

Internet Exchange Messaging Server

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



Installation Guide

Version 5



Contents

Preface		i
Chapter 1	Installing Internet Exchange Messaging Server 5 on a Single Machine	1
	Linux Installations	1
	Windows Installations	13
Chapter 2	Installing Internet Exchange Messaging Server 5 in a Distributed Environment	31
	Linux Installations	32
	Windows Installations	45
Chapter 3	Installing the License Certificate After Internet Exchange Messaging Server 5 Installation	39
	Linux Installations	39
	Windows Installations	40
Chapter 4	Running Internet Exchange Messaging Server 5	42
	Linux Installations	42
	Windows Installations	44
Appendix A	License Agreement	
Appendix B	System Requirements	

Chapter 1

Installing Internet Exchange Messaging Server 5.1 on a Single Machine

IEMS can be installed and run either on a single machine or on a distributed environment.

Installing IEMS on a single machine means all IEMS components such as the MTA, Preprocessor, Directory Server, among others, will reside and run on a single machine.

This chapter details how to install IEMS on a single machine. Because IEMS supports both Linux and Windows, this chapter is divided into two sections; one that describes the installation procedure for Linux and another for Windows.

Linux Installations

Internet Exchange Messaging Server (IEMS) for Linux distribution consists of two packages, **IEMS** and **DCE-RPC**. IEMS consists of the Internet Exchange Messaging Server 5 files and executables packaged using RPM, a format for wrapping software into easily installed and maintained packages. **DCE-RPC** (Distributed Computing Environment-Remote Procedure Call) on the other hand, is a package of codes and binaries that enable communication between platforms.

These two packages are installed through the `rpm` program, executed by the user at the shell prompt either manually or through the shell script `INSTALL`. This is a text file that may be either read as instructions to the user for a manual installation, or executed at the shell prompt by entering:

```
./install
```

You can acquire IEMS by either purchasing the IEMS CD or downloading an evaluation copy at <http://www.ima.com/download/v5eval.html>.

To install IEMS using the CD, insert the CD on your CD-ROM drive. Go to directory `../mnt/cdrom/linux/install` and run the `./install` file. This displays the IEMS software license (**Figure 1-1** on page 3).

The downloaded copy of IEMS is either a standard tar (e.g., `iems-5.10-linux.tar`) or compressed tar (`iems-5.10-linux.tgz`) file. Hence, it needs to be extracted to obtain the installer file. To do this, follow the steps given below:

1. Create a directory
2. Move the downloaded copy of IEMS to the directory previously created
3. From this directory, extract the installer file by typing any one of the following:

```
tar xvf iems-5.1-final-linux.tar
or:
tar xvzf iems-5.1-final-linux.tgz
```

After extracting the **archived** files, open a root shell. Go to the directory where the package was extracted and locate the `INSTALL` file. Run this file by typing :

```
./install
```

at the `#` prompt. This will lead you to the license agreement.

```
LICENSE AGREEMENT

THANK YOU FOR PURCHASING RIGHTS TO USE THIS SOFTWARE OWNED BY INTERNA-
TIONAL MESSAGING ASSOCIATES ( IMA ). THIS LIMITED USER LICENSE
AGREEMENT STATES THE TERMS AND CONDITIONS UNDER WHICH YOU ARE PERMITTED
TO USE THE SOFTWARE. INSTALLATION OF THE SOFTWARE INDICATES YOUR ACCEP-
TANCE OF THE FOLLOWING TERMS AND CONDITIONS. IF YOU DO NOT AGREE WITH
THESE TERMS AND CONDITIONS, YOU CAN NOT PROCEED FURTHER WITH THE INSTALLA-
TION.

AS FURTHER DESCRIBED IN THE INFORMATION ACCOMPANYING THE
SOFTWARE, THIS SOFTWARE CAN ONLY BE USED WITH AN ENABLING LICENSE KEY. IMA
WILL PROVIDE YOU WITH AN AUTHORIZATION KEY WHICH WILL ALLOW THE APPRO-
PRIATE SOFTWARE TO FUNCTION WITHOUT LIMITATION ONCE YOU HAVE MADE FULL
PAYMENT TO IMA OR ONE OF ITS AUTHORIZED VENDORS.

LIMITED USE SOFTWARE LICENSE AGREEMENT

LICENSE: This software contains multiple IMA products. IMA grants
you a non-exclusive, nontransferable limited use ...

-More--
```

Figure 1-1: License Agreement

The display of the license agreement (through the standard UNIX paging command "more") signals the start of the installation process. To continue with the installation, please scroll through the text of the license by pressing the space bar until you'll be prompted with the line:

```
Do you accept the above license agreement? [Y/N]
```

Any answer different from "y" or "yes" (no matter how capitalized) will abort the procedure, returning the shell prompt. You must choose such negative answer if, for any reason, you disagree with the licensing terms.

If, on the other hand, the license terms are accepted, the INSTALL script will continue. It will first make sure that the library `/usr/lib/libstdc++-libc6.1-1.so.2` is present; then, it will proceed to install the DCE and IEMS rpm packages. If a prior version of the latter is found, an upgrade will be performed instead.

Finally, the script will display:

```
Installation is complete. Please go to the following URL:  
  
    http://FQDN/iems/cgi-bin/postconfig.cgi?Command=Start  
  
to finish the post configuration.  
  
Note: In the login screen of the browser, please enter  
the username "administrator" and password "system"
```

where FQDN stands for the Fully Qualified Domain Name of the machine where IEMS was installed (e.g., mail.somedomain.com) .

To start the post configuration, open a browser and enter: `http://FQDN:80/iems/cgi-bin/postconfig.cgi?Command=Start` in the URL (Universal Resource Locator) field. FQDN stands for the Fully Qualified Domain Name of the machine where IEMS was installed.

Before you can proceed with web-based post configuration, you first need to undergo user authentication. A dialog box appears. Enter the default username and password. The default username is administrator while the default password is system. Select Ok. This will show a second License Agreement screen:

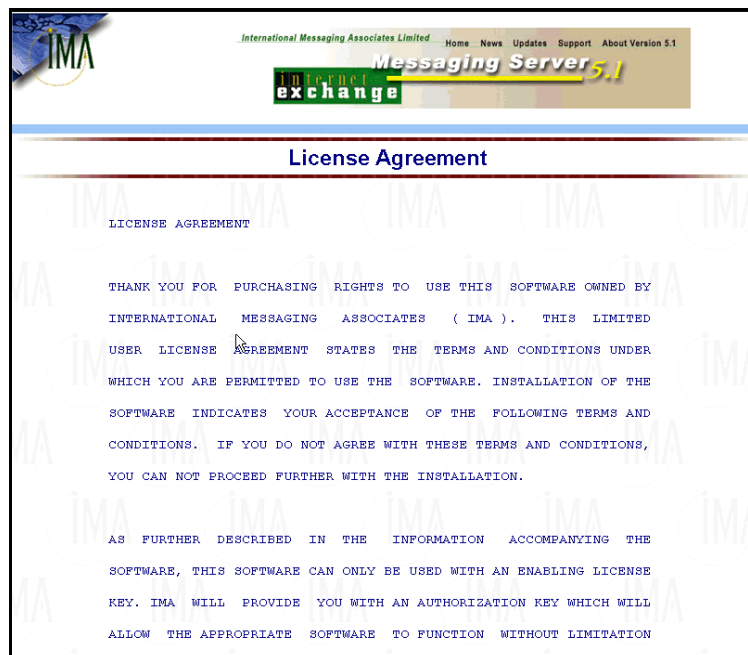


Figure 1-2: License Agreement

Click on the **"Accept"** button to continue. This will show the "Welcome Screen" of the web-based post configuration (see **Figure 1-3** below). On the "Welcome" screen, select the First Internet Exchange Messaging Server 5.1 Installation option if you are installing IEMS for the first time. Click Accept to continue. This will display the "Select Components" screen (see **Figure 1-4** below).

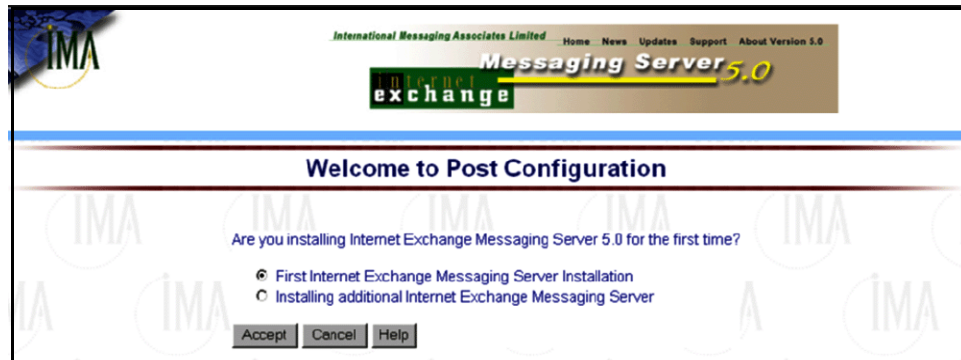


Figure 1-3: Web-based post configuration welcome screen

The "Select Components" screen (see **Figure 1-4** below) lists the key components of IEMS (i.e., Preprocessor, MTA and Message Store) available for installation. Initially, every listed component is selected for installation. This is denoted by the presence of ✓ marks.

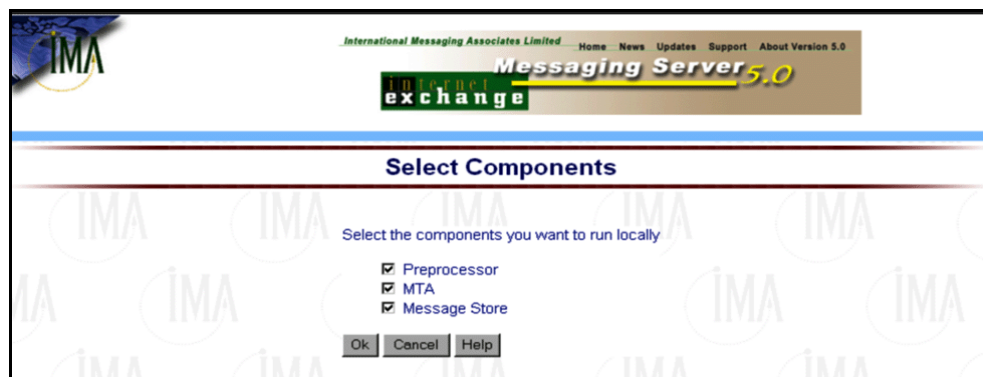


Figure 1-4: Selecting Components

Because you are installing the entire messaging server on a single machine, select all the components listed in the above screen. Press **Ok**. This displays the “Certificate Installer” screen (see **Figure 1-5** below).

