

Installation Guide

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

7

VERSION

Internet Exchange Messaging Server

IMA INTERNATIONAL MESSAGING
ASSOCIATES

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IEMS

Internet
Messaging



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ENDUSER



WMC



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PREFACE

This is the Internet Exchange Messaging Server (IEMS) version 7.1 Installation Guide 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 IEMS on your Linux or Windows machines.

This manual is but one part of the entire IEMS 7 documentation set. It is assumed the reader of this manual understands the concepts presented in the **Internet Exchange Messaging Server 7 Principles of Operations**. The IEMS 7 documentation set is made up of the following volumes:

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

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

This manual is organized into the following chapters:

- Chapter 1, *Introduction to Internet Exchange Messaging Server***
- Chapter 2, *Single Machine Linux Installations***
- Chapter 3, *Single Machine Windows Installations***
- Chapter 4, *Installing In A Distributed Environment***
- Chapter 5, *Linux Post Configuration and Licensing***
- Chapter 6, *Windows Post Configuration and Licensing***
- Chapter 7, *Installing The License Certificate After Installation***
- Chapter 8, *Running IEMS***

CONVENTIONS USED IN THIS MANUAL

Conventions Used In This Manual

The conventions used in this manual are designed to help you learn IEMS 7 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. *jdoe@ima.com*).

CHAPTER 1

Introduction to Internet Exchange Messaging Server

Overview

This manual describes the steps in setting up, installing and running Internet Exchange Messaging Server (IEMS) 7 for Linux and Windows platforms on a single machine and in distributed environments. Running IEMS on a single machine means all its components are installed on one machine only. Running IEMS in a distributed environment allows its various components to be installed and run in parallel across different machines, providing a scalable and multi-platform messaging environment.

IEMS may be obtained by either purchasing the IEMS CD or downloading an evaluation copy at <http://www.ima.com/download/v7eval.html>.

IEMS installation is broken down into three phases:

- Software Installation
- License Installation
- Configuration

The software can be successfully installed without a license, but this does not mean immediate full access to the software. You still need to install a license certificate after the completion of the setup to fully enable your software. A 3-User Free Mode of operation is immediately available with no licensing requirements, however several features are not available in this unlicensed mode. Please see “Free 3-User Mode” on page 10 for more information.

The rest of this chapter contains the installation and licensing procedures for both the Linux and Windows versions of IEMS. In addition, both single machine and distributed mode installation procedure are described for both environments. Please skip forward to the appropriate section, depending upon your installation environment.

Licensing and Enabling of IEMS

After installing the Internet Exchange Messaging Server, a license certificate containing license information is required in order to fully activate the software. License certificates need to be requested from an authorized license manager (either IMA or who you purchased Internet Exchange from). After registration, a certificate containing information on the licensed modules is issued. This certificate is needed to identify and validate the user when installing the license key.

IEMS Editions

IEMS 7 is distributed as a single package, made up of three different editions. Users can upgrade from one edition to another at any time with no need to reinstall the system, by simply upgrading the license certificate. Each of the different editions are described below.

3 User Edition

The 3 User Edition requires no license certificate, and is not tied to the fully qualified domain name (FQDN) of the IEMS machine, as are the other IEMS editions. The 3 User Edition includes the Internet Exchange MTA, Preprocessor, Directory Server, Message Store, Web Mail Client, IMAP Server, POP Server, Mailsort, Anti-Spam (content filtering, connection control, bayesian filtering, sender site verification), and open API. Usage is limited to a maximum of 3 users.

Standard Enterprise Edition (SE)

In addition to the functionality of the 3 User Edition, the Standard Enterprise Edition (SE) includes support for Anti-Virus, MTA Pass-Through (advanced anti-spam handling), Web Folders, SMTP Authorization, SMTP SSL support, Distribution Lists, multi-domain administration, Microsoft Exchange migration tools, Microsoft Outlook Calendaring and Scheduling server support, and the BSMTP client and server. The number of users included in a SE license is 75. SE licenses are provided for free to sites that register with IMA.

Professional Enterprise Edition (PE)

In addition to the functionality of the SE Edition, the Professional Enterprise Edition (PE) includes support for Distributed Operations, MTA Pass-Through Anti-Spam for Distributed Spam Control, and the cc:Mail and Lotus Notes connectors. The number of users included in the standard PE license is 250, but can be increased without limit.

License Key Types

There are three types of licenses for the SE, and PE Editions of Internet Exchange: Evaluation, Interim, and Permanent. Evaluation licenses are time-limited licenses (normally 30-days) and are used with the freely available evaluation copies of Internet Exchange. Once a registration form is received, the authorized license manager generates this license and provides it to the user. Evaluation licenses may also be obtained over the Internet by visiting <http://www.ima.com/iems/reg.html>, as well as through the IEMS Installation Registration procedures (assuming a live Internet connection).

LICENSING AND ENABLING OF IEMS

Interim licenses are also time limited, except that an interim license can be updated to a permanent license at a later date. These licenses are used for serialized or purchased copies of Internet Exchange.

Permanent licenses are permanent and never have to be renewed. Permanent licenses are usually provided to holders of Interim licenses after the Internet Exchange software has been purchased. They are applied only to serialized copies of the software. The permanent license is generated only by any authorized license manager (IMA).

IEMS Licenses are tied with the FQDN, or fully qualified domain name of the machine IEMS is running on. To determine the FQDN of your machine, the following procedures can be used:

Linux

- From the Linux prompt execute the command : *hostname -f*
- The resulting hostname is the official FQDN of the machine

Windows NT

- Open a DOS prompt, then execute the command : *ipconfig /all*
- Look for the value of the "Host Name" field under the Windows 98 / Windows NT IP Configuration
- The value of the Host Name is the official FQDN of the machine

Windows XP

- Go to Start/Settings/Control Panel/System
- In the Computer Name folder, look for the value of Full computer name field
- The value of the Full computer name is the official FQDN of the machine

Windows 2000

- Go to Start/Settings/Control Panel/System
- In the Network Identification folder, look for the value of Full computer name field
- The value of the Full computer name is the official FQDN of the machine

FREE 3-USER MODE

Free 3-User Mode

IEMS can be run in a free 3-user mode, without requiring any licensing certificate. All features and capabilities other than those listed below are available in the 3-User mode. Features that require licensing to be enabled are the following:

- MTA Pass-Through
- Distribution Lists
- Batch SMTP
- Anti-Virus
- Web Folders
- SMTP Authorization
- Automatic Attachment Removal
- ISP / ASP Toolkit
- cc:Mail and Lotus Notes connectors
- Microsoft Exchange Migration Tools
- Outlook compatible Calendaring and Scheduling server support
- Distributed Operations

To install in the Free 3-User Mode, simply follow the instructions below for either Linux or Windows based installations, and when asked for a license certificate during the post-configuration, indicate that you will not be installing a license certificate. Details on this are provided in the appropriate post-configuration section.

