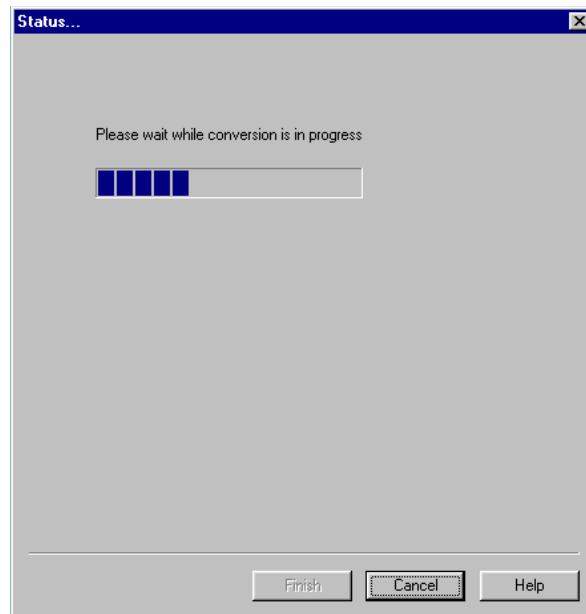


Figure 43: Conversion Status

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After the conversion is complete, a dialog box appears, giving the system administrator the option to view the conversion log file (see Figure 44 on page 48). To view the log file (see Figure 45 on page 48), click on the *Yes* button. If you click on the *No* button, a new screen will appear asking you to close the cc:Mail Mailbox Conversion utility and complete the conversion process by clicking on the *Finish* button (see Figure 46 on page 49). In this screen, the system administrator is again given the option to view the log file.

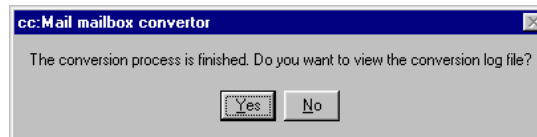


Figure 44: Log File View Option

```

migcc.log - Notepad
File Edit Search Help
Mon Jan 21 18:47:06 *** A new conversion was started ***
Mon Jan 21 18:47:06 Initialize address mapping cache...
Mon Jan 21 18:47:06 Done...
Mon Jan 21 18:47:10 Start converting mailbox for user: Melissa Marcelo password=arimasen
Mon Jan 21 18:47:10 Processing folder: inbox
Mon Jan 21 18:47:10 0 mail(s) exported.
Mon Jan 21 18:49:46 *** A new conversion was started ***
Mon Jan 21 18:49:46 Initialize address mapping cache...
Mon Jan 21 18:49:50 Done...
Mon Jan 21 18:49:50 Start converting mailbox for user: Melissa Marcelo password=arimasen
Mon Jan 21 18:49:50 Processing folder: inbox
Mon Jan 21 18:49:50 0 mail(s) exported.
Mon Jan 21 18:51:06 *** A new conversion was started ***
Mon Jan 21 18:51:06 Initialize address mapping cache...
Mon Jan 21 18:51:10 Done...
Mon Jan 21 18:51:10 Start converting mailbox for user: Melissa Marcelo password=arimasen
Mon Jan 21 18:51:10 Processing folder: inbox
Mon Jan 21 18:51:10 0 mail(s) exported.
Mon Jan 21 18:54:13 *** A new conversion was started ***
Mon Jan 21 18:54:13 Initialize address mapping cache...
Mon Jan 21 18:54:17 Done...
Mon Jan 21 18:54:17 Start batch conversion ...
Mon Jan 21 18:54:17 Processing command line: /N=Chiong, Cesar /D=d:\ccddata /P=70e2f734
Mon Jan 21 18:54:18 /INBOX=Y /ALLFOLDERS=Y /DELETE=N
Start converting mailbox for user: Chiong, Cesar password=70e2f734

```

Figure 45: Mailbox conversion log file



Figure 46: Completing or Canceling Migration

Batch File Migration

If you are already familiar with the cc:Mail Mailbox Converter, you may find it handy to write a batch file for converting multiple mailboxes stored in different post offices 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>

The name of the cc:Mail user whose mailbox(es) will be converted (e.g. /N=Jerry Garcia).

/D=<PO directory>

The path for the cc:Mail post office that will be accessed by the Mailbox Converter (e.g. /D=C:\CCDATA).

/P=<Password>

The password that the cc:Mail user uses to access that particular post office (e.g. /P=password).

/INBOX=Y/N

This parameter tells the cc:Mail Mail Box 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.

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/ALLFOLDERS=Y/N

This parameter tells the cc:Mail Mail Box Converter whether to read the messages in all of the cc:Mail 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.

/DELETE=Y/N

This parameter tells the cc:Mail Mail Box Converter whether to delete converted messages in the cc:Mail 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.

Following is an example of a batch file:

```
/N=Jim Brown /D=c:\ccdata /P=password1 /INBOX=Y /ALLFOLDERS=Y /DELETE=N
/N=Tom Lee /D=d:\ccdata /P=password2 /INBOX=Y /ALLFOLDERS=Y /DELETE=Y
/N=Pam Chow /D=c:\ccdata /P=password3 /INBOX=Y /ALLFOLDERS=Y /DELETE=Y
```

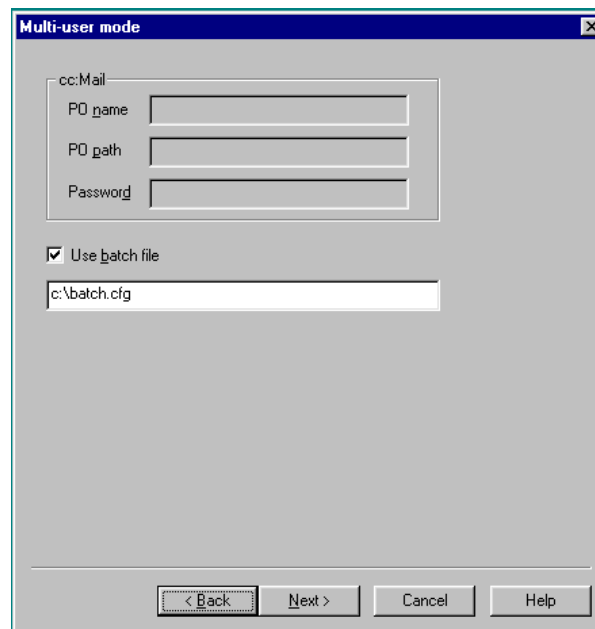


Figure 47: Enabling Batch File Processing

After you have created a batch file, you are now ready to export mailboxes/folders to the IEMS Message Store via batch file processing. To do this, enable the *Use batch file* option in the multi-user mode migration screen (see Figure 47 on page 50). 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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