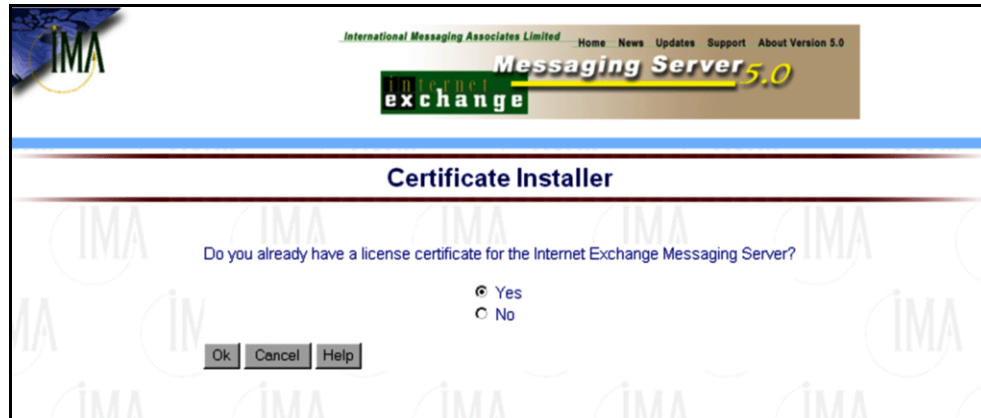


Figure 1-5: Determining the availability of the license certificate

If you still need to obtain a license certificate from IMA, select **No** and press **Ok** in the “Certificate Installer” screen (see Figure 1-5 above). This will show a screen asking if you want to apply for an Evaluation Certificate online (See Figure 1-6 on page 7).

Note: Selecting “Yes” in Figure (1-6) means you already have the license certificate and wishes to pursue proceed with the installation. The next screen that will appear will prompt you to enter the full path name and filename of the certificate (see Figure 1-14 on page 12).

The screen in Figure 1-10 on page 9 prompts you to apply for an Evaluation Certificate.:

Note: To register online at your preferred time, simply visit <http://www.ima.com/download/v5eval.html>.

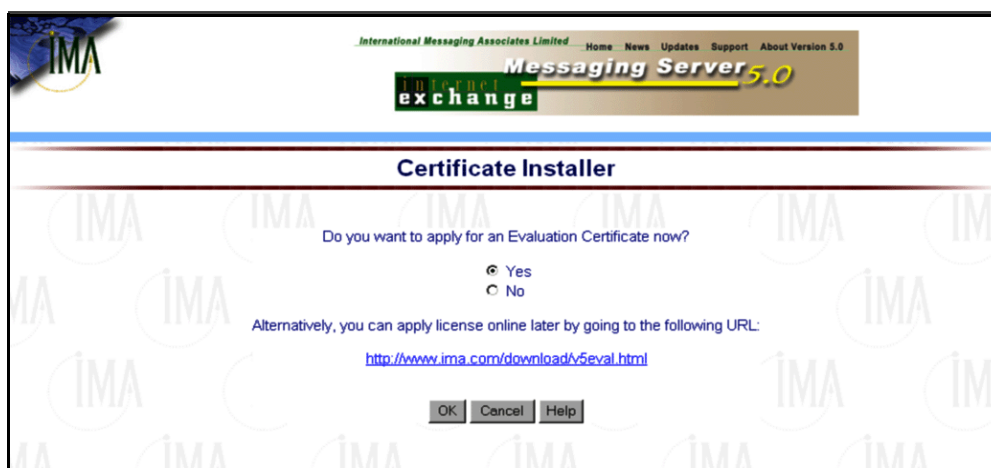


Figure 1-6: Applying for a license certificate online

Select **Yes** and press **Ok** to apply. This will show the "License Registration" screens (see **Figure 1-8** on page 8). If you do not wish to apply, select **No** and press **Ok**. In this second case, the installation will be completed in "3 Free User Mode", and the following screen will be displayed:



Figure 1-7: Confirmation of "3 Free User Mode" registration

Please note that in this mode there are other limitation besides the 3 User limit. The following features are not available:

- Distribution Lists
- Batch SMTP
- Anti-Virus
- Anti-Spam control (apart from mail relaying control)

You will be able to get a full license at any future time with a Web registration followed by an installation of the certificate file. For that, you may visit <http://www.ima.com/download/v5eval.html>

If, on the other hand, you chose "Yes", you will be brought to the screen shown in Figure 1-8:

The screenshot shows the 'License Registration' window of the IMA Messaging Server 5.0. The window has a title bar with the IMA logo and navigation links: Home, News, Updates, Support, About Version 5.0. Below the title bar is a banner for 'Internet exchange Messaging Server 5.0'. The main content area is titled 'License Registration' and contains a paragraph of instructions. Below the instructions are several input fields for user information, each with a label and a corresponding text box or dropdown menu. At the bottom of the form are three buttons: 'Next', 'Cancel', and 'Help'.

Name:	John Doe
Company:	Big Corporation, Inc.
Mailing Address:	4/F Tower Bldg., Engineering Dept.
Country:	Philippines
Email Address:	john@ima.com
Telephone No:	123-4567890
Facsimile:	123-4567891

Figure 1-8: License Registration

Figure 1-8 above requires you to enter information about your company. IMA support staff will use the information entered here when processing your request for an evaluation certificate. Click the **Next** button.

The screen below allow the system administrator to enter his primary and secondary contact information. The primary technical contact is required, whereas the secondary is optional.

After completing the form, click the **Next** button to continue. This will show the “FQDN Information” screen (see top screen in **Figure 1-9** below).

International Messaging Associates Limited Home News Updates Support About Version 5.0

Messaging Server 5.0
exchange

License Registration

Technical Contacts:

Primary

Name: Jade Enriquez

Telephone No: 098-1234567890

International Messaging Associates Limited Home News Updates Support About Version 5.0

Messaging Server 5.0
exchange

License Registration

The licensing of Internet Exchange is tied with the Fully Qualified Domain Names of each machine running Internet Exchange components. The Fully Qualified Domain Name for a given machine is the combination of its Host Name and Domain Name. For instance, the FQDN for the machine "mail" in the domain ima.com is "mail.ima.com"

License Information - FQDN

MTA Server: mail.ima.com

Directory Server: mail.ima.com

Message Store: mail.ima.com

ccMail Connector:

Note Connector:

Operation Environment

Operating System: Linux

Accept Cancel Help

Figure 1-9: FQDN Information

The license of IEMS is tied with the FQDN of the machines (other than the Preprocessor modules) running the IEMS components. The FQDN for a given machine is the combination of its Host Name and Domain Name. For instance, the FQDN "host1.ima.com" is made up of the following: host1 is the host name or machine name, and ima.com is the domain name.

To fill the FQDN information screen in **Figure 1-9**, type the FQDN of the machines which will run the IEMS components you will use (MTA Server, Directory Server, Message Store, cc:Mail Connector, Notes Connector). The corresponding operating system you are using is indicated (e.g. Linux). Click the **Finish** button to complete the registration process.

Note: Filling up the corresponding boxes for cc:Mail and Notes is optional. It is only applicable if you are installing either or both in a distributed environment with a different FQDN.

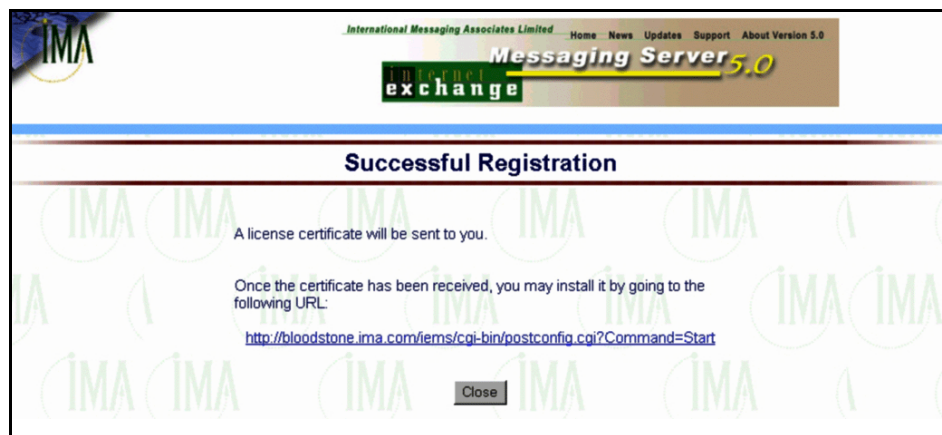


Figure 1-10: Successful License Registration

The above screen confirms a successful license registration. Once registration is successful, the evaluation certificate will be sent to the email address you have indicated in the registration form. Once received, install the certificate on the indicated URL.

Figure 1-11 below will appear if you already have the license certificate. This screen will allow you to upload to the server a certificate file located on the same machine where the browser is running. The "Choose file" window will appear after clicking on the **Browse** button. Once you have chosen the certificate file, click **"OK"**.

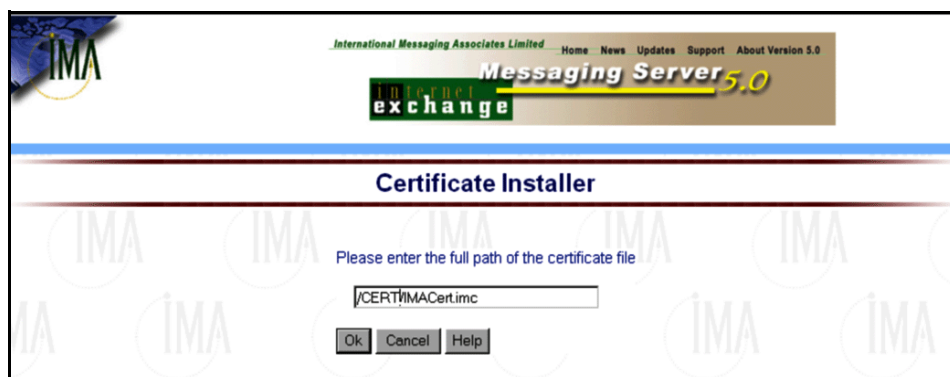


Figure 1-11: Uploading the certificate file

Once the certificate installer locates the certificate file, it extracts and displays the licensing information contained in the certificate (see **Figure 1-12** below).

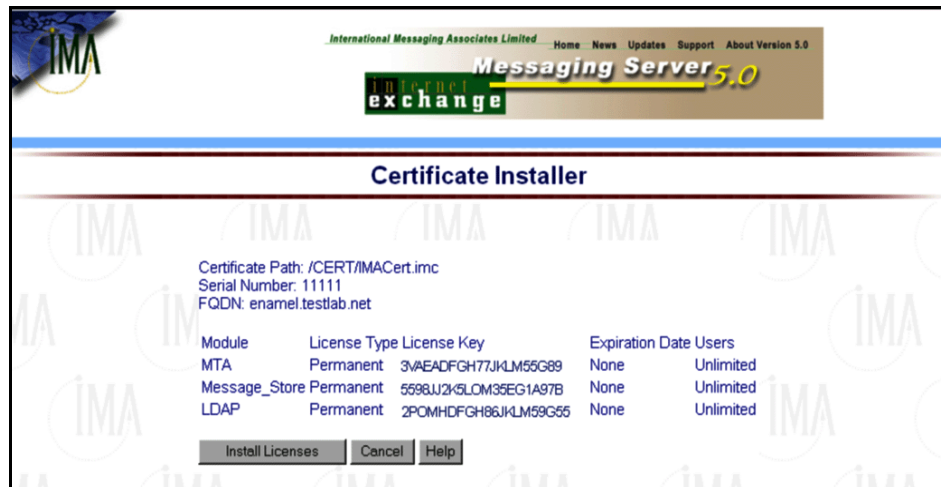


Figure 1-12: Displaying the contents of the certificate file

Certificate Serial Number

The application serial number for the IEMS components being licensed.

Certificate Information

The IEMS components (MTA, Message Store, LDAP, cc:Mail connector, Notes connector) that require a software license for activation.

License Type

The type of license to be installed. There are three license types, namely:

- **Evaluation/Interim**

These keys are time-limited keys (normally 30 days), and are used with the freely available evaluation copies of IEMS 5.1. Once a registration form is received from a customer, the License Manager generates this key and sends it to the client.