3rd Party Applications**SpamAssassin**

IEMS Version 7 adds support for content filtering in the MTA. This is accomplished through the addition of a new preprocessor module that communicates with the SpamAssassin backend filter. SpamAssassin is a public domain mail filter using text analysis techniques to identify spam. It is distributed with most Linux distributions, and can also be obtained from the SpamAssassin web site:

<http://www.spamassassin.org>

SpamAssassin uses a rule base consisting of a wide range of heuristic tests on mail headers and body text, to identify "Spam", or unsolicited commercial email. The spam-identification tactics used in SpamAssassin include:

- header analysis: spammers use a number of tricks to mask their identities, fool you into thinking they've sent a valid mail, or fool you into thinking you must have subscribed at some stage. SpamAssassin tries to spot these.
- text analysis: again, spam mails often have a characteristic style (to put it politely), and some characteristic disclaimers and CYA text. SpamAssassin can spot these, too.
- blacklists: SpamAssassin supports many useful existing blacklists, such as mail-abuse.org, ordb.org or others.

3RD PARTY APPLICATIONS

- **Razor:** Vipul's Razor is a collaborative spam-tracking database, which works by taking a signature of spam messages. Since spam typically operates by sending an identical message to hundreds of people, Razor short-circuits this by allowing the first person to receive a spam to add it to the database -- at which point everyone else will automatically block it.

The SpamAssassin plug-in for IEMS provides a per server level of spam detection. The system administrator can define rules that fit his own environment for spam message detection. He can choose actions on spam identified message by marking it (by adding a X-Spam-Status header or change the subject line to `*****SPAM*****`), bouncing the email, discard the message or archive the message.

BogoFilter

Bayesian filtering is a statistical technique use for spam detection that was first described by Paul Graham in his article **A Plan For Spam** (<http://www.paulgraham.com/spam.html>) and later embellished in the paper **Better Bayesian Filtering** (<http://paulgraham.com/better.html>). There are many different Bayesian filter implementations freely available on the Internet that were considered for integration with IEMS. The BogoFilter package (<http://sourceforge.net/projects/bogofilter>) was chosen for its combination of maturity, ability to perform 3-way classification of messages, and efficiency in compiling new messages. Some Bayesian systems require the learning engine to be able to rescan the entire source set of messages when rebuilding the Bayesian databases. BogoFilter however only needs to scan in messages that have been added since the last learning session.

BogoFilter is an open source project, and is distributed under the GPL license. The version that IMA uses with IEMS, together with the source changes to properly integrated with IEMS can be freely downloaded at:

<http://www.ima.com/dist/pd/bogofilter.tgz>
<http://www.ima.com/dist/pd/bogofilter.zip>

The BogoFilter module is shipped together with the IEMS distribution, however it is a separate installation. The IEMS installer can launch the BogoFilter installer after IEMS installation, or BogoFilter can be installed separately at a later time.

OpenLDAP (Linux)

Beginning with version 7.1, IEMS uses the OpenLDAP bundled with most Linux distributions rather than shipping a separate server. This software needs to be present and installed on the system before performing the IEMS installation or upgrade. For more information, please see Appendix B.

Note: The OpenLDAP server is started automatically by the IEMS responder program, which supplies it with the proper configuration information. It is important **NOT** to have OpenLDAP started automatically via the system startup scripts in `/etc/rc.d` as this will result in an improper configuration being loaded.

CHAPTER 2

Single Machine Linux Installations

The Internet Exchange Messaging Server (IEMS) for Linux distribution consists of three packages, **IEMS**, **BOGOFILTER** and **DCE-RPC**. These packages perform the following:

- **IEMS**: Internet Exchange Messaging Server 7 files and executables.
- **BogoFilter**: Bogofilter libraries used to enable Anti-Spam Bayesian filtering capabilities.
- **DCE-RPC**: Distributed Computing Environment - Remote Procedure Call - used to enable RPC communication between IEMS modules residing on separate machines.

All distributions above are packaged using RPM, a Linux distribution format and can be installed using the `rpm` program, executed by the user at the shell prompt either manually or through the shell script `install`. The installation program can be invoked by entering the following:

```
./install
```

If the IEMS CD is available, insert the CD on your CD-ROM drive. Go to directory `./mnt/cdrom/linux` and start the installation by typing `./install` at the `#` prompt.

If the IEMS CD is not available, the download copy should be used. The downloaded copy of IEMS is a standard compressed tar (`iems-7.1-linux.tgz`) file. Hence, it needs to be extracted to obtain the installer file. To do this, follow the steps given below:

- Create a directory
- Move the downloaded copy of IEMS to the directory previously created
- From this directory, extract the installer file by typing the following:

```
tar xvzf iems-7.1-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. The `install` script will first make sure that the file `/usr/lib/libstdc++-libc6.1-1.so.2` of the standard C++ libraries for RedHat 6.2 backward compatibility package (`compat-libstdc++`) is present. Then, it will proceed to install the DCE, BOGOFILTER and IEMS rpm packages. If a prior version of the latter is found, an upgrade will be performed instead.

The installation process will ask if the BOGOFILTER package should be installed automatically. For sites that want to enable the Anti-Spam Bogofilter capability, it is recommended that the BOGOFILTER package be installed automatically.

The following is displayed:

Would you like to install Anti-Spam bogofilter library? [Y/N]:

The BOGOFILTER can be installed manually later by using the following RPM command:

```
rpm -ivh iems_bogofilter-0.11.2-2.i386.rpm
```

IEMS uses the Apache web server to provide the administrative and user web access to Internet Exchange. The next step of the installation process will ask if the Apache configuration file should be automatically updated, or if the administrator would like to manually make the changes later. For sites that are hosting web sites on the IEMS machine, it is recommended that the Apache configuration file be edited manually so that IEMS can be setup as a separate virtual host.

The following is displayed:

Would you like to have your HTTPD configuration changed so that the default page is set to the IEMS administration interface [Y/N]:

If the Apache configuration file is not updated, the following is displayed:

Web access to the IEMS administration interface can be enabled later by simply adding the following line to your HTTPD configuration file:

