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Internet Exchange News

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International Messaging Associates (IMA) Ltd.
Hong Kong Computer Center
54-62 Lockhart Road
Wan Chai, Hong Kong
Tel: +852 2520-0300
Fax: +852 2648-5913

IMA Philippines Inc.
The Peak Tower
15/F 107 Alfaro Street
Salcedo Village
Makati City, Philippines
Tel: +63 (2) 811-3999
Fax: +63 (2) 811-3939

US Support: +1 (408) 481- 9985
US Sales: +1 (408) 481- 9985
US Fax: +1 (888) 562 - 3561

Email: info@ima.com
Website: www.ima.com

NEWS FLASH!!!

The Internet Exchange 4.0 Migration Tools: Moving users from legacy email platforms to messaging systems based on Internet standards without the hassles

With the explosive growth of the Internet, electronic mail or email becomes an indispensable tool to many organizations. With Internet email, they are provided with an inexpensive tool for communicating with their customers and employees, as well as with other organizations that they do business with. However, this also poses a serious problem to organizations using legacy messaging systems. They need to migrate to a system capable of reaping the benefits offered by Internet standards, but they cannot dispose of their legacy systems abruptly since it is likely to disrupt the flow of information. To provide system administrators with the means to support both legacy messaging systems and systems based on open Internet standards , Internet Exchange 4.0 comes with a rich set of migration tools for cc:Mail and Lotus Notes users. With these migration tools, Internet Exchange users can avail of the advantages offered by Internet standards such as:

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

Moving users from one messaging system to another is a complicated task and there is more to consider than simply the movement of mail directories and addresses. Aside from these, other data that must be migrated includes attachments, folders and folder hierarchy, distribution lists, as well as archives and bulletin boards. Another issue that must be addressed before migration starts is how this data can be moved to the new platform with the minimum disruption of for the users and with the minimum effort on the part of the system administrator.

Migration Tools

During the migration period, users typically need to access information in both the legacy systems as well as the new open systems. To make migration as simple as possible, Internet Exchange comes with several migration tools for assisting IT managers in migrating existing cc:Mail users or Lotus Notes customers to Internet Exchange 4.0's open messaging environment. Internet Exchange 4.0 uses two main migration tools, namely:

- *cc:Mail/Notes directory-to-Internet Exchange 4.0 directory converter* – this tool converts the address book information from cc:Mail and Notes directories to a format supported by the Internet