These keys can be updated to a permanent license at a later date.

- **Permanent**

These keys are used for the conversion of a given interim/evaluation key into a permanent license and are only applied to serialized copies of the software. Permanent keys are generated only by an authorized license manager.

License Key

The license key stored in the certificate. This is supplied by IMA to enable the software license.

Expiration Date

The date of validity for the component's certificate/license key. The date format should be: mm/dd/yy.

Users

The number of users allowed for the component being licensed.

On the "Certificate Installer" screen (see **Figure 1-12** on page 6-11), click **Install Licenses**. This action displays the "Configuration Complete" screen (see **Figure 1-13** below), which points you to a site, containing information on the configuration and administration of IEMS. This completes the installation of IEMS for Linux.

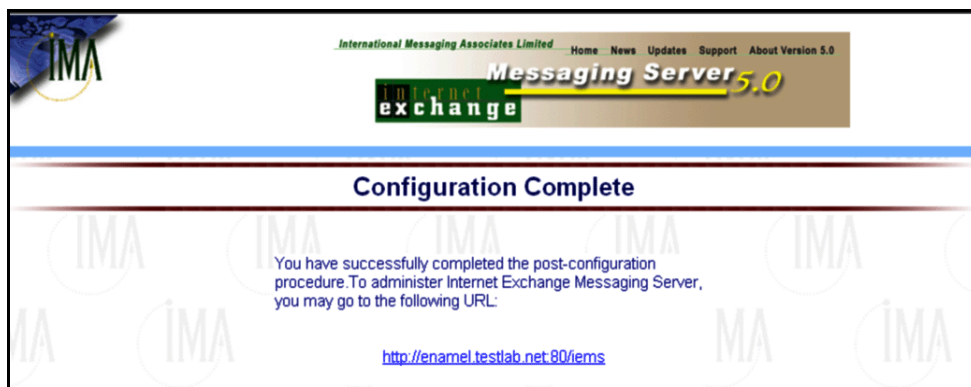


Figure 1-13: Displaying the administration and configuration site

Note: The actual FQDN of the machine where IEMS 5.1 is installed will appear on this screen (e.g. mail.ima.com).

Windows Installation

Before installing IEMS for MS Windows, you must decide if you wish to install and configure cc:Mail and/or Notes connectors.

If you wish to include cc:Mail connector support, you must install the Lotus VIM (32-bit Windows version) in your machine in order for IEMS to work properly with cc:Mail. Make sure that you do not have multiple copies or different versions of the Lotus VIM library in your system.

You may download the VIM libraries from ftp://ftp.support.lotus.com/pub/comm/ccmail/dev_tools/vdlw32.zip. To install the Lotus VIM library, overwrite the existing files with the latest version of the VIM library.

For more information on the cc:Mail VIM support, please go to <http://www.ima.com/pdf/ccmailcn.pdf> or <http://www.ima.com/documents/whitepaper/2.0/vim6db8.html>.

If you wish to install the Notes connector, make sure that Domino R4.6/R5 have been properly installed before installing IEMS. The NOTES.INI file, located under the C:\LOTUS\DOMINO directory of the Notes Domino Server, shall be moved to the Microsoft Windows installation directory. The default location for Windows NT is C:\WINNT. Similarly, if you are installing IEMS on R4.6/R5 Notes Workstation, move the NOTES.INI file from C:\LOTUS\NOTES directory of the Notes Workstation to the Microsoft Windows installation directory.

After moving the NOTES.INI to the Microsoft Windows installation directory, you will then need to configure the Lotus Notes R4.6/R5 Domino Server. In configuring the Domino Notes Server, you need to start the .Lotus Notes Domino Administrator. program. If you are a first-time user of the Domino R4.6/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). Start the .Lotus Notes Domino Administrator program. and complete the following steps:

- I. Create the Foreign SMTP domain document
- II. Establish SMTP connection document
- III. Add SMTP routing task to your Notes server
- IV. Create SMTP.BOX file to hold outbound messages
- V. Setup the access control for SMTP.BOX and MAIL.BOX
- VI. Create MAIL.BOX file on the Notes Workstation
- VII. Setup the Notes connector

For more information, please see <http://www.ima.com/pdf/notescn.pdf> and <http://www.ima.com/pdf/notes5config.pdf>.

If you are not going to include cc:Mail and Notes support, the installation procedure starts here.

You can install IEMS₇ for Windows on a single machine in one of two ways. One, is to simply insert the IEMS CD on your machine's CDROM drive and let the autorun utility automatically initiate the installer setup program. The setup opening screen (see **Figure 1-14** below) will appear. In case this does not happen, run the setup.exe file manually from your CD-ROM drive (located in the Windows directory).

The other installation method applies to the evaluation copy of IEMS 5.1 (iems-5.1-final-win32-full..zip) which can be from <http://www.ima.com/download/v5eval.html>.

The downloaded copy is compressed. Hence, you first need to extract the installer file setup.exe in your preferred directory. After extraction, locate the setup.exe file in the directory where you extracted the IEMS files and run it. Like the first method, this also leads you to the IEMS setup opening screen in **Figure 1-13** below.

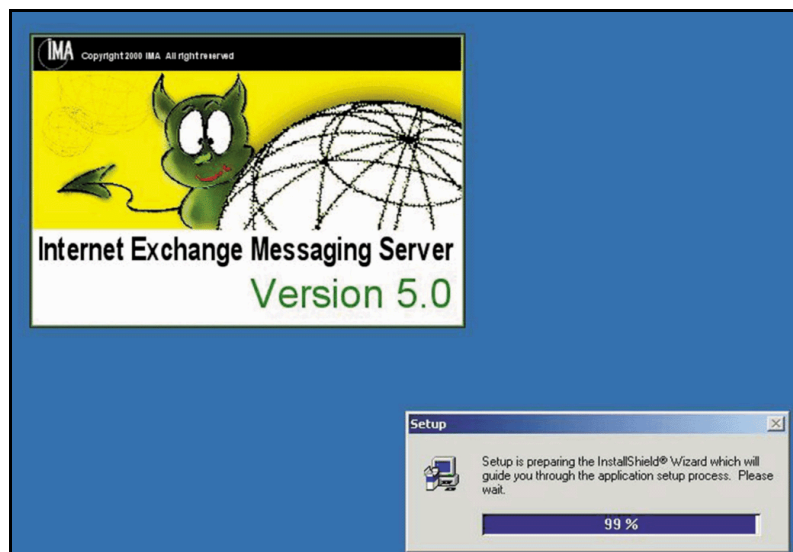


Figure 1-14: Setup opening screen

The “Welcome” screen (see **Figure 1-15** on page 15) informs you that copyright laws and international treaties protect IEMS.



Figure 1-15: Welcome Screen

Click the **Next** button to proceed with the installation. This action displays the “License Agreement” screen (see **Figure 1-16** below).

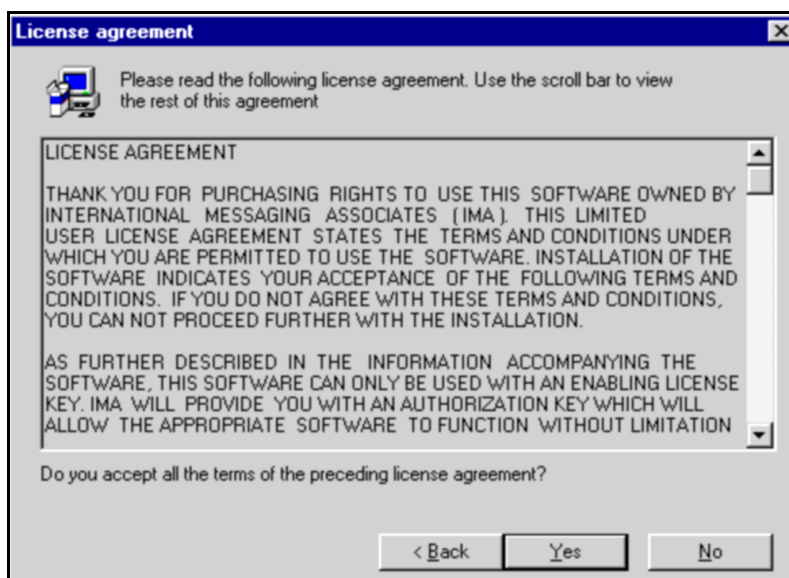


Figure 1-16: License Agreement

The above “License Agreement” screen contains information on the usage of the software.

If you do not agree with the terms and conditions, click the **No** button. The installation will terminate. Clicking the **Yes** button indicates your acceptance of the terms and conditions stated herein. Thus, allowing you to proceed with the installation (see **Figure 1-17** on page 16).



Figure 1-17: Choosing directory location for IEMS

In the above screen, select the First Internet Exchange Messaging Server 5.1 Installation option if you are installing IEMS for the first time.

If you are installing additional IEMS components on multiple machines, select the Installing Additional Internet Exchange Messaging Server 5.1 option.

To initiate installation, choose the type of installation you wish to perform. Press Next to continue. This will display the “Choose Destination Location” screen (see **Figure 1-18** next page).

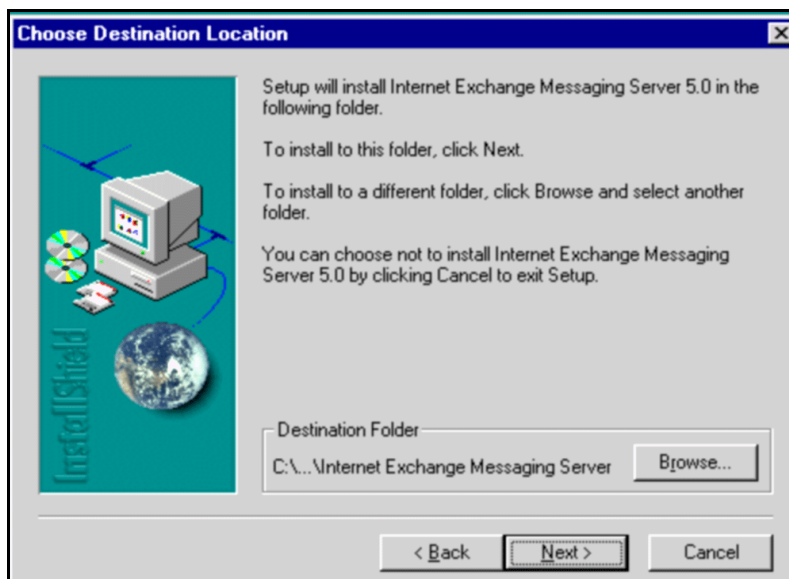


Figure 1-18: Choosing directory location for IEMS

Specify the directory or folder where you wish the executable files of IEMS stored. By default, these files will be installed in the *C:\Program Files\IMA\Internet Exchange Messaging Server 5.1* folder.

If you wish to install IEMS in a different folder, use the **Browse** button to indicate your preferred directory. After specifying the directory location, click the **Next** button.