```
include "/etc/httpd/conf/iems.httpd.conf"
```

Finally, the script will display:

Installation is complete. Please go to the following URL:

`http://FQDN/iems/cgi-bin/postconfig.cgi`

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`

in the URL (Universal Resource Locator) field. FQDN is stands for the Fully Qualified Domain Name of the machine where IEMS was installed.

At this point the web-based post configuration should be running. To continue with the post configuration, please see "Linux Post Configuration and Licensing" on page 37.

Note: If you are upgrading from a previous version of IEMS, the directory database used with the earlier version of IEMS will be migrated to OpenLDAP at this point. Under most circumstances no additional information will need to be provided and the process is automatic.

CHAPTER 3

Single Machine Windows Installations

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

cc:Mail Connector Considerations

If you wish to include cc:Mail connector support, you must install the Lotus VIM (32-bit Windows version) DLL's on 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>

Lotus Notes Connector Considerations

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, needs to be moved to the Microsoft Windows installation directory. The default location for Windows NT is *C:\WINNT*. Similarly, if you are installing IEMS on a 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, first 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.,

IEMS WINDOWS INSTALLATION

Netscape, Internet Explorer). Start the “Lotus Notes Domino Administrator program” and complete the following steps:

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

For more information, please see:

<http://www.ima.com/pdf/notescn.pdf>

and

<http://www.ima.com/pdf/notes5config.pdf>

IEMS Windows Installation

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

IEMS for Windows can be installed on a single machine in one of two ways. One, is to simply insert the IEMS CD and let the autorun utility automatically initiate the installer setup program. The setup opening screen (see Figure 1 on page 18) will appear. In case this does not happen, run the **setup.exe** file manually from your CD-ROM drive located in the windows\iems directory.

The other installation method applies to the evaluation copy of IEMS (iems-6.x-windows.zip) which can be from:

<http://www.ima.com/download/v7eval.html>

The downloaded copy is a compressed zip file. Hence, you first need to extract the distribution in your preferred directory. After extraction, locate the **setup.exe** file in the iems directory where you extracted the IEMS files and run it. Like the first method, this also leads you to the IEMS setup opening screen (see Figure 1 on page 18).



Figure 1: Setup Opening Screen

IEMS WINDOWS INSTALLATION

The “Welcome” screen (see Figure 2 on page 19) informs you that copyright laws and international treaties protect IEMS.

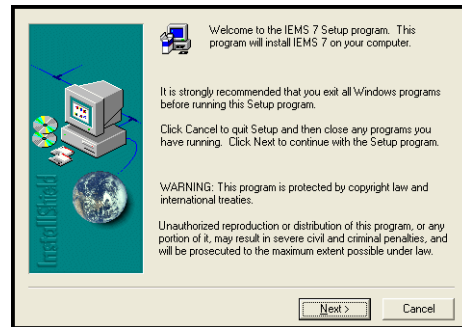


Figure 2: Welcome Screen

Click the **Next** button to proceed with the installation. This action displays the “License Agreement” screen (see Figure 3 on page 19).

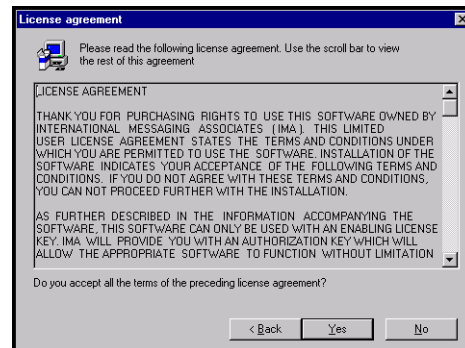


Figure 3: License Agreement Screen

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 4 on page 20).

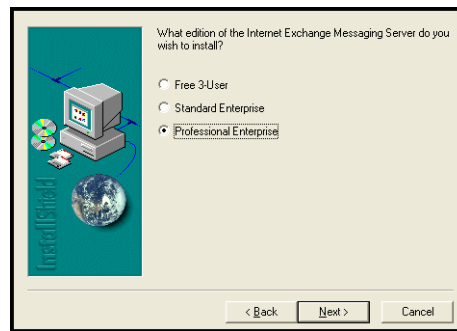


Figure 4: Initial Windows Setup Screen

The next screen asks what edition of IEMS you are installing. Even if you choose Standard Enterprise or Professional Enterprise editions, you will later be able to install the Free 3-User license. Select the option most suited to your site, and click **Next** to continue.

If you are installing the Professional Enterprise edition, the following screen will be displayed:



Figure 5: Selecting Component for Professional Enterprise Users

In the above screen, select the **First Internet Exchange Messaging Server 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** 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 6 on page 21).

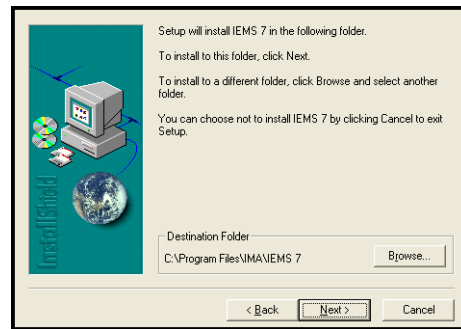


Figure 6: Directory Location Selection

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\IEMS 7* 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.

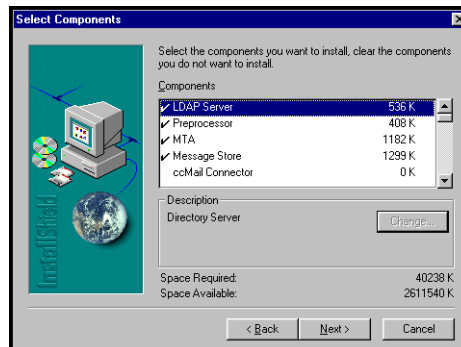


Figure 7: Component Selection

