RELEASE NOTES

Internet Exchange Messaging Server 7.1

Internet Exchange Messaging Server (IEMS) 7 is a highly modular and scalable open architecture system. It can be used from small single machine installations to fully distributed systems linking geographically distributed sites into a common set of logical domains (see Figure 1). Its various components can be run on a single machine or in a distributed environment.

IEMS 7 introduces a new integrated Anti-Spam approach to message reception and delivery. The MTA Pass-Through technology employed by IEMS 7 allows end users (message store accounts), individual distribution list maintainers, and connector modules to define their own security profiles independent of the rest of the system. At the same time the messaging system administrator can still define an overall global security policy, where some anti-spam measures will be handled directly by the MTA (such as reliable DNS-BL identified traffic). Other measures which may be desired by part of the user community, such as DNS-BL's with known high false positive rates (at the time of this writing, SpamCop and a few others have received a lot of industry coverage for their perceived indiscriminate listing practices) can then be passed through to the users for consultation on a case by case basis.

In most conventional messaging systems, security measures are employed on a system wide basis, making the choice of tools, such as DNS-BL's, critical. IEMS MTA Pass-Through technology changes this by allowing the administrator to be able to employ many more countermeasures, enabling only those that have been proven to be universally effective at the MTA level, and letting users pick and choose what additional measures they may or may not wish to apply to their individual message traffic

This document discusses the product features of IEMS 7; and known problems and limitations that have been identified in this release. Hardware and software requirements for IEMS 7 installation are also included.

What's New in Version 7

Apart from fixing some issues outstanding in version 7, this release introduces some new features:

Edition Support

IEMS 7.1 now supports 3 Editions in a single binary distribution - Free 3-User, Standard Enterprise, and Professional Enterprise. Upgrades from the Free 3-User edition through the Professional Enterprise can be accomplished by applying a new license certificate. The Version 6 SME and SE editions have been consolidated to a single V7 SE release. 75-User Standard Enterprise licenses are provided free of charge to sites who register with IMA.

LDAP Version 3 Support (Linux)

IEMS 7.1 now works with the OpenLDAP included in all major distributions. Under Linux, OpenLDAP is now required to be installed before initial installation or upgrade from previous versions of IEMS.

MTA Content Filtering

IEMS 7 has added MTA level support for the SpamAssassin mail filter. SpamAssassin is used for doing spam content analysis of messages as they pass through the MTA.

Bayesian Filtering

Bayesian filters use statistical techniques to calculate the probability of messages being spam. The filter uses mail samples provided by each user to determine the spam probability on a user by user basis. This approach results in a robust and adaptable system with success rates commonly in excess of 98% after initial training. Bayesian filtering has been incorporated into the IEMS Local Mail Delivery Agent, allowing for highly efficient user directed filtering.

Integrated Anti-Spam (MTA Pass-Through)

System administrators are often caught in the middle of conflicting sets of requirements. On one hand, it is their responsibility to protect their organization and systems from outside (and sometimes inside) attacks from virus infected messages as well as spam. At the same time, they serve the users of these systems.

Traditional spam fighting techniques are performed by the MTA based upon policies set by the administrator. These global policies normally are set to ensure the maximum protection for the organization with minimal impact on the end user. In the case of spam detection and handling, the definition of what constitutes spam can vary widely from community to community, as well as from user to user within a single organization. Sales and marketing related messages may be very welcome in a sales group, while not being tolerated in a nearby engineering group. Advertisements pitching lower mortgage rates may be undesirable by most but a small group of people looking to purchase a new home. Viagra advertisements and other personal enhancement types of advertisements may not be at home for any users, especially if the site caters to the young or corporate users.

IEMS 7 introduces a new MTA Pass-Through technology used to integrate the various anti-spam measures, and to allow the application of these measures to be adapted to the varying requirements of each user. Pass-Through technology allows the system administrator to be able to perform MTA level checks on messages, and then to optionally defer any action until being handled by an agent controlled by the end user. These agents are typically output channel processors, such as the Local Mail Delivery Agent, the Distribution List Processor, and others. As not all output channels are capable of handling deferred actions (such as the cc:Mail and Notes connector modules), the administrator can define default actions to be performed on a channel by channel basis, which will then be carried out by the preprocessor.

SMTP Authentication

IEMS 7 adds support for SMTP Authentication. Remote mail clients can now use SMTP Auth to connect with an IEMS MTA, which will then permit relaying of email once the remote client has been properly authenticated.

SMTP SSL Support

SSL support has been added for the SMTP protocol.

Non-Delivery Notification Special Handling

One of the biggest problems a mail administrator has to deal with is maintaining outbound SMTP queues. This problem is made more difficult in this age of rampant spam by the number of non-delivery notification (NDN) messages generated when messages arrive for non-existent users. Most times the return addresses are un-replyable, resulting in huge message backlogs in the outbound SMTP queues.