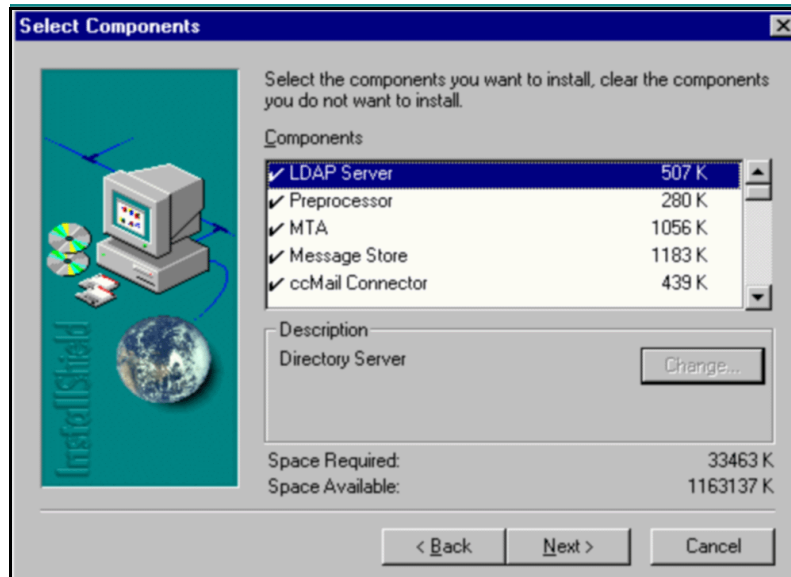


Figure 1-19: Selecting the components to be installed

A new screen (see **Figure 1-19** above) lists all the IEMS components available for installation. The installer checks if you already have cc:Mail or Notes installed in your system. If such components already exist in your system, they are automatically selected. If there is none, such components are deselected for installation. This is denoted by the check mark at the left most side of each component. If you do not want a specific component installed, remove the check mark. After determining the components to be installed, click the **Next** button.

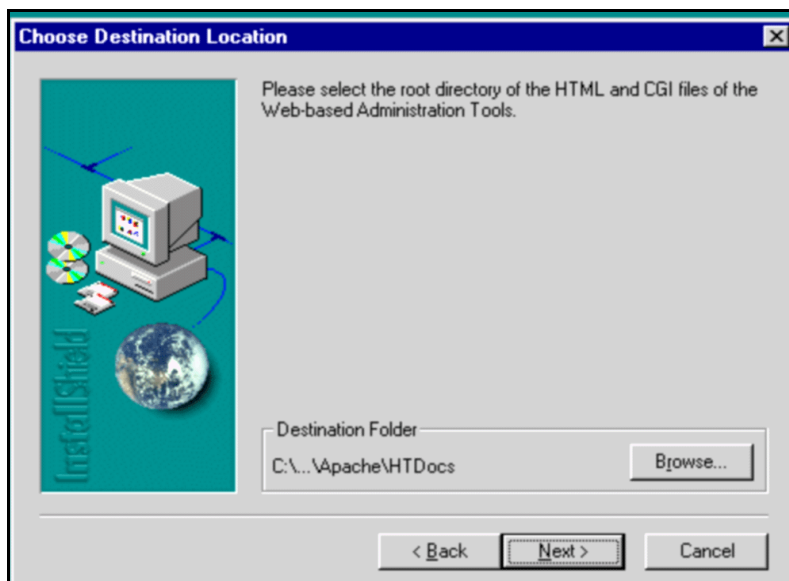


Figure 1-20: Choosing location for HTML and CGI files

The screen (see **Figure 1-20** above) prompts you to indicate the directory where you wish the HTML and CGI files of the web-based administration tools installed. By default, these files will be installed in the *C:\Program Files\IMA\Internet Exchange Messaging Server 5.1\Apache\HTDocs* folder.

However, if you wish to install the HTML and CGI files in a different directory, you may use the **Browse** button to indicate your preferred directory.

After specifying the directory location, click the **Next** button. This action displays the "Select Program Folder" (see **Figure 1-21** on page 20).

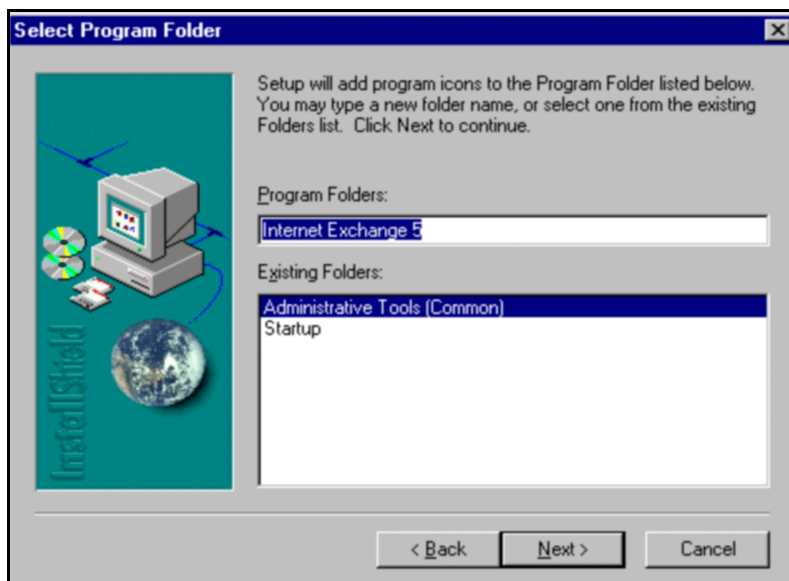


Figure 1-21: Selecting program folder

Enter the name of the folder where the IEMS program files will be stored. By default, the program folder name is set to "Internet Exchange 5.1". If you wish to change this name, you may do so in this screen. You may also select from any of the folder names included in the "Existing Folders" list. After specifying the program folder, click the **Next** button. This will show a progress bar (see **Figure 1-22** below) displaying how much of the installation process has been completed.

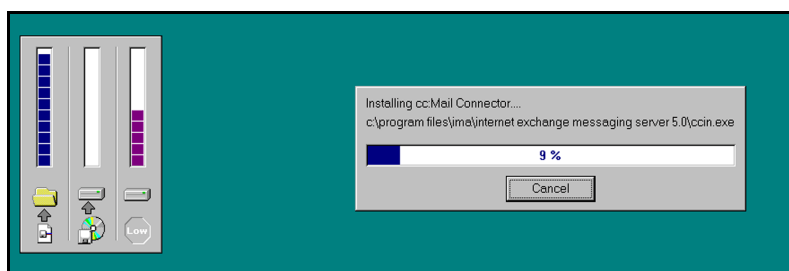


Figure 1-22: Installation progress bar

Note: Pressing any key while installation is in progress displays the “Exit Setup” screen. Click the **Resume** button to continue installation.

Upon completion of the installation, the setup program informs you that the end of installation has been reached (see **Figure 1-23** below).

Click the **Finish** button.

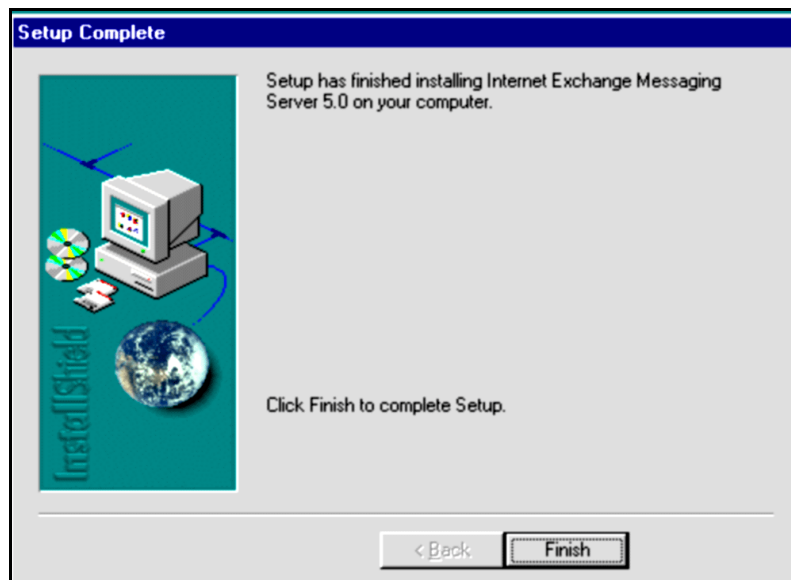


Figure 1-23: Setup complete

If the cc:Mail and Lotus Notes connectors⁸ were not selected for installation, the setup program directly proceeds to the installation of licenses (see **Figure 1-29** on page 26). If not, screens for preconfiguring these connectors will appear.

cc:Mail Connector

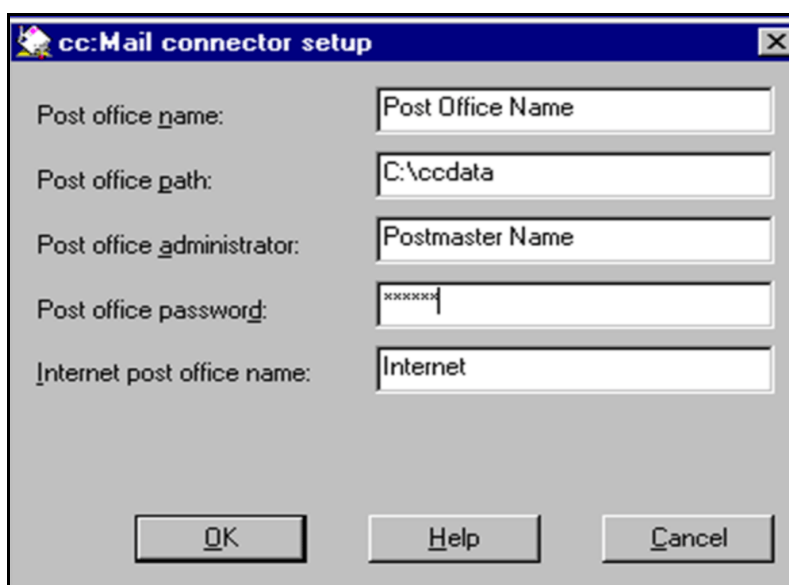


Figure 1-24: Configuring cc:Mail connector

On the above “cc:Mail Connector Setup” screen, provide information on the following:

Post Office Name

The name of the cc:Mail Post Office (e.g. Jade) that IEMS will log on to, to retrieve and send messages.

Post Office Path

The directory where the cc:Mail Post Office resides (e.g. **\ccdata**). If the Post Office is on a shared network, it is suggested that a drive letter mapping be given instead of a UNC (Universal Network Convention) path.

Post Office Administrator

The cc:Mail address of the administrator (e.g. Postmaster) managing IEMS.

Post Office Password

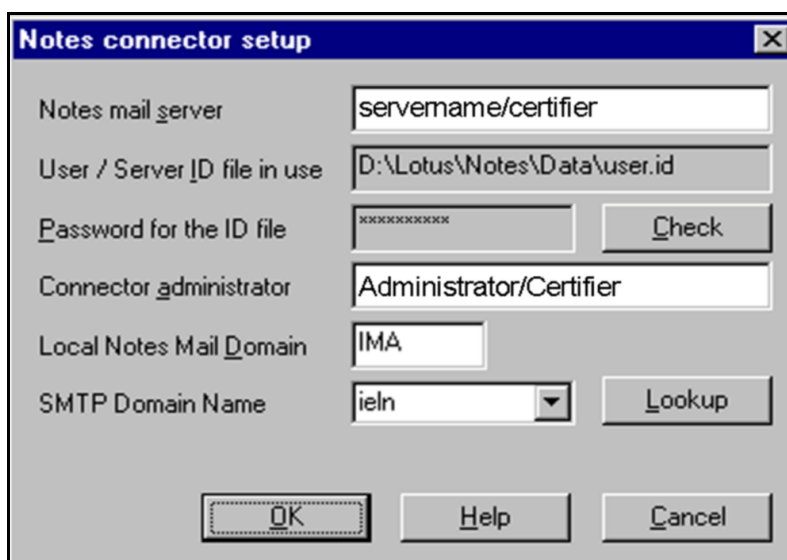
The password that IEMS will use to log on to the local cc:Mail Post Office. The password appears on screen as a row of asterisks for security purposes.