If this is a Professional Enterprise edition installation, you will be asked to select the components to install. The Select Components screen The Select Components screen (see Figure 7 on page 21) 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.

The next screens ask if you want to install the Apache web server, and then the associated file locations.

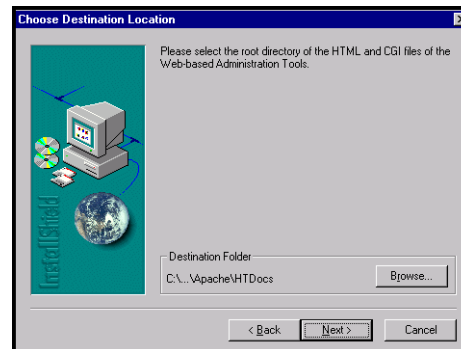
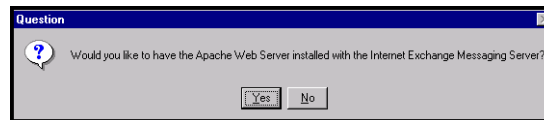


Figure 8: HTML and CGI File Location Setup

The Choose Destination Location (see Figure 8 on page 22) 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\IEMS 7\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 9 on page 22).



Figure 9: Select 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 7”. 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 10 on page 23) displaying how much of the installation process has been completed.

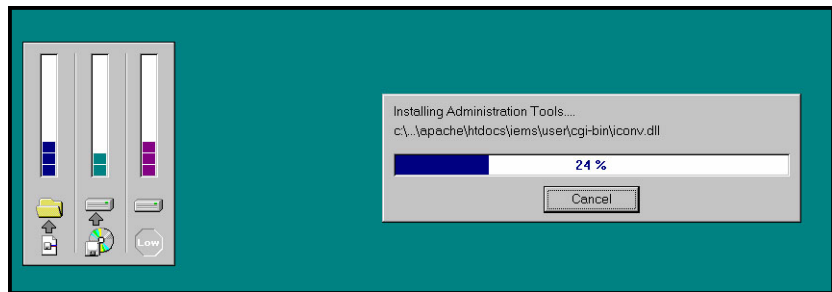


Figure 10: Installation Progress Bar

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 11 on page 23).



Figure 11: Setup Completion

If the cc:Mail and/or the Lotus Notes connectors were selected for installation, the setup program continues with their configuration (see “cc:Mail Connector” on page 24 and “Notes Connector” on page 25 for details on how to configure the connectors). Otherwise, if no connectors have been installed, the installation phase is now complete.



Figure 12: IEMS Setup Program Completion

cc:MAIL CONNECTOR

At this point please follow the post configuration instructions found at “Windows Post Configuration and Licensing” on page 43.

cc:Mail Connector

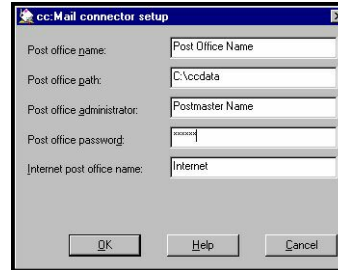


Figure 13: Configuring the cc:Mail Connector

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 14 on page 25). Otherwise, please proceed to “Windows Post Configuration and Licensing” on page 43 to finish the licensing and configuration of IEMS.

NOTES CONNECTOR

Notes Connector

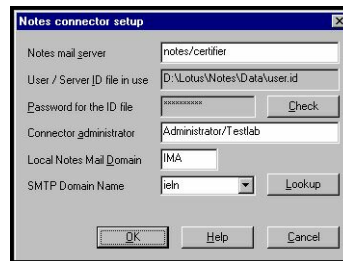


Figure 14: Configuring the Lotus Notes Connector

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 14 on page 25), 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 displays choices in the **SMTP Domain Name** menu. Choose an SMTP domain name from the menu.

After entering values for all the fields, click the **OK** button. At this point, installation is complete, so please proceed to "Windows Post Configuration and Licensing" on page 43 to finish the licensing and configuration of IEMS.

BOGOFILTER INSTALLATION

Bogofilter Installation

The Bogofilter package for Windows can be installed in one of two ways. One, is to simply insert the IEMS CD and run the **setup.exe** file manually from your CD-ROM drive located in the Windows\bogofilter directory.

The other installation method applies to the Internet download copy of IEMS which can be obtained from:

<http://www.ima.com/download/v7eval.html>

The downloaded copy of the Bogofilter package is a compressed zip file. Hence, you first need to extract the distribution in your preferred directory. After extraction, locate the **setup.exe** file in the bogofilter directory where you extracted the IEMS distribution, and run it. Like the first method, this also leads you to the Bogofilter setup opening screen.

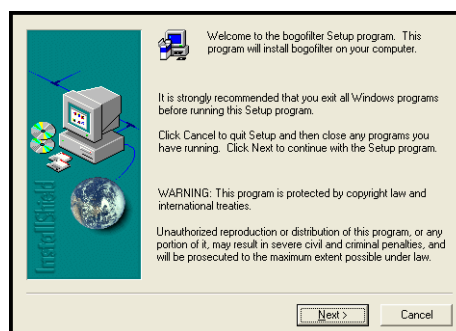


Figure 15: Bogofilter Welcome Screen

The “Welcome” screen informs you that copyright laws and international treaties protecting Bogofilter.

Click the **Next** button to proceed with the installation. This action displays the “License Agreement” screen .

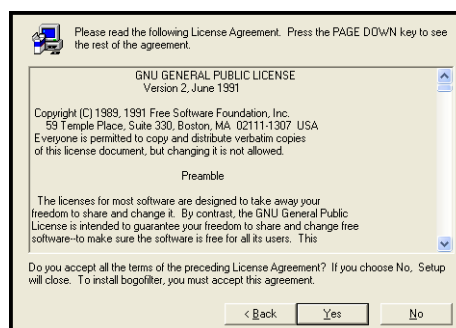


Figure 16: Bogofilter License Agreement Screen

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.

BOGOFILTER INSTALLATION

Upon completion of the installation, the setup program informs you that the end of installation has been reached .



Figure 17: Bogofilter Setup Completion

CHAPTER 4

Installing In A Distributed Environment

The Internet Exchange Messaging Server (IEMS) 7 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"

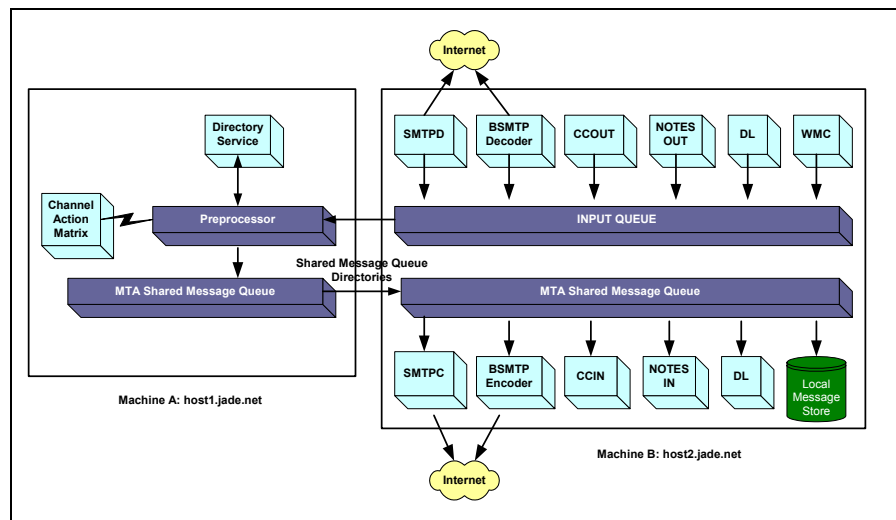


Figure 18: IEMS in a Distributed Environment

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 INSTALLATION

Linux Installation

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 “Single Machine Linux Installations” on page 13.

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 Figure 19 on page 30).