IEMS 7 adds several tools to assist the administrator in dealing with growing mail queues of non-delivered spam mail. Messages that have been identified by the system as spam candidates which result in non-delivery can have different time to live values assigned to them in the SMTPC queue. For instance, while a normal message may be permitted to hang around until it gets delivered or say 3 days (typical), a spam tagged NDN message on the other hand can be configured for a much smaller value - say 4 hours. This special handling allows for the automatic management of the outbound queues, not only keeping them at reasonable levels, but also allowing the administrator to be able to finally see through all the junk messages to valid

Web Folders

Online storage features have been added to the Web Mail Client. This new subsystem includes the following features:

- Login through webmail login interface
- A file manger like user interface (e.g. Internet Explorer)
- Webmail client can detach attachments from email message and store the attachment inside the online storage area
- Provides easy uploading and downloading facilities
- Ability to launch local application to view / edit files being stored in the online storage area

Domain Administration

IEMS has always been able to support multiple domains on a single machine. Administration of these domains is done through the mail system administrator interface. IEMS 7 adds the ability to delegate domain administration (message store, distribution list) to sub-administrators.

Open Client API

IMA provides two sets of Application Programming Interfaces (APIs) for messaging system developers. Developers looking to build gateway modules, or other applications that need to tightly integrate with the IEMS MTA and Preprocessor should use the Message Queue (MQ) API. This API provides the tools necessary to directly manipulate the MTA Shared Message Queue. In

addition, programmers can make use of this API to build new Preprocessor filter modules.

Developers needing to write user applications or other applications that sit outside of the messaging system should use the Client API's. The IEMS Client API provides both C++ as well as PHP interfaces to the application developer. It encapsulates most of the functional details provided by the different IEMS subsystems and provides a simplified API. The Client API provides a simple to use interface to the IEMS Message Store, and provides simple tools for message submission. User authentication and password management tools are also included.

Licensing - Anti-Virus

Anti-Virus functions are now standard in all licensed IEMS versions, except the free (non-licensed) 3-user version.

PRODUCT FEATURES

Internet Standards Support

IEMS 7 is specifically designed to conform to Internet standards to ensure system stability and flexibility. These standards include:

- **SMTP (Simple Mail Transfer Protocol)**
  IEMS communicates with mail hosts on the Internet using the SMTP. This protocol is used for the submission as well as the reception of messages. To communicate well with the Internet, IEMS implements SMTP as two separate modules. A client program, SMTPC (Simple Mail Transfer Protocol Client), delivers messages to the Internet. The server program, SMTPD (Simple MailTransfer Protocol Daemon), listens for incoming messages on the Internet.

- **BSMTP (Batch Simple Mail Transfer Protocol)**
  IEMS includes a batch-mode implementation of SMTP supporting the BSMTP Media Type (RFC-2442). This is a MIME (Multipurpose Internet Mail Extensions)-content type that is used to tunnel ESMTP (Extended SMTP) transactions through any MIME-capable transport. This feature allows the tunneling of a group of messages to a predefined Internet address while preserving the original envelope or delivery information of each message.

- **IMAP4 (Internet Mail Access Protocol version 4)**
  IEMS supports for IMAP4 allows users to access their mailboxes via IMAP4-capable clients, such as Microsoft Outlook Express, Netscape Communicator, among others. By utilizing IMAP4, users can manipulate their mailboxes/folders on the server without having to download them to a local hard disk.

- **POP3 (Post Office Protocol version 3)**
  IEMS supports for POP3 provides POP3-capable clients with another means of accessing their mailbox. Using POP3, users can retrieve messages from the local Message Store Inbox and store them in a local hard disk so they can be read in an off-line or disconnected state. The POP3 server supports multithreading for fast message

retrieval.

- **LDAP (Lightweight Directory Access Protocol)**
  The IEMS Directory Server incorporates LDAP, an open directory access protocol especially designed to effectively manage information about users, groups, mailing lists, alias processing and mail routing. LDAP also has a rich set of searching capabilities that makes directory look up fast and efficient.

Security

To ensure the security of the messaging system, IEMS 6 has several layers of built-in security features, such as:

- **Anti-Virus Capability**
  IEMS performs simultaneous virus scanning on MIME and non-MIME message attachments. Once a virus is detected, the message can either be deleted, bounced back to the sender, or archived to a predefined location/directory for later manual processing.

- **Anti-Spam Capability**
  The new integrated anti-spam in IEMS 7 (MTA Pass-Through) allows for the establishment of separate security policies for the system and individual users (the later being a subset of the global policy). Connection and MTA level checks can be identified, and acted upon (per the global system security policy) in manners setup by each individual user.