Internet Post Office Name

The Internet Post Office name (e.g. Internet) which IEMS will use to log on to 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.

After entering values for all the fields, click the **OK** button. If the Notes connector was installed, this action displays the "Notes Connector Setup" screen (see **Figure 1-25** below).

Notes Connector



The screenshot shows the "Notes connector setup" dialog box. It has a title bar with a close button (X). The dialog contains the following fields and buttons:

- Notes mail server:** A text box containing "servename/certifier".
- User / Server ID file in use:** A text box containing "D:\Lotus\Notes\Data\user.id".
- Password for the ID file:** A text box containing "xxxxxxxx" with a "Check" button to its right.
- Connector administrator:** A text box containing "Administrator/Certifier".
- Local Notes Mail Domain:** A text box containing "IMA".
- SMTP Domain Name:** A dropdown menu showing "ieln" with a "Lookup" button to its right.
- Buttons:** "OK", "Help", and "Cancel" buttons are located at the bottom of the dialog.

Figure 1-25: Configuring the Notes Connector

Notes mail server

The name of the Notes server (e.g. notes5/Jade) that will be accessed by IEMS.

User/Server ID file in use

The name of the ID file (e.g. C:\Lotus\Notes\Data\user.id) specified in the entry KeyFileName of IEMTA.INI file. IEMS uses the owner of this ID file to access SMTP.BOX and MAIL.BOX in the Notes server. Normally, the file is created in the data directory of the Lotus Notes server/workstation during the installation process. If KeyFileName does not contain any path information, IEMS automatically appends the data directory specified in the directory from IEMTA.INI as the prefix.

Password for the ID file

The password that will be used by the user to access the SMTP.BOX and MAIL.BOX in the Notes server. The password will appear on screen as a row of asterisks for security purposes.

Connector Administrator

The user name for the administrator (e.g. John Doe/Jade). By default, IEMS uses the owner of User/Server ID file as the name of the administrator. Messages received by IEMS addressed to the Postmaster will be sent to this Notes user.

Local Notes Mail Domain

The local Notes mail domain name (e.g. Jade) connected to IEMS. This is created automatically in the server during the installation of the Notes server.

SMTP Domain Name

The domain name of the machine to which IEMS is connected to. Select the correct entry to enable concurrent multiple SMTP server for a single Notes environment (i.e., ieln). On the "Notes connector setup" screen (see **Figure 1-28** on page 26), enter the Password for the ID file and click **Check**. After typing the Local Notes Mail Domain to be used, click the **Lookup** button. This action enables the drop-down list for the SMTP Domain Name field. Choose an SMTP domain name from the list.

Click the **OK** button to continue with the installation. This displays the "Certificate Installer" screen (see **Figure 1-26** below) which determines whether or not you have received the license certificate.

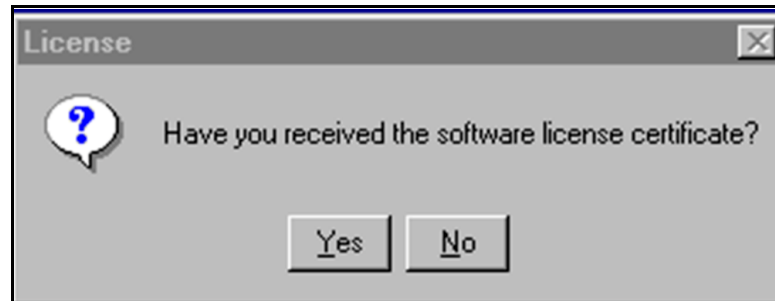


Figure 1-26: Determining the availability of the license certificate

The screen above appears after successfully installing IEMS on a single machine and pre-configuring the connectors (if installed). This screen signals the start of the license certificate installation. The license certificate contains the keys necessary to activate IEMS components.

If you still need to obtain a license certificate from IMA, press the **No** button in the above "Certificate Installer" screen. This will show a screen asking if you wish to apply for an Evaluation Certificate online (See **Figure 1-30** below).

Note: Clicking on **Yes** button means you already have the license certificate. The next screen that will appear will prompt you to enter the full path name and filename of the certificate (see **Figure 1-34** on page 31).

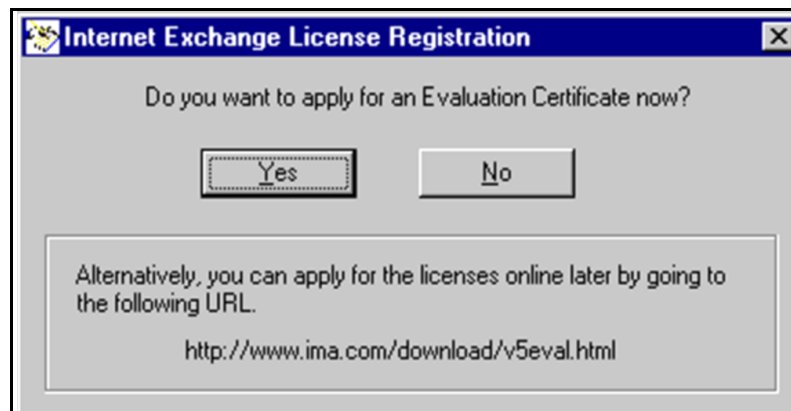


Figure 1-27: Apply for a license certificate online

The screen in Figure 1-27 prompts you to apply for an Evaluation Certificate. Click **Yes** to apply. This will show the .License Registration. screen (see **Figure 1-28** below). Press **No** if you do not wish to apply. In this second case, the installation will be completed in "3 Free User Mode", and the following dialogue box will be displayed.

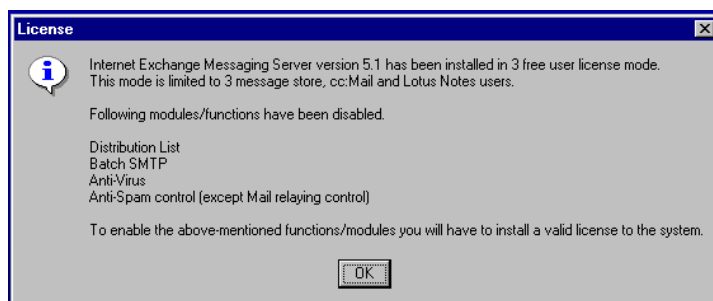


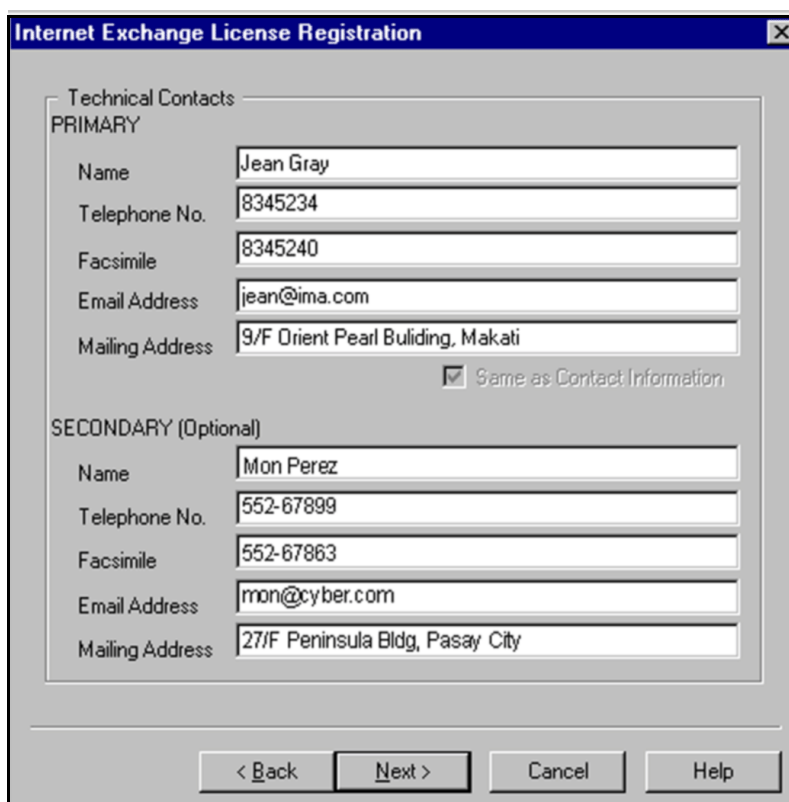
Figure 1-27b: Confirmation of "3 Free User Mode" registration

A Windows-style dialog box titled "Internet Exchange License Registration". It contains a paragraph of text: "Please take some time to fill out the information below so that we may issue you a license certificate. These information are required by our support staff to process your evaluation license. Please ensure these fields are filled in your registration. The certificate will be send to the email address you specified in the form." Below the text is a "Contact Information" section with several input fields: "Name" (John Doe), "Company" (Internet Messaging Associates Inc.), "Mailing Address" (4/F, Tower Building, Engr. Dept. Corp. Inc.), "Country" (Philippines, with a dropdown arrow), and "Email Address" (john@ima.com). Below these are telephone and facsimile fields, each with "Int", "Area", and "Local" sub-fields. The telephone fields are filled with 12, 34, and 567890 respectively. The facsimile fields are filled with 12, 34, and 567891 respectively. At the bottom are four buttons: "< Back", "Next >", "Cancel", and "Help".

Figure 1-28: License Registration

Figure 1-28 above requires you to enter information about your company. IMA support staff will use the information entered here to process your request. Click the **Next** button to continue.

The screen below allows the system administrator to enter his primary and secondary contact information. The primary technical contact is required, whereas the secondary is optional. After completing the form, click the **Next** button. This will show the “FQDN Information” screen (see **Figure 1-30** on page 28).

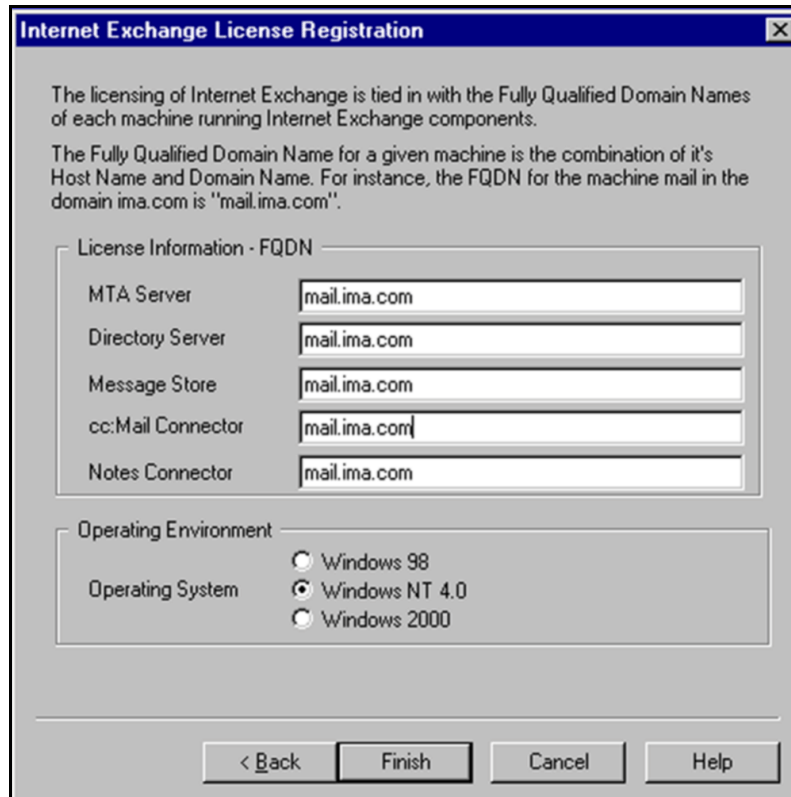


The image shows a Windows-style dialog box titled "Internet Exchange License Registration". It contains two sections for technical contacts. The "PRIMARY" section has fields for Name (Jean Gray), Telephone No. (8345234), Facsimile (8345240), Email Address (jean@ima.com), and Mailing Address (9/F Orient Pearl Bulding, Makati). There is a checkbox labeled "Same as Contact Information" which is checked. The "SECONDARY (Optional)" section has fields for Name (Mon Perez), Telephone No. (552-67899), Facsimile (552-67863), Email Address (mon@cyber.com), and Mailing Address (27/F Peninsula Bldg, Pasay City). At the bottom, there are four buttons: "< Back", "Next >", "Cancel", and "Help".