```
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/iems/remotequeue
Enter [1....6] to change value
  [A]bort
  [R]eload settings
  [Q]uit to save changes
```

Figure 19: Linux Preprocessor Configuration

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]
writable=yes
available=yes
max connections=0
valid users=iems
force group=iems
force user=iems
directory mask=755
create mask=660
path=/var/spool/iems/mqueue
```

where:

[mqueue] - the samba share name

writable=yes - full permission to write

path=/var/spool/iems/mqueue - directory accessed through the share

max connections = 0 - unlimited connections

available=yes - share is available to all

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

force group=iems - All directories / files created in the share are set to primary group *iems* ownership

force user=iems - All directories / files created in the share are set to user *iems* ownership.

directory mask=755 - All directories created are set to 755 mode permission

create mask=660 - All files created in the share are set to 660 permission

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. Set the password for the UNIX user “iems” by typing at the # prompt:

```
passwd iems
```

Enter the password for the UNIX user iems.

2. At the # prompt (root login), add the Samba user “iems” by typing:

```
smbadduser iems:iems
```

then press Enter. Enter the password used for the UNIX user “iems” in step #1.

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

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

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

ON MACHINE B:

To install the Message Store on Machine B, follow the steps in “Single Machine Linux Installations” on page 13.

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 -o  
username=iems,password=iems_password
```

After mounting the Message Queue to Machine B, restart all IEMS modules in the following order:

- On machine B, execute: `/etc/rc.d/init.d/responder stop`
- On machine A, execute: `/etc/rc.d/init.d/responder restart`
- On machine B, execute: `/etc/rc.d/init.d/responder start`

Windows Installation

ON MACHINE A:

To install the Directory Server, Preprocessor and MTA on Machine A, follow the steps in “Single Machine Windows Installations” on page 17.

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\IEMS 7*.
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 allow the Message Store of **Machine B** to access the Message Queue on **Machine A**, you must first run the Windows Preprocessor Configuration (see Figure 20 on page 34). 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\IEMS 7*. Locate and then double click the **preconf.exe** file. The Windows Preprocessor Configuration screen will appear.

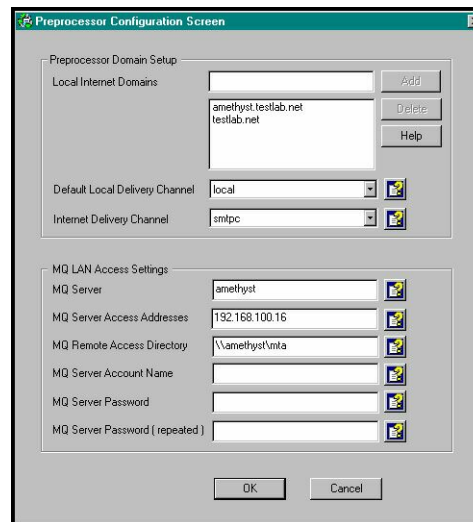


Figure 20: Windows Preprocessor Configuration

For the screen shown on Figure 20 on page 34, each box corresponds to the following:

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.

Default Local Delivery Channel: used for recipients who belong to the local domain, but are not located in the Directory Server.

Internet Delivery Channel: set to SMTPC by default. This refers to the channel capable of delivering messages to the internet.

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

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.

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).

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.

WINDOWS INSTALLATION

MQ Server Password: contains the password which gives the “MQ Account Name” full access to the “MQ Remote Access Directory” on the above field.

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, except for the following:

In selecting the installation type (see Figure 4 on page 20), choose **Installing additional Internet Exchange Messaging Server**.

After selecting the installation type, enter the FQDN of the machine running the Directory Server .

Input the port number used by the Directory Server . 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 21: Directory Server Name Configuration

In selecting the components to be installed, select Message Store, Web Administrator and Apache Web Server (see Figure 7 on page 15). After completing the installation, restart all machines for new settings to take effect.



Figure 22: Directory Server Port Number Configuration

CHAPTER 5

Linux Post Configuration and Licensing

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 and passwords are “**administrator**” and “**system**”. Select Ok. This will bring up the “License Agreement” screen.

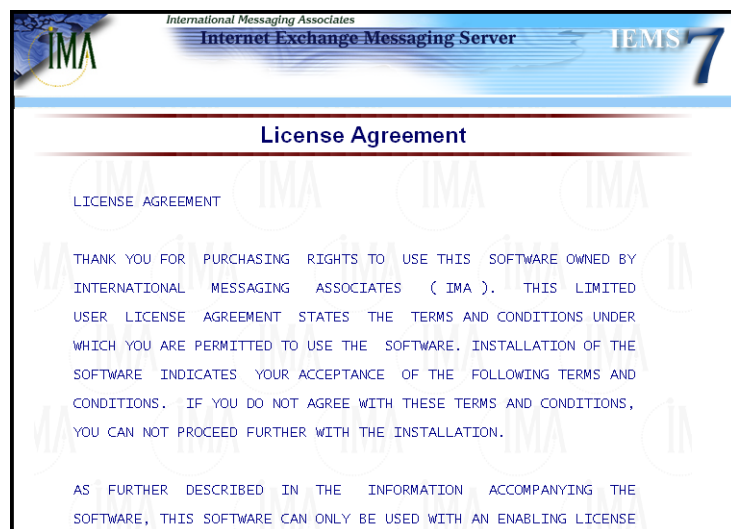


Figure 23: License Agreement

Click on the “**Accept**” button to continue. This will bring up the “Licensing Options” screen (see Figure 24 on page 38). At this point there are three ways in which to proceed, depending upon if you intend to license IEMS, and if so, if you currently have the license certificate or not. If you are not going to license IEMS and wish to run in the Free 3-User Mode, please jump to “Completing Installation For Free 3-User Mode” on page 38. If you already have a valid IEMS certificate for this site, please see “Completing Installation With Certificate” on page 39. If you do not currently have a valid license for this site, but wish to apply for one, please go to “Completing Installation And Requesting New Certificate” on page 42.

COMPLETING INSTALLATION FOR FREE 3-USER MODE

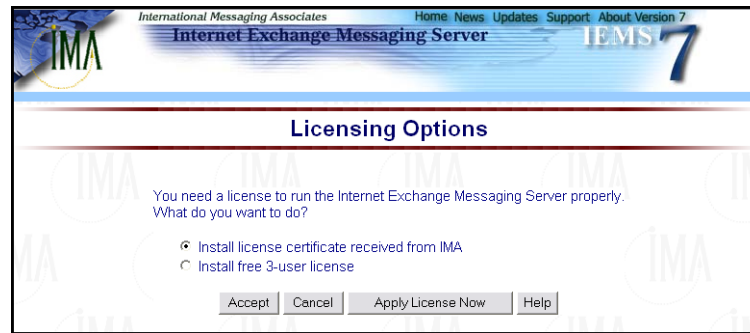


Figure 24: Licensing Options

Completing Installation For Free 3-User Mode