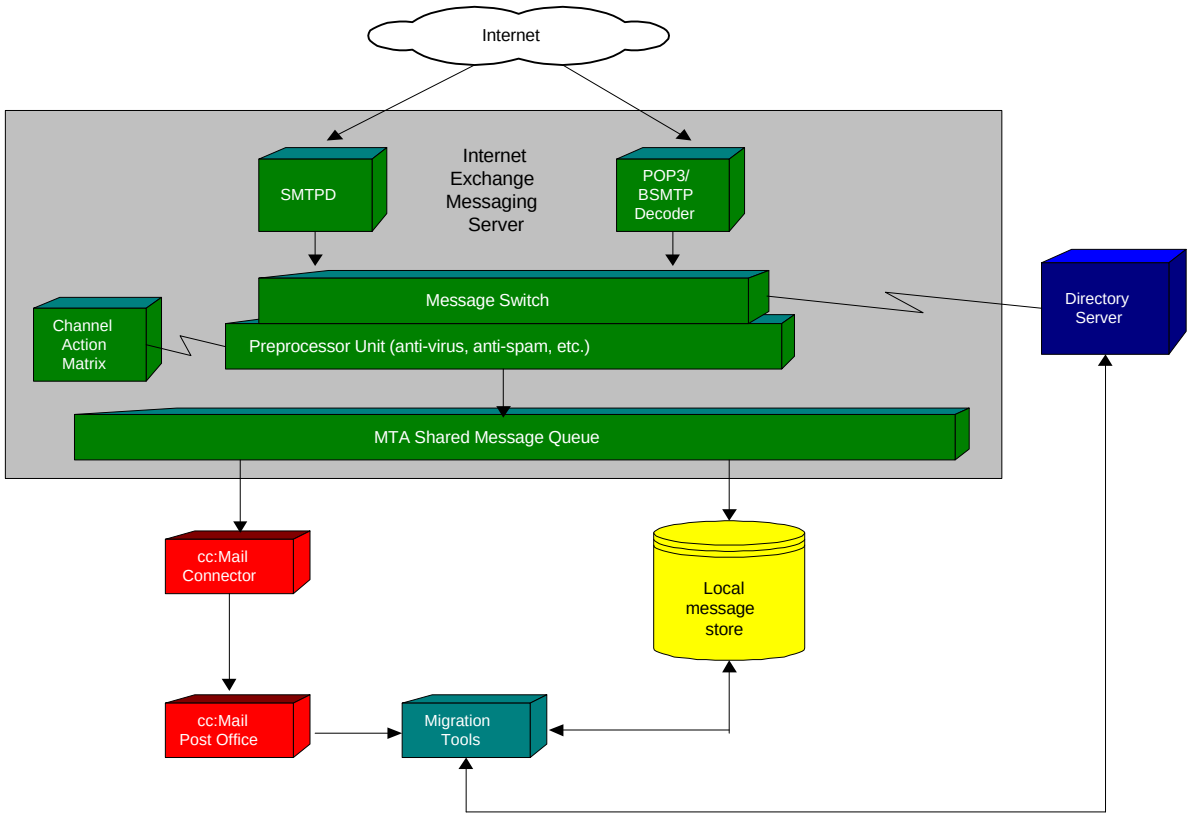


Figure 1. Migration strategy for cc:Mail users

Exchange 4.0's LDAP based Directory Server.

- *cc:Mail/Notes mailbox-to-Internet Exchange 4.0 standard message store converter* – this tool converts cc:Mail and Lotus Notes mailboxes into a format supported by Internet Exchange 4.0's IMAP4 Optimized Message Store, where they can be accessed via the IMAP4 and POP3 servers. It should be noted that it is possible to use this tool in two modes, namely:

  i. Per user mode – in this mode, individual users can convert their mailbox into the standards Internet Exchange 4.0 mailbox.

  ii. Batch processing – in this mode the user's mailbox can be converted into a format supported by the standard Internet Exchange 4.0 Message Store based on data present in a local configuration file.

Note: It is important that the system administrator runs the address book converter before running the mailbox converter so that users are registered in the Internet Exchange 4.0 directory first.

The migration tools bundled with Internet Exchange 4.0 are simple to use, easy to configure, and are able to handle commands via graphical user interface or in batch processing mode. The tools also feature appropriate logging facilities capable of the following:

- tracking all user addresses that have been exported.
- tracking all user mailboxes that have been migrated.
- logging all errors encountered during migration.

cc:Mail Migration Strategy

The cc:Mail migration tools bundled with Internet Exchange 4.0 supports both DB6 and DB8 post offices. The tools are a set of 32-bit Windows applications that use the VIM interface to access the cc:Mail post office. It is imperative that the migration tools are run on a machine or PC that has the VIM libraries preloaded and available on the path. The migration tools for cc:Mail are designed to run on Microsoft Windows 95, Windows 98, and Windows NT.

When migrating individual cc:Mail users' mailboxes to

Internet Exchange 4.0's standard message store, the system administrator must have the following:

- the password of the individual users
- the appropriate access rights to the individual user mailbox.

User Name Information

The cc:Mail address book is structured as shown in the table below. The migration tools require that the NAME field in the cc:Mail user record be exported to INternet Exchange 4.0's directory. Since the cc:Mail user name format is not fully RFC822 compliant, the migration tools reconstruct the cc:Mail name into a fully RFC822 compliant address. This is done by getting the appropriate information from a predefined rule configured by the user. In general, the cc:Mail user name is in the following format:

<USER>at<PO NAME>

where user can be anything like:

<FIRSTNAME LASTNAME>or<LASTNAME FIRSTNAME>

In cc:Mail, characters like "," and "@" are allowed to be used in the user name field. This leads to the special requirement of handling characters that are not valid as per RFC822 addressing standard. It should be noted that cc:Mail supports multiple languages like European and Asian languages, raising the need to deal with special European characters and Asian characters, such as Japanese and Chinese, which are actually stored in double byte format.

The <PO NAME> of a cc:Mail user address denotes the physical location of the mailbox. Internet Exchange's migration tools are capable of mapping different PO's to different domains while constructing the users' Internet addresses during the migration process. Once a valid Internet address has been constructed, a dummy password will be generated which will either be an MD5 hashed password or an 8byte long ASCII string.

For users who are already running Internet Exchange 3.x, the migration tools will allow the users to reuse the user Alias database (smtpadr.btr), directory database (rulebadr.btr), and Domain Mapping database (smtppod.btr) when constructing the Internet Exchange 4.0 directory. The conversion tool looks up in the individual databases to construct the fully RFC822 compliant address of a particular cc:Mail user.

To address these issues, the migration tools provide users with predefined rules to construct a valid RFC822 address in addition to the user alias database/directory and domain mapping database. The predefined rule set are as follows:

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

For the Internet domain name part, the migration tools allow the user to define mappings between the cc:Mail Post Office name and the Internet domain name. The migration tools then use the rule set and the mappings to construct a full RFC822 compliant Internet address.