Technical Contacts	
PRIMARY	
Name	Jean Gray
Telephone No.	8345234
Facsimile	8345240
Email Address	jean@ima.com
Mailing Address	9/F Orient Pearl Bulding, Makati
<input checked="" type="checkbox"/> Same as Contact Information	
SECONDARY (Optional)	
Name	Mon Perez
Telephone No.	552-67899
Facsimile	552-67863
Email Address	mon@cyber.com
Mailing Address	27/F Peninsula Bldg, Pasay City

< Back Next > Cancel Help

Figure 1-29: License Installation



The licensing of Internet Exchange is tied in with the Fully Qualified Domain Names of each machine running Internet Exchange components.

The Fully Qualified Domain Name for a given machine is the combination of its Host Name and Domain Name. For instance, the FQDN for the machine mail in the domain ima.com is "mail.ima.com".

License Information - FQDN

MTA Server	mail.ima.com
Directory Server	mail.ima.com
Message Store	mail.ima.com
cc:Mail Connector	mail.ima.com
Notes Connector	mail.ima.com

Operating Environment

Operating System

- ☐ Windows 98
- ☒ Windows NT 4.0
- ☐ Windows 2000

< Back Finish Cancel Help

Figure 1-30: FQDN Information

The license of IEMS is tied with the Fully Qualified Domain Name (FQDN) of the machines (other than the Preprocessor modules) running the IEMS components. The FQDN for a given machine is the combination of its Host Name and Domain Name. For instance, the FQDN "host.ima.com" is made up of the following: mail is the host name or machine name, ima.com is the domain name.

On the "FQDN Information" screen above, type the FQDN of the machines which will run the IEMS components you will use (MTA Server, Directory Server, Message Store, cc:Mail Connector, Notes Connector). The corresponding operating system you are using is indicated (e.g. Linux). Click the **Finish** button to complete the registration process.

A screen confirming successful license registration will be displayed. Once registered, the evaluation certificate will be sent to the email address you have specified in the registration form. This prompts you to install the certificate on the indicated URL, once received.

Figure 1-31 below appears after successful installation of the license certificate. The certificate installer extracts and displays the licensing information contained in the certificate on screen.

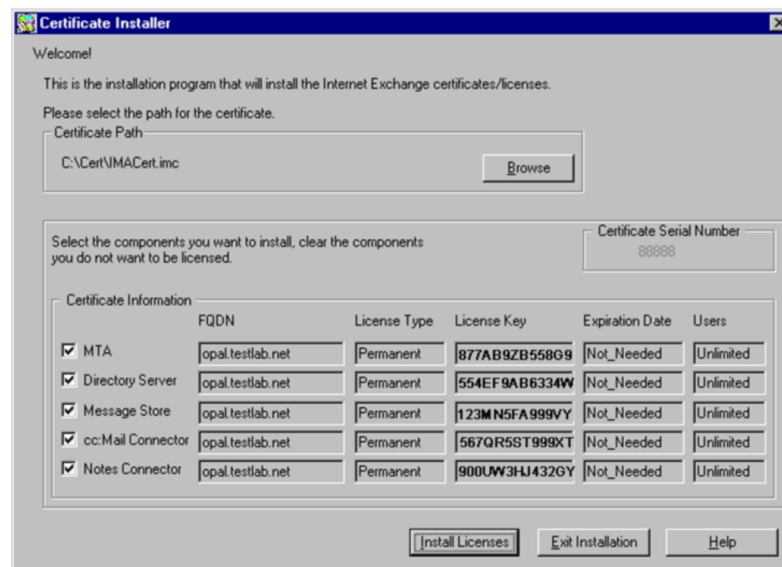


Figure 1-31: Specifying certificate path

Note: For a single machine, only one FQDN is used because each components are installed in the same machine.

Select a component to be licensed by marking its check box then, click the **Install Licenses** button, a new screen displaying the component licenses that have been successfully installed appears (see **Figure 1-32** next page). Click the **Ok** button.

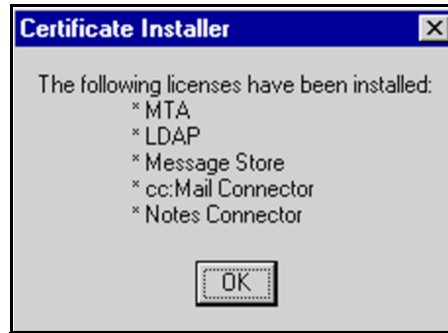


Figure 1-32: Confirming installation of licenses

Figure 1-33 below appears to indicate successful installation. Click the **OK** button. **Figure 1-34** below will then appear. The screen will point you to a site containing information on the configuration and administration of IEMS.



Figure 1-33: Setup complete

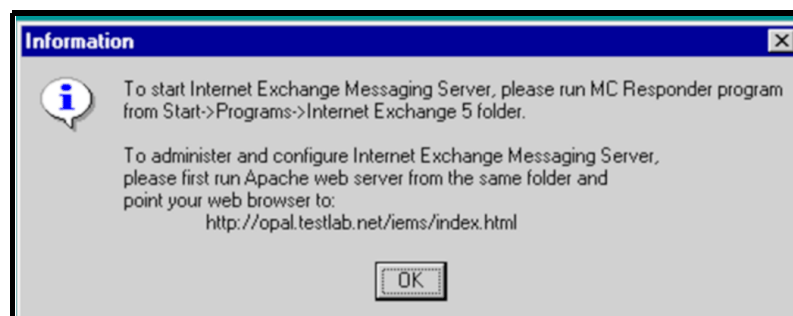


Figure 1-34: Information screen

Chapter 2

Installing Internet Exchange Messaging Server 5.1 in a Distributed Environment

The Internet Exchange Messaging Server (IEMS) 5.1 may be installed in a distributed environment consisting of multiple Linux and/or Windows machines. For the purpose of having an example scenario, two computers (Machine A and Machine B) are used in installing the components of IEMS. The components are distributed as follows:

Machine A -- Directory Server, Preprocessor, MTA with FQDN of "host1.ima.com" and IP address "192.168.0.1"

Machine B -- Message Store with FQDN of .host2.ima.com. and IP address: "192.168.0.2"

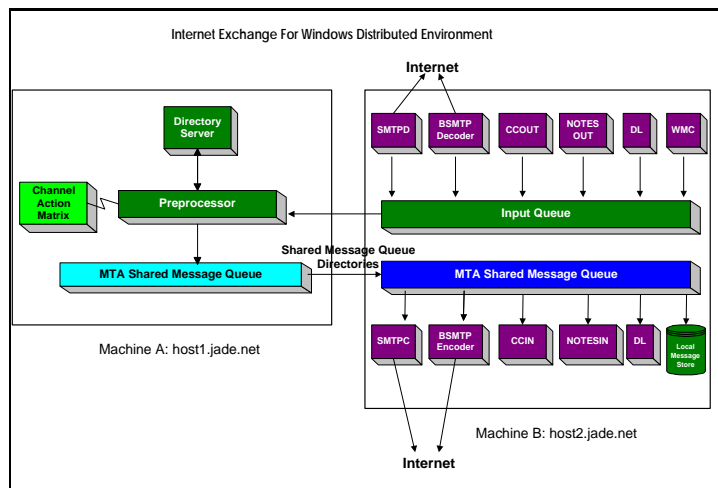


Figure 2-1: IEMS in a distributed environment

To install IEMS in a distributed environment, the Directory Server must first be installed for some of the core software configurations. Without an active Directory Server, you cannot install additional components on the other machines.

Linux Installations

IEMS for Linux binaries, by default, are installed under the `/opt/iems/bin` directory, while the Message Queue is located under the `/var/spool/iems/ mqueue` directory.

In order to install and run IEMS for Linux in a distributed environment, the system administrator must first log on as the `.root.` user. The administrator must then configure the SAMBA server on Machine A where the Preprocessor will be installed to make the remote Message Queue directories available to the machines running the other MTA components.

On Machine A:

To install the Directory Server, Preprocessor and MTA components on Machine A, follow the steps in *Installing Internet Exchange Messaging Server 5 for Linux on a Single Machine*, on Chapter 1, pages 1 to 12.

After installing the Directory Server, Preprocessor and MTA components on Machine A, preconfigure the Preprocessor to allow Machine B to access the components installed in Machine A.

IEMS comes with a `preconf` utility specially designed to help you perform this task. The `preconf` utility is located in the `/opt/iems/bin/` directory. To run the `preconf` utility, type the following:

```
/opt/iems/bin/preconf
```

This displays the Preprocessor configuration menu (see screen on page 35).

On this menu, perform the following:

1. Modify the Local Internet Domain field by selecting `Local Internet Domains`. (1) and pressing ENTER. This displays a new set of options for modifying the local Internet domain.
2. Since you are going to add the FQDN of the machine B that runs the Message Store in the Local Internet Domain field, select `Local Internet Domain` by typing A and pressing ENTER. Enter the FQDN of B. Type E to save and return to the Preprocessor configurations menu.
3. Modify the MQ Server Access Addresses field by selecting `.MQ Server Access Address` (5) and pressing ENTER. This displays a new set of options for modifying the MQ Server Access Addresses.

4. Since you are going to add the IP address of Machine B, which contains the Message Store, to the MQ Server Access Addresses field, select .Add items in the List. (A) and press ENTER.
5. The preconf utility instructs you to type the IP address you wish to add to the MQ Server Access field. Type the IP address (e.g. 192.168.0.2) and press ENTER.
6. After adding the IP address of Machine B to the Preprocessor, select .Exit. (E) to save and exit from the current menu.

You have just finished setting up Machine A. You may now start the services in this machine before installing the Message Store on Machine B.

To configure the SAMBA share for RedHat Linux 6.2/7.0/7.1, perform the following:

1. Go to `/etc` (RedHat 6.2) or `/etc/samba/` (RedHat7.0/7.1) directory of the SAMBA server.
2. Edit the **smb.conf** file using a text editor.
3. Insert the following information:

```
[mqueue]
public=yes
writable=yes
browseable=yes
path=/var/spool/iems/mqueue
max connections=0
available=yes
valid users=iems
```

where:

[mqueue] - the samba share name

public=yes - allows those without a login on the server to access a share

writable=yes - means given full permission to write

browsable=yes - means existence of the share can be seen even by those without rights to the share

path=/var/spool/iems/mqueue - directory accessed through the share
max connections = 0 - means unlimited connections

available=yes - means share is available to all

valid users=iems - means only iems has rights to the share

4. Save the new settings of the **smb.conf** file.

After configuring Samba, create and add an “smb user” who has permission to access the Message Queue. To do this, follow these steps:

1. Type:

```
smbadduser iems:iems
```

at the # prompt (root login) then press ENTER

Note: *The login user name for Host1 and Host2 are both set to iems, this however, can be changed in any name, provided, the user has full permission to the share. For stability, it is advised that iems be used for both.*

2. Enter the password for the shared folder on the remote machine for authentication purposes.

3. Once the # appears restart the SAMBA daemon by executing:

```
/etc/rc.d/init.d/smb restart
```

at the prompt.