When prompted for the type of installation in the “Licensing Options” screen, select **Install free 3-user license**, and click on **Accept** to continue. IEMS will then be installed in the 3-user mode, and the following screen displayed:

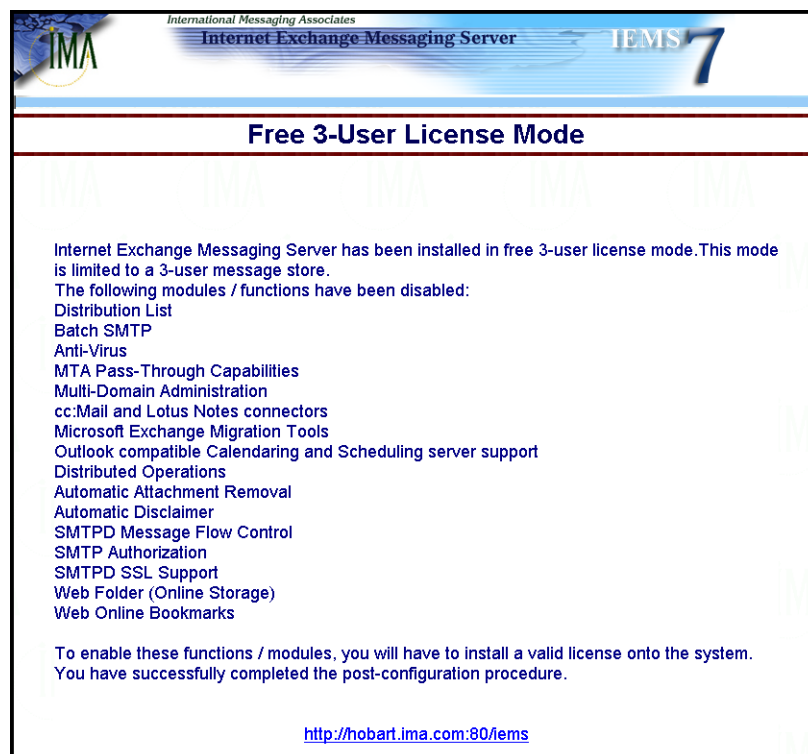


Figure 25: Confirmation of “3 Free User Mode” Registration

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 this, please visit <http://www.ima.com/download/v7eval.html> at any time.

This completes the installation in 3-User Free mode.

COMPLETING INSTALLATION WITH CERTIFICATE

Completing Installation With Certificate

When asked if you have a license certificate for IEMS (see Figure 24 on page 38), select **Install license certificate received from IMA** and then click **Accept** to continue. This will then bring up the Certificate Installer screen (see Figure 26 on page 39) allowing 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**.

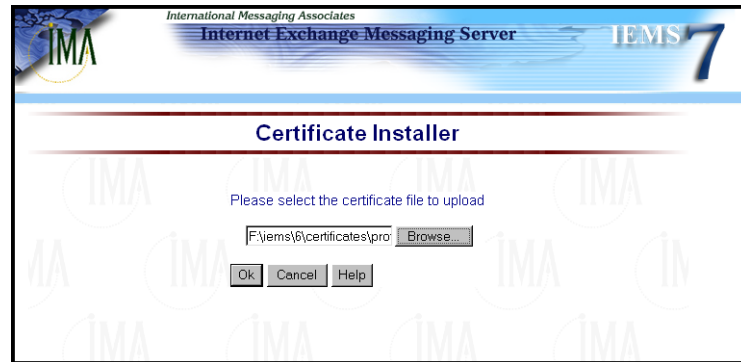


Figure 26: Certificate File Uploading

Once the certificate installer locates the certificate file, it extracts and displays the licensing information contained in the certificate (see Figure 27 on page 39).

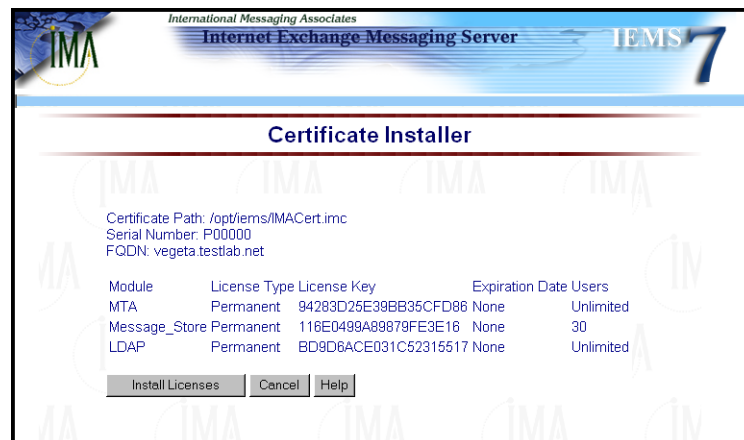


Figure 27: Certificate File Content Display

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.

COMPLETING INSTALLATION WITH CERTIFICATE

License Type

The type of license to be installed. There are three license types, namely evaluation, interim, and permanent:

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 components 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 27 on page 39), click **Install Licenses**. After license installation, the “OpenLdap Configuration” screen will be displayed (see Figure 28 below).

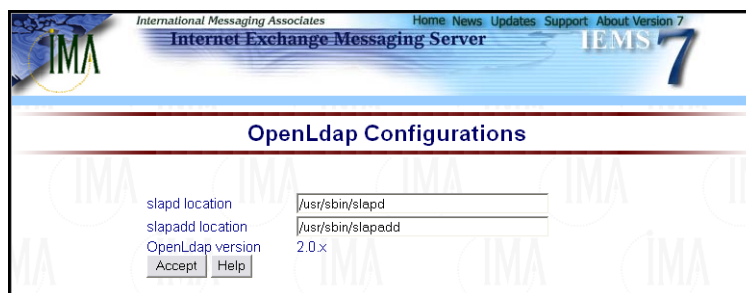


Figure 28: OpenLdap Configuration

After checking and making any necessary changes (none are required for standard installations), click the **Accept** to continue. This action displays the “Configuration Complete” screen (see Figure 29 on page 40) when installing either the Standard Enterprise edition. It will point you to the URL of the main IEMS page. This completes the installation of IEMS for Linux (Standard Enterprise Edition).



Figure 29: Installation Completion Screen

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

Professional Enterprise Edition Post Configuration

When installing a Professional Enterprise edition license, the “Welcome to Post Configuration” screen (see Figure 30 on page 41) will now appear. On this screen, if you are installing IEMS in a single machine environment, or if this is the first machine of a distributed environment, select the First Internet Exchange Messaging Server 7 Installation option. Otherwise, select the additional IEMS option. Select Accept to continue. This will display the “Select Components” screen (see Figure 31 on page 41).



Figure 30: Post Configuration Welcome Screen

The “Select Components” screen 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 31: Selecting Components

If you are installing the entire messaging server on a single machine, select all the components listed in the above screen, otherwise select just those

COMPLETING INSTALLATION AND REQUESTING NEW CERTIFICATE

items that are needed for the current installation. Press **Ok** to continue. This completes the Professional Enterprise edition Post Configuration, and the “Configuration Complete” screen (see Figure 29 on page 40) is displayed.

Completing Installation And Requesting New Certificate

When asked if you have a license certificate for IEMS (see Figure 24 on page 38), select **Apply License Now** to continue. This will redirect to the License Registration page on the IMA website.

The License Registration 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. 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 or machine name, and *ima.com* is the domain name.

To fill the FQDN information, 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).

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.*

Once the registration has been submitted, the evaluation certificate will be sent to the email address indicated in the registration form. License certificates are normally returned within one business day after receipt of the registration. When the certificate is received, please go to “Installing The License Certificate After Installation” on page 47 to complete the licensing and installation of IEMS.

CHAPTER 6

Windows Post Configuration and Licensing

After completing the base installation of IEMS, select **Finish** when asked to complete the setup (see Figure 11 on page 23). This marks the end of the installation phase and the start of the Post Configuration and Licensing.

At this point there are three ways in which to proceed, depending upon if you intend to license IEMS, and if so, if you currently have the license certificate or not. The “Internet Exchange Messaging Server Setup” screen (see Figure 32 on page 43) is next displayed to indicate the start of the Post Configuration phase.

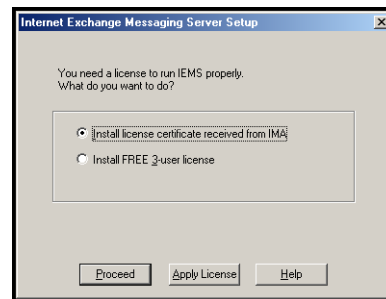


Figure 32: IEMS Post Configuration Startup

If you are not going to license IEMS and wish to run in the Free 3-User Mode, please select “Install FREE 3-user license” and go to “Completing Installation For Free 3-User Mode” on page 43. If you already have a valid IEMS certificate for this site, please see “Completing Installation With Certificate” on page 44. If you do not currently have a valid license for this site, but wish to apply for one, please go to “Completing Installation And Requesting New Certificate” on page 45.

Completing Installation For Free 3-User Mode