- **Auto Text Insertion Engine**
  The auto text insertion engine provides the capability to insert disclaimer messages into messages passing through the MTA. The administrator can add different disclaimer messages based on the message source channel. The engine, which supports non-MIME and MIME message structure types, allows the system administrator to use plain and/or HTML text file format in the insertion process.

- **Attachment Removal Filter**
  An Open Source Message Queue Open API application able to remove file attachments with extensions or MIME media types.

- **SSL Support**
  Transport level security through SSL is available for IMAP4 and POP3 protocols to remote email clients, as well as the HTTP protocol for remote web administration and web mail client.

- **IMAP / POP3 / Web Mail Client IP Access Control**
  System administrators now have full access control for IMAP, POP3 and Web Mail Client access to IEMS.

Scalability

The IEMS architecture is designed to support a distributed messaging environment to ensure that each IEMS component will have sufficient computing resources to perform its tasks and to provide for future expansions. Thus, the various components can be run on different machines and operating systems concurrently.

Mailing List Management

The Distribution List Manager allows messages to be sent to all list's subscribers by simply submitting the said messages to a single address. The module also enables the system administrator or list owner to create electronic mailing lists that support the following features: mail blocking, adding and removing subscribers, and setting the preferred delivery options.

IEMS Distribution List Archives allows members and non-members of the mailing list to view the archived messages of a mailing list.

Mailing List Subscription and Unsubscription

IEMS also allows both members and non-members of a mailing list to subscribe to or unsubscribe from the mailing list available in the server.

Mail Storage

IEMS features a Message Store that acts as a dedicated mail repository for storing, retrieving and manipulating messages, while also enabling users to access their mailboxes via POP3- and/or IMAP4-capable clients.

Filtering and Vacation Utility

The Mailsort utility allows both the system administrator and end user to define rules so that the LMDA can copy, forward or move messages to preselected mailboxes/folders other than the Inbox. It can also generate automatic replies to incoming messages based on a predefined criteria. The Mailsort filtering utility implements rules based on certain attributes (i.e., message sender, recipient or subject) to process incoming mail at message delivery time. Another function is its ability to reject messages coming from the defined email addresses.

Disk Quota Management

The Quota Agent allows the system administrator to set and enforce disk quotas on all Message Store user accounts. This feature limits the amount of resources that is allocated to the individual users to prevent them from consuming all of the available disk space in the server. The Quota Agent generates reports in HTML and text file format that can be used by the system administrator in checking and verifying Message Store performance and space usage.

Excellent File Attachment Handling and Support

Transferring file attachments among disparate electronic messaging systems have long been a problem for many messaging systems. With IEMS, attachment file names and attributes are transferred among disparate mail systems fully preserved, preventing the loss and corruption of data regardless of the source and destination systems.

Optimized Message Handling and Queue Management

To speed up mail delivery and save on storage resources, IEMS uses a Shared Message Queue structure. By using this structure, duplication of messages is avoided and processing overhead is minimized. IEMS also features an SMTPC Queue Management that provides a mechanism for efficient message priority handling, the efficient processing of server-side ETRN (Extended Turn) requests, and improved message queuing strategies.

Migration Support

Comprehensive migration tools are provided to help users move to an Internet standards-based environment smoothly and reliably. All address and mailbox information is transferred to the new system transparently, causing end users very minimal disruption. In addition, it supports the most common client software available in the market, allowing end users to immediately make use of system after the messaging system (backend) migration is complete.

Messaging Connectivity for cc:Mail and Lotus Notes

Connector modules are provided for Lotus cc:Mail and Lotus Notes, allowing seamless integration of these legacy systems with IEMS 6.

Centralized Monitoring and Control Module

The MC (Monitoring Control) Responder is used to automatically start or stop IEMS components. The MC Responder serves as a centralized monitoring and control module that manages the different modules running across multiple machines and operating systems.

Web-Based Administration

The web-based interfaces of IEMS allow users to manage the system via the Internet using any web browser.

Web-Based User Administration

This web-based interface allow each user to manage a number of properties of his/her own account. This interface is multilingual: besides English, it supports Simplified Chinese (GB3212). In future releases, support will be added for Traditional (BIG5) Chinese, French, German and Spanish; a white paper will then be release to document how the Administrator may add support for custom languages.

Web Mail Client

The Web-based mail client allows users to compose, reply and forward messages using any web browser. This interface is also multilingual, with the same characteristics as the Web-Based User Administration. In addition, it is also possible to display (and reply to) mail messages written in still unsupported languages (e.g., Japanese) as long as the browser used supports the relative encoding. Please note that the multilingual support in older browsers is often limited and buggy; for best results, we recommend to avoid versions of Microsoft Internet Explorer prior to 5.5, and versions of Netscape Navigator prior to 6.