On Machine B:

To install the Message Store on Machine B, follow the steps in “**Installing Internet Exchange Messaging Server 5.1 for Linux on a Single Machine**” on pages 1 to 12 except for the following:

In selecting installation type (see Figure 1-3 on page 5), choose Installing Additional Internet Exchange Messaging Server 5.1 Components installation because you are installing an additional IEMS component, which is the Message Store on Machine B.

In selecting a component to be installed (see Figure 1-4 on page 5), select only the Message Store.

After successfully installing the Message Store on Machine B, mount the Message Queue located in Machine A (i.e., //host1/mqueue) to /var/spool/iems/remotqueue on Machine B by typing:

```
smbmount //host1/mqueue /var/spool/iems/remotqueue  
username=iems,password=your_password,uid=iems_id,gid=iems_group_id,dmask=755
```

Windows Installations

On Machine A:

To install the Directory Server, Preprocessor and MTA on Machine A, follow the steps in “Installing Internet Exchange Messaging Server 5.1 for Windows on a Single Machine” on Chapter 1, pages 10-30.

After successfully installing the Directory Server, Preprocessor and MTA on Machine A, the next step will be to make the Message Queue on Machine A accessible to the Message Store component installed in machine B. To do this, follow the steps given below.

1. Go to the directory location of the Message Queue. By default, this directory is in *Program Files\IMA\Internet Exchange Messaging Server 5.1*.
2. Right click the MsgQueue folder. A menu will appear.
3. Select Properties. The “Msgqueue Properties” tab will appear.
4. On this tab, click the Shared As radio button.
5. Type “msgqueue” in the input box opposite the Shared As radio button.
6. Click the **Ok** button to save changes.

To access Message Store from **Machine B**, you must first run the Preprocessor Configuration (see **Figure 2-2** below). To run, go to the directory where the Preprocessor Configuration utility (preconf.exe) is installed. By default, this is installed in *C:\Program Files\IMA\Internet Exchange Messaging Server 5.1*. Locate and then double click the **preconf.exe** file. The screen below will appear.

```

Preprocessor Configurations
[1] Local Internet Domains      host1.ima.com,host2.ima.com
[2] Default Local Delivery Channel local
[3] Internet Delivery Channel  smtp
[4] MQ Server                   host1.ima.com
[5] MQ Server Access Addresses  192.168.0.1, 192.168.0.2
[6] MQ Remote Access Directory  /var/spool/ims/remotetequeue
Enter [1....6] to change value
    [A]bort
    [R]eload settings
    [Q]uit to save changes
  
```

Figure 2-2: Preprocessor Configuration

On the above screen, each box corresponds to the following:

1. **Local Internet Domain:** contains the listing of the domains which your mail server accepts. Use the **Add** and **Delete** button to modify the listing. Add the FQDN of Machine B.
2. **Default Local Delivery Channel:** used for recipients who belong to the local domain, but are not located in the Directory Server.
3. **Internet Delivery Channel:** set to SMTPC by default. This refers to the channel capable of delivering messages to the internet.
4. **MQ Server:** the host name of the system where the preprocessor is running. If the Messaging Server is installed in a distributed system, both the computer name and the Internet Host Name must be the same.
5. **MQ Server Access Address:** the mechanism which only allows connection from host with the IP address matching this entry. The default will be the IP address of the host.
6. **MQ Remote Access Directory:** the name of the network share used when IEMS is deployed in a distributed environment. The share must be accessible using the "MQ Account Name" and "MQ Server password" as entered on the last two fields. This is the directory shared and accessible to the other machines (i.e. MsgQueue).
7. **MQ Server Account Name:** this field is only applicable if you plan to install Messaging Server on multiple systems. When installing IEMS in a distributed system. This stands for the user account name authorized to access the Message Queue.
8. **MQ Server Password:** contains the password which gives the "MQ Account Name" full access to the "MQ Remote Access Directory" on the above field.
9. **MQ Server Password:** contains the same password as the previous field. The password has to be entered twice for verification purposes.

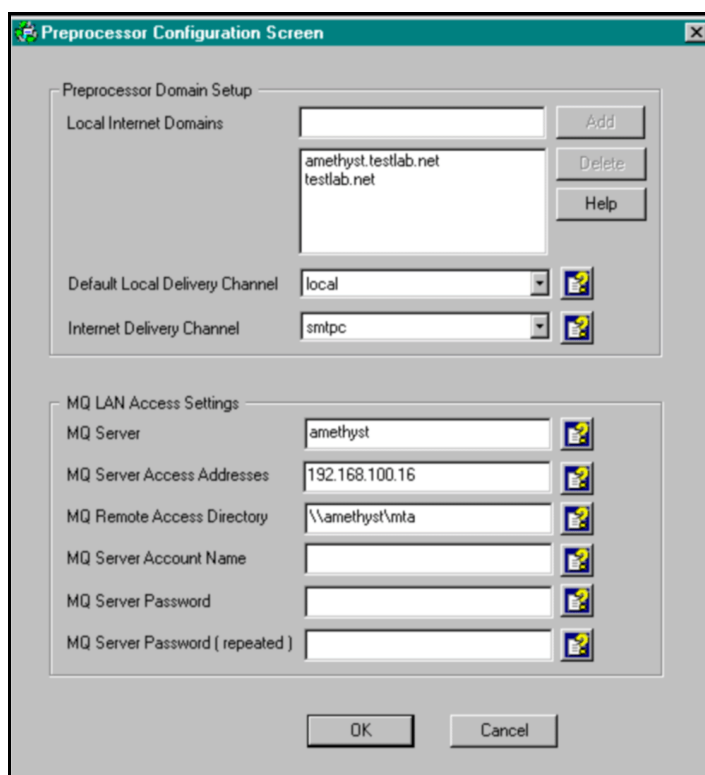
After providing the values to the corresponding fields, press Ok button to proceed with the rest of the installation process

On Machine B:

To install the Message Store on Machine B, follow the same steps in installing the Directory Server, Preprocessor and MTA on Machine A except for the following:

In selecting the installation type (see **Figure 1-3** on page 5), choose Installing additional Internet Exchange Messaging Server.

After selecting the installation type, enter the FQDN of the machine running the Directory Server (see **Figure 2-3** next page).



The image shows a Windows-style dialog box titled "Preprocessor Configuration Screen". It contains two main sections: "Preprocessor Domain Setup" and "MQ LAN Access Settings".

Preprocessor Domain Setup

- Local Internet Domains:** A list box containing "amethyst.testlab.net" and "testlab.net". To the right are "Add", "Delete", and "Help" buttons.
- Default Local Delivery Channel:** A dropdown menu set to "local" with a help icon.
- Internet Delivery Channel:** A dropdown menu set to "smtpc" with a help icon.

MQ LAN Access Settings

- MQ Server:** A text box containing "amethyst" with a help icon.
- MQ Server Access Addresses:** A text box containing "192.168.100.16" with a help icon.
- MQ Remote Access Directory:** A text box containing "\\amethyst\mta" with a help icon.
- MQ Server Account Name:** An empty text box with a help icon.
- MQ Server Password:** An empty text box with a help icon.
- MQ Server Password (repeated):** An empty text box with a help icon.

At the bottom of the dialog are "OK" and "Cancel" buttons.

Figure 2-3: Entering of the machine running the Directory Server

Input the port number used by the Directory Server (see **Figure 2-4**). By default, the Directory Server uses port 389. If the Directory Server is using a different port number, enter that port number in the text box provided.

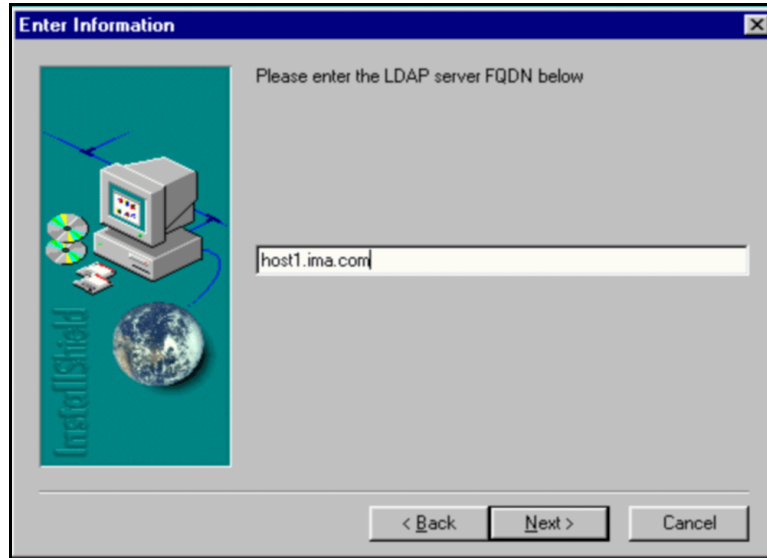


Figure 2-4: Entering Directory Server port number

In selecting the components to be installed, select Message Store, Web Administrator and Apache Web Server (see **Figure 1-19** on page 18). After completing the installation, restart all machines for the new settings to take effect.

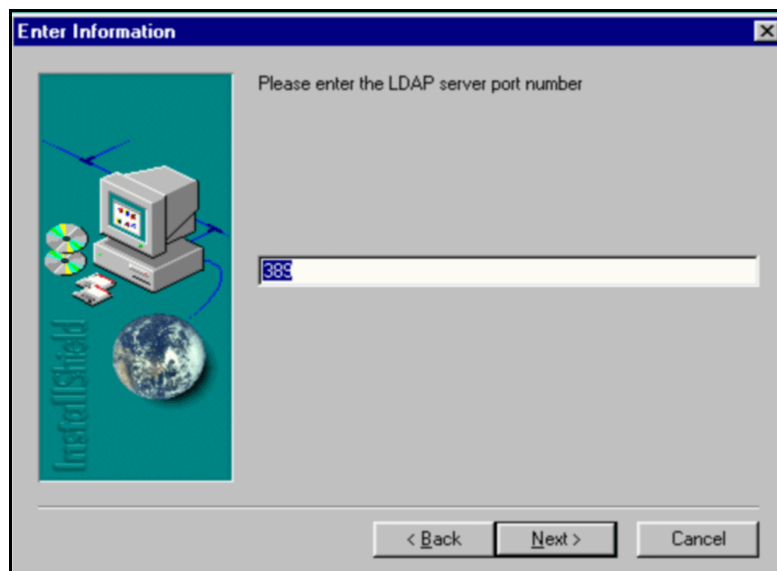


Figure 2-4: Entering Directory Server port number

Chapter 3

Installing the License Certificate After Installation

Successful installation of IEMS does not mean immediate access to the software. You still need to install a license certificate to enable the software. Validation of the certificate is necessary to be able to use the applications.