Upon entering the Post Configuration and Licensing phase, you will be asked if a license certificate is available (see Figure 32 on page 43). Since you will not be installing a license, select **Install FREE 3-user license**, and then click **Proceed**.

The installation will now be completed in “3 Free User Mode”, and the Free 3-User License Confirmation screen will be shown (see Figure 33 on page 44) completing the installation.

COMPLETING INSTALLATION WITH CERTIFICATE

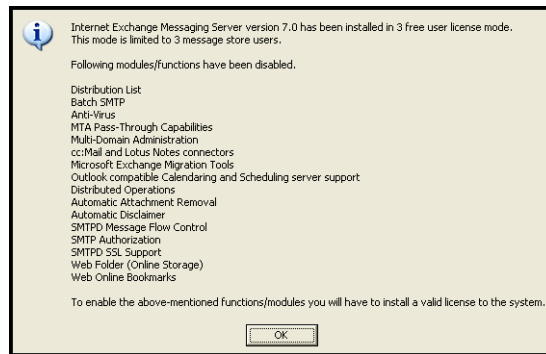


Figure 33: Free 3-User Mode License Confirmation

Completing Installation With Certificate

Upon entering the Post Configuration and Licensing phase, you will be asked if a license certificate is available (see Figure 32 on page 43). Select **Install license certificate received from IMA** and click on **Proceed** to continue.

The Certificate Installer screen now appears (see Figure 34 on page 44). Select the **Browse** button to set the location of the certificate file. Once identified, the certificate installer extracts and displays the licensing information contained in the certificate on screen.

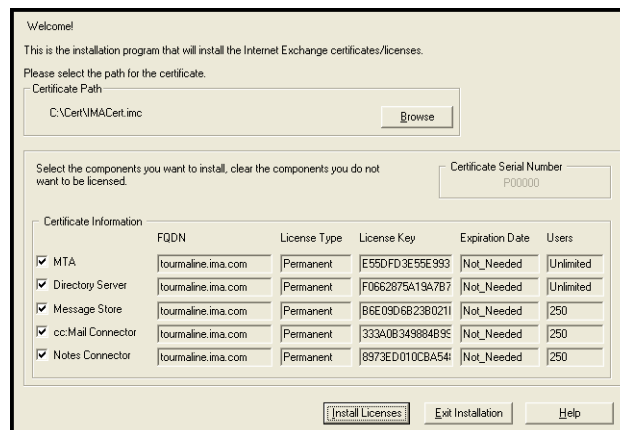


Figure 34: Certificate Installer Screen

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

Select the components to be licensed by marking the appropriate check boxes. Once selected, click the **Install Licenses** button, to apply the license. A new screen displaying the component licenses that have been successfully installed now appears (see Figure 35 on page 45). Click the **Ok** button.



Figure 35: License Installation Confirmation

The IEMS Setup Completion screen is now shown (see Figure 36 on page 45) to indicate successful installation. Click the **OK** button to continue. The final installation screen is then shown (see Figure 37 on page 45). This information screen will point you to the URL to use to continue the configuration and administration of IEMS.



Figure 36: Setup Complete



Figure 37: Information Screen

Completing Installation And Requesting New Certificate

Upon entering the Post Configuration and Licensing phase, you will be asked if a license certificate is available (see Figure 32 on page 43). If you wish to apply for and install a license later, click on **Apply License** to continue. This will redirect to the License Registration page on the IMA website..

The License Registration 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. 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 or machine name, and *ima.com* is the domain name.

To fill the FQDN information, 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.

Note: Filling up the corresponding boxes for cc:Mail and Notes is optional.

COMPLETING INSTALLATION AND REQUESTING NEW CERTIFICATE

Once the registration has been submitted, the evaluation certificate will be sent to the email address indicated in the registration form. License certificates are normally returned within one business day after receipt of the registration. When the certificate is received, please go to “Installing The License Certificate After Installation” on page 47 to complete the licensing and installation of IEMS.

CHAPTER 7

Installing The License Certificate After Installation

Linux Installation

Successful installation of IEMS does not mean full 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. This section describes the procedures for both Linux as well as Windows installations for applying a license certificate after the installation has been completed.

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.

The commands on the screen above instructs the setup program now to proceed with the license installation. Typing "B" or "b" will prompt you to enter the directory location of the certificate file. 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 Figure 38 on page 48).

Expiration Date	: Not_Needed
Users	: Unlimited

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

*** LDAP ***	: mail.ima.com
FQDN	: Permanent
License Type	: 554EF9AB6334W4
License Key	: Not Needed
Expiration Date	: Unlimited
Users	
*** Message Store ***	: mail.ima.com
FQDN	: Permanent
License Type	: 567QR5ST999XT9
License Key	: Not Needed
Expiration Date	: Unlimited
Users	
*** MTA ***	: mail.ima.com
FQDN	: Permanent
License Type	: 877AB9ZB558G9
License Key	: Not Needed
Expiration Date	: Unlimited
Users	
B - Browse certificate path C - Cancel (Exit) installer I - Install license	

Figure 38: Linux Certificate Installer

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 Installation

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\IEMS 7*). Double click the *Certinst.exe* file to activate the Certificate Installer. The first licensing screen will be displayed (see Figure 34 on page 44).

This screen signals the start of the software license installation. Click the **Yes** button to continue. The Certificate Installer screen (see Figure 34 on page 44) 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. 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 8

Running IEMS

Linux Installation

This section describes how to start IEMS using either Linux or Windows operating systems.

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 Direct Running Of The Program Files

Another way of running Internet Exchange Messaging Server (IEMS) 7 for Linux is to manually start each component of IEMS. To do this, first check if the Apache Web Server is already running. If not, 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> - is the executable file of the component

Note: the "&" - runs the program in the background

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