SOFTWARE AND HARDWARE REQUIREMENTS

For optimum performance, it is recommended that IEMS and its components to be installed using the following minimum configurations:

Windows 98 (Anti-Virus Processing Only)

- 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

Windows XP, 2000 and 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 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

Supported 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

New Features

Web Mail Client: Style Selection

The new Web Mail Client now allows for up to 10 pre-defined color combinations to be applied to the Web Mail Client interface, on a user selectable basis. In addition, the number of entries that can be displayed per page is configurable through the new Style configuration.

LDAP v3 Support: Linux

OpenLDAP is now supported in the Linux version of IEMS. Under Linux, OpenLDAP is now required to be installed before initial installation or upgrade from previous versions of IEMS.

Web Mail Client: Interface Cleanup

Several inconsistencies in the Web Mail Client interface have been cleaned up. These include inconsistent buttons when asking the user to "keep going", The Delete button on the New Message Screen was confusing as it could mean either delete attachment or delete message. This has been changed to "Delete File". When invoked from the New Message Screen, the Address Book display initially displayed boxes for the addresses that were very small and of varying sizes. These are now larger and of a consistent size.

POP3 / IMAP / Web Mail Client IP Access Control

Administrators now can control access via IMAP, POP3 and the Web Mail Client by IP addresses.

Distribution List Command Line Utility

This new utility allows administrators to be able to add/delete/list distribution list members via a command line interface.

Domain Administration Command Line Utility

This new utility allows administrators to be able to add/delete/list domain administration accounts via a command line interface.

Microsoft Exchange Migration Tool Update

The Microsoft Exchange Migration Tool has been updated with improved support for Exchange 5.5 and Exchange 2000.

Bug Fixes

Preprocessor Module Failure Handling

IEMS version 7.0 and earlier sometimes have problems when preprocessor modules fail. This was evident in version 7.0 in cases where the Spamassassin spam filtering process had crashed. These failures in spam content filtering resulted in messages being delivered as though they passed checking. The preprocessor module now block in these situations and send a notification to the postmaster.

Web Mail Client: Save To Draft

When composing a new message, if the originator elects to save the message to the Drafts folder, and no recipients have been entered, the WMC would not permit them to do this. It brought up an error screen indicating "No valid recipients". This has been fixed and no requirements exist now for recipient information to be present before a message can be saved.

KNOWN LIMITATIONS

/usr/sbin/sendmail problems

In some situations when installing under Mandrake Linux, the ownership and modes of the IEMS sendmail replacement binary get reset, resulting in this utility not working properly. To fix, run the following commands as root:

```
# chown iems.iems /usr/sbin/sendmail
# chmod 6755 /usr/sbin/sendmail
```

cc:Mail migration tools do not migrate nested folders

The cc:Mail mailbox migration tools will not migrate nested folders as the cc:Mail VIM API does not include support for this.

cc:Mail/Notes mailbox converter does not migrate empty folders

When no message are found in a folder, the migration tool skips the conversion process for the empty folder. This is due to a lack of support within the cc:Mail / Notes API's that the IEMS migration tools utilize to communicate with these environments.

Notes migration authentication fails if server.id is used to connect to the Domino server 4.x

The Notes migration authentication to the Notes server will fail if the server.id is used to connect to the Domino 4.x server. The Notes VIM interface requires that a user ID is used to open the Notes address book.

Shared mailboxes not visible in WMC

When using the Web Mail Client (WMC), the shared mailbox available for the local user will not be visible in the list of folders in WMC. Shared folder access is only accessible using any IMAP compatible client, such as Outlook Express, Netscape, Eudora, etc.

Deleting 300+ Message Store users returns "Internal Server Error"

Deleting approximately 300 Message Store accounts or more at a time returns "Internal Server Error". The CGI library for deleting Message Store user limits the total characters to be posted per transaction. When the data posted exceeds this limit, the program will display "Internal Server Error". To solve this problem, limit the users to be deleted at a time to around 200 accounts or less.

Adding 200+ mailing list members returns "Internal Server Error"

Adding 200+ mailing list members at a time returns "Internal Server Error" The CGI library for adding mailing list members at a time limits the total characters to be posted per transaction. When the data posted exceeds this limit, the program will display "Internal Server Error". To solve this problem, limit the users to be added at a time to approximately 100 email addresses or less.

Defining 50+ lines of data for the LDAP address field returns "Internal Server Error"

The system returns an "Internal Server Error" message when more than 50 lines of data is entered in the address field/attribute of user in LDAP.

IEMS modules lose connection to LDAP server under Windows 98

Windows 98 TCP stack can run out of memory under certain conditions. When this happens, IEMS modules and all TCP base client software will not be able to make new TCP connection. It is recommended that Windows 98 be replaced with a more robust operating system, like Windows NT or Linux.