Linux Installations

To install the license certificate for IEMS for Linux after the software installation, copy the certificate file (**IMACert.imc**) to a local folder (i.e., **/CERT**). On the # prompt, issue the command:

```
chown -R iems:iems /CERT
```

Open a Linux shell as the "root " user and issue the following command to start the certificate installer. Type:

```
/opt/iems/bin/certinst
```

to launch the "Certificate Installer" screen (see the box on next page) appear.

```

- - - - -
Certificate Installer
- - - - -

Welcome!

This is the installation program for Internet Exchange Mes-
saging Server 5 certificates/Licenses.

B - Browse certificate path
C - Cancel (Exit) installation

```

The screen above instructs the setup program to proceed with the license installation. Typing .B. or .b. will prompt you to enter the directory location of the certificate. Type the directory location and the name of the certificate file. By default, the file is located at /CERT/IMACert.imc. Press ENTER.

Once the certificate installer locates the certificate file, it extracts and displays the licensing information contained in the certificate (see the box below).

Expiration Date	: Note_Needed
Users	: Unlimited
*** LDAP ***	
FQDN	: mail.ima.com
License Type	: Permanent
License Key	: 554EF9AB6334W4
Expiration Date	: Not Needed
Users	: Unlimited
*** Message Store ***	
FQDN	: mail.ima.com
License Type	: Permanent
License Key	: 567QR5ST999XT9
Expiration Date	: Not Needed
Users	: Unlimited
*** MTA ***	
FQDN	: mail.ima.com
License Type	: Permanent
License Key	: 877AB9ZB558G9
Expiration Date	: Not Needed
Users	: Unlimited

B - Browse certificate path
C - Cancel (Exit) installer
I - Install license

Typing “I” will give you the choice to install each module.

Install MTA? (Y/N)

Install LDAP? (Y/N)

Install MessageStore? (Y/N)

Selecting “Y” will install the corresponding modules and complete the license installation.

Windows Installations

You may install the license after the installation of IEMS for Windows by going to the Start\Programs\Internet Exchange\System Configuration or by opening Windows Explorer and going to the installation directory of IEMS (C:\Program Files\IMA\Internet Exchange Messaging Server 5). Double click the Certinst.exe file to activate the “Certificate Installer” screen.

The .Certificate Installer. screen (see **Figure 1-29** on page 28) signals the start of the software license installation. Click the **Yes** button. A new screen (see **Figure 1-34** on page 32) prompts you to specify the path where the certificate file is installed. By default, the file is located at

C:\Cert\IMACert.imc. If the certificate file is located in another directory, use the **Browse** button. Once the certificate installer locates the certificate file, it extracts and displays the licensing information contained in the certificate (see **Figure 1-34** on page 32). Select a module to be licensed by marking its check box then, click the **Install Licenses** button. This displays the component licenses that have been successfully installed.

Chapter 4

Running Internet Exchange Messaging Server 5.1

Successful installation of IEMS does not mean immediate access to the software. You still need to install a license certificate to enable the software. Validation of the certificate is necessary to be able to use the applications.

Linux Installations

Via the Run Control Script

To start the responder, type:

```
/etc/rc.d/init.d/responder start
```

on the # prompt of the current directory.

On the other hand, if you wish to stop the responder, type:

```
/etc/rc.d/init.d/responder stop
```

By running the executable files

Another way of running Internet Exchange Messaging Server (IEMS) 5 for Linux is to manually start each of the different components of IEMS. If the Apache web server has not been started yet, start it by typing:

```
/etc/rc.d/init.d/httpd start
```

on the # prompt of the current directory.

Next, go to the directory where the executable files of the IEMS components are stored (/opt/iems/bin).

Once on the # prompt directory, type:

```
./<exe> &
```

where:

<exe> - executable file of the component

& - runs the program in the background

For example, if you wish to run the Preprocessor, type:

```
./preprocessor &
```

Below are the corresponding executable files of the IEMS components:

- IMAP4 - imapd
- POP3 - pop3d
- Local Mail Delivery Agent - locmail
- Local Mail Server - locmails
- Message Store Server - msgstors
- Quota Agent - quota
- Message Queue Router - mqrouter
- SMTP Client - smtpc
- SMTP Daemon - smtpd
- Batch SMTP - bsmtplib
- Distribution List Manager - dl
- Directory Server - ldapserv
- Preprocessor - preprocessor
- Log Daemon - logd

Windows Installations

Through Start Menu

Go to Start\Programs\Internet Exchange 5\Apache Web Server. This runs the Apache webserver. Then, go to Start\Programs\Internet Exchange 5\MC Responder to activate the MC Responder. This automatically runs all the IEMS components (i.e., LDAP, MTA, Preprocessor, among others).

By running the executable files

Another way of starting the different components of IEMS manually is to run the Apache web server by going to Start\Programs\Internet Exchange\Apache Web Server. Open MS DOS session, then go to the IEMS directory (C:\Program Files\IMA\ Internet Exchange Messaging Server 5.1\) to run the corresponding executable files of the components you wish to run.

See list of executable files on the previous page.

Appendix A

License Agreement

THANK YOU FOR PURCHASING RIGHTS TO USE THIS SOFTWARE OWNED BY INTERNATIONAL MESSAGING ASSOCIATES CORPORATION (IMA). THIS LIMITED USER LICENSE AGREEMENT STATES THE TERMS AND CONDITIONS UNDER WHICH YOU ARE PERMITTED TO USE THE SOFTWARE. INSTALLATION OF THE SOFTWARE **INDICATES YOUR ACCEPTANCE OF THE FOLLOWING TERMS AND CONDITIONS. IF YOU DO NOT AGREE WITH THESE TERMS AND CONDITIONS, YOU CAN NOT PROCEED FURTHER WITH THE INSTALLATION.**

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LICENSE: This software contains multiple IMA products. IMA grants you a non-exclusive, nontransferable limited use license to use each software product and accompanying documentation that has been purchased according to the following terms and conditions:

For the software you may:

1. physically transfer the software from one computer to another, provided that each software product is installed in only one computer or distributed system at a time;

(1.1) A distributed system is defined as one or more computers running a single copy of the software in tandem. With the exception of the responder, no more than one instance of each of the software modules may be running at one time amongst the computers making up the distributed system;

2. make one copy of the software solely for backup purposes, provided you reproduce and include the copyright notice on the back-up copy.

You may not, nor permit others to, do any of the following:

- 1 use the software on more than one computer or distributed system at a time (see section 1.1 above);
- 2 modify, translate, reverse engineer, decompile, disassemble, prepare derivative works of the software, or copy the software or accompanying documentation;
- 3 share, rent, lease, sublicense, or transfer your right to use the software or otherwise grant any right to use the software, or accompanying documentation in any form to another party without the prior written consent of IMA, or provide access to the software on a local area network, wide area network, or any other multiple user computer hardware or software arrangement, to a person who is not a member or employee of your firm, agency or company; or
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Appendix B

System Requirements

For optimum performance, it is recommended that Internet Exchange Messaging Server (IEMS) 5 and its components be installed using the following minimum configurations:

For Windows 98

- Pentium or higher
- Minimum recommended RAM: 64MB
- Minimum recommended hard disk space for applications: 200MB
- Minimum recommended hard disk space for message store: 1GB or dependent on the number of users

For Windows 2000 and Windows NT 4.0 with SP4

- Pentium or higher
- Minimum recommended RAM: 96MB
- Minimum recommended hard disk space for applications: 200MB
- Minimum recommended hard disk space for message store: 1GB or dependent on the number of users

For Linux

- Pentium 133 or higher
- Minimum recommended RAM: 64MB
- Minimum recommended hard disk space for applications: 200MB
- Minimum recommended hard disk space for message store: 1GB or dependent on the number of users.

IEMS 5 supports the following Linux distributions:

- RedHat 6.2, 7.0 and 7.1
- Caldera 2.3.1
- VAlinux 6.2.3
- TurboLinux Server 6
- Suse 7.1
- Mandrake 7.2 and 8 beta 1

Support for other Linux distribution systems will be added soon.

Note: *The system requirements mentioned above are applicable for both single and multiple machines (distributed system) installations.*

The base hardware/software configuration is only for running the machine's OS (Operating System) and other software needed to install IEMS properly. To determine the total minimum memory requirement needed by your machine to install the OS and IEMS, you must add the memory requirements of the IEMS components to the base hardware configuration. To compute the minimum memory requirement for your machine, please refer to the table found on the next page. This table contains the memory requirement of each IEMS component.

For example, if you have a machine running Windows 98, you need a minimum of 64MB of RAM to run the OS. If you wish to install the IEMS on that machine, then you will have to install additional RAM of 6MB for SMTPD, 4MB for SMTPC, 2MB for the MQ Router, 4MB for the Directory Services, 4MB for the DL Manager, 8MB for the Preprocessor, 4MB for the Btrieve Database Engine, 4MB for the Anti-virus, 2MB for the Responder, 2MB for the Apache Web Server, 2MB for the Auto-loop detection DLL (Dynamic Link Library), 2MB for the Anti-spam, and 8MB for the Administration Tools. Thus, the machine needs at least 118MB of RAM in order for IEMS to run smoothly.

Before installing the software either on a single machine or on a distributed system, make sure that you have installed the certificate file issued to you by IMA on your local disk drive. It is recommended that you place it on your C:. drive. By default, the certificate installer reads the certificate file (**ImaCert.imc**) from C:\CERT. The certificate file will be used to activate the modules to be installed on your machine. Please take note of the directory path of the certificate file. You will be prompted to verify this directory path when you reach the licensing stage. Without the certificate file, you will not be able to run the software.

Internet Exchange Messaging Server Components	Memory Usage
*CCIN	8
*CCOUT	8
*NOTESIN	8
*NOTESOUT	8
SMTPD	6
SMTPC	4
MQ ROUTER	2
DIRECTORY SERVICES	4
LMDA	4
LOCAL MAIL SERVER	2
DL MANAGER	4
MESSAGE STORE SERVER	2
IMAP4 SERVER	6
POP3 SERVER	4
PREPROCESSOR	8
BTRIEVE DATABASE ENGINE	4
ANTI-VIRUS	4
ANTI-SPAM	2
RESPONDER	2

Note: Those with * are applicable only in IEMS 5 for Windows platform.

Index

A

B

C

- cc:Mail Connector 25
 - Internet Post Office Name 26
 - Post Office Administrator 25
 - Post Office Name 25
 - Post Office Password 25
 - Post Office Path 25

- Certificate File 2,40
 - certificate serial number 13
 - certificate information 13
 - license type 13
 - evaluation 13
 - interim 13
 - permanent 14
 - license key 14
 - expiration date 14
 - users 14

- Connector Administrator 27

D

- Distributed 35

E

- Expiration Date 14
- Evaluatuion 13

F

G

H

I

- Installation 1
 - Distributed 35
 - Single 1
 - interim 13

J

K

L

- License 7
- License certificate 8
- license key 14
- license type 13
 - evaluation 13
 - interim 13
 - permanent 14
- Linux 1, 35, 45, 48
 - Non-X Windows 2
 - X windows 1
- Local Notes Mail Domain 27

M

N

- Non-X Windows 2
- Notes Connector 23
 - Connector Administrator 27
 - Local Notes Mail Domain 27
 - Notes mail server 26
 - Password for the ID file 27
 - SMTP Domain Name 27
 - User/Server ID file in use 27

O

P

- Password for the ID file 27
- permanent 15
- Post Office Administrator 25
- Post Office Name 25
- Post Office Password
- Post Office Path

Q

R

- Running Internet Exchange 48

S

- Single 1
- SMTP Domain Name 27

T

U

- Users 14
- User/Server ID File in use 27

V

W

- Windows 15, 40, 47, 49

X

- X windows 3-1

Y

Z