```
./preprocessor &
```

WINDOWS INSTALLATION

Below are the corresponding executable files of the IEMS components:

- Directory Server - sldapd
- Preprocessor - preprocessor
- 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
- Log Daemon - logd

The Directory Server (sldapd) and Preprocessor (preprocessor) modules should be the first and second module to start up, as other modules are dependent on it. After these two modules start, other can be started independently. The Directory Server module used by IEMS beginning with version 7.1 is the OpenLDAP server shipped with most Linux distributions, and not part of the IEMS distribution.

Note: *The Directory Server should be started via the responder script rather than the system startup scripts in /etc/rc.d. This is so that the proper IEMS configuration can be specified at startup time. If started via the system startup scripts, the IEMS configuration will not be loaded resulting in failure of the IEMS system to start properly.*

Windows Installation

Through The Start Menu

Go to *Start\Programs\Internet Exchange 7\Apache Web Server* to run the Apache web server. Then, go to *Start\Programs\Internet Exchange 7\MC Responder* to activate the MC Responder. This will automatically run all the IEMS components (i.e., LDAP, Preprocessor, SMTPC, among others).

By Direct Running Of The Program 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 an MS DOS session, then go to the IEMS directory (*C:\Program Files\IMA\IEMS 7*). From this directory, type the corresponding executable files of the components you wish to activate. See list of executable files on the previous page.

APPENDIX A

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APPENDIX B

System Requirements

For optimum performance, it is recommended that Internet Exchange Messaging Server (IEMS) version 7 and its components be installed using the following minimum configurations:

Windows 2000, Windows XP 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

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 supports the following Linux distributions:

- RedHat 6.2 - 9.0
- Mandrake 8.2 - 9.1
- SCO Linux Server 4.0 (United Linux 1.0)
- RedFlag
- Cosix (CS&S)

OpenLDAP (Linux)

IEMS 7.1 now uses the OpenLDAP distributed with most Linux distributions rather than shipping a separate server. This software needs to be present and installed on the system before performing the IEMS install or upgrade. The OpenLDAP distributions can usually be found on the CD's that accompany your Linux distribution. The needed RPM's for various distributions are listed below:

RedHat 7.2

openldap-servers-2.0.11-13.i386.rpm
openssl-0.9.6b-32.7.i386.rpm
openldap-2.0.11-13.i386.rpm

RedHat 7.3

openldap-servers-2.0.23-4.i386.rpm
openssl-0.9.6b-32.7.i386.rpm
openldap-2.0.23-4.i386.rpm

RedHat 8.0

openldap-servers-2.0.25-1.i386.rpm
 openssl-0.9.6b-33.i386.rpm
 openldap-2.0.25-1.i386.rpm

RedHat 9.0

openldap-servers-2.0.27-8.i386.rpm
 openssl-0.9.7a-2.i386.rpm
 openldap-2.0.27-8.i386.rpm

Mandrake 8.2

openldap-servers-2.0.21-4.2mdk.i586.rpm
 openssl-0.9.6i-1.4mdk.i586.rpm
 libldap2-2.0.21-4.2mdk.i586.rpm

Mandrake 9.0

openldap-servers-2.0.25-7.2mdk.i586.rpm
 openssl-0.9.6i-1.4mdk.i586.rpm
 libldap2-2.0.25-7.2mdk.i586.rpm

Mandrake 9.1

openldap-servers-2.0.27-4mdk.i586.rpm
 openssl-0.9.7a-1mdk.i586.rpm
 libldap2-2.0.27-4mdk.i586.rpm

To determine if a given RPM is present on your system, run the following:

```
rpm -q <package-name>
```

Example:

```
rpm -q openldap-servers
```

to see if the openldap-servers package is installed and if so what version.

TCP Port Usage

The Internet Exchange Messaging Server makes use of the following TCP ports:

21	FTP (Calendaring / Scheduling backend server)
25	SMTP
110	POP3
143	IMAP4
389	LDAP (Directory Server)
1234	Responder
1235	Message Queue Server
1236	Preprocessor Alias Update listener
1240	Antivirus Server (when AV configured in distributed mode)
4000	Locmail Server
4001	Message Store Server

Note: *The above mentioned system requirements are applicable for both single machine and 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 requirements for your machine, please refer to the **Internet Exchange Messaging Server 7 - Site Planning Guide** for a detailed description.

For example, if you have a machine running Windows 2000, you need a minimum of 96MB of RAM to run the OS. If you wish to install 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 the 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. 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 this certificate file, you will not be able to run the software.

Note: Those with * are available only on Windows platforms.

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