User Mailbox (cc:Mail)

The migration tools shipped with Internet Exchange 4.0 are designed to convert cc:Mail mailbox files into Internet Exchange 4.0's standard message store. First, each mail is independently exported from the cc:Mail Post Office via the VIM (Vendor Independent Messaging) interface. Then, the message is converted into a single part MIME message (if the cc:Mail message contains multiple items.

Notes Migration Strategy

The Lotus Notes migration tools bundled with Internet Exchange 4.0 support Lotus Notes Version 4.x. The tools, which run on Microsoft Windows NT, are a set of 32-bit applications that use the Notes API to access the Notes server/mailbox. For optimum results, it is imperative that the migration tools are run on a PC that uses the Notes API. It is also recommended that the tools are run on a machine configured as a Notes server rather than as a Notes client.

Name	Location	Comments	cc:Mail address	Last login
Victor Wong	L	IMA engineer		12/12/97 8:10PM
Mary	R	Remote CC	PO2	
Main-PO	P	Main PO		
Internet	P	Internet PO		
PO2	P	Downstream PO	\\PC2\CCDATA	
Peter	R	Remote user	Internet peter@ima.com	

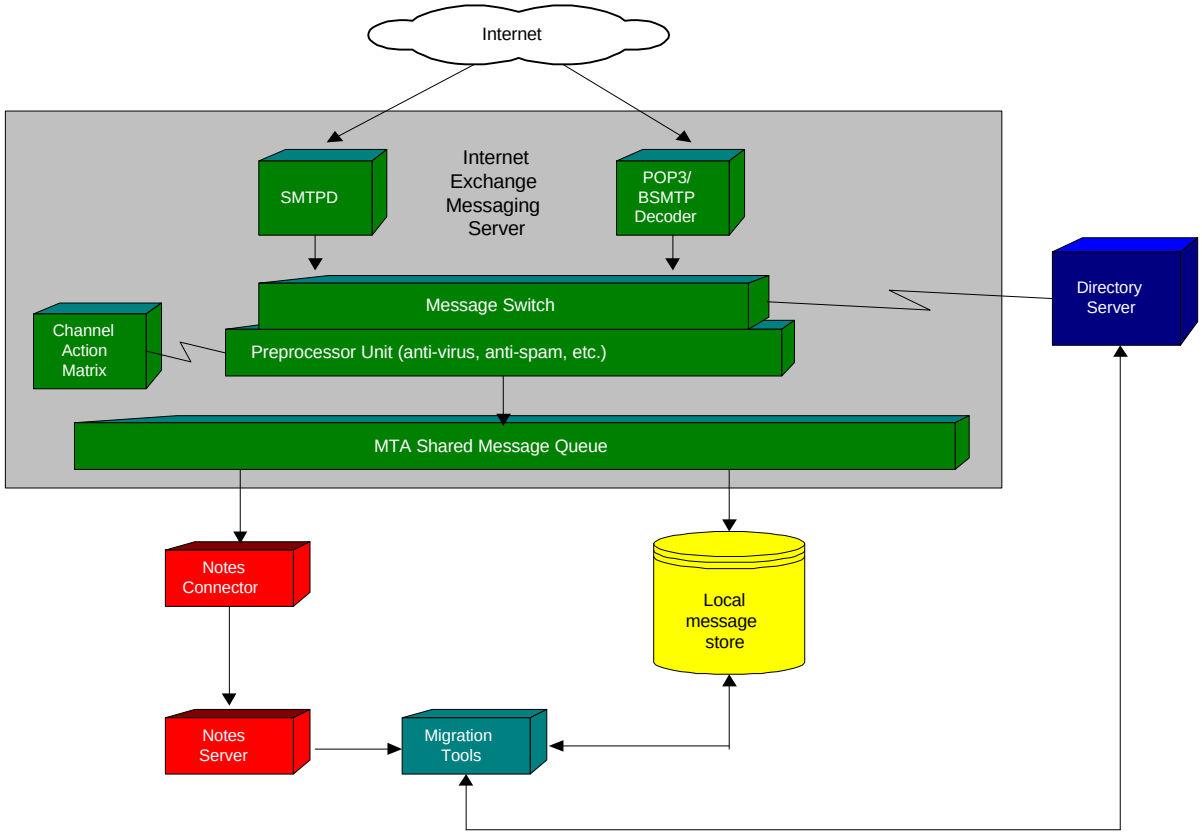


Figure 1. Migration strategy for Lotus Notes users

When migrating individual users' mailboxes to Internet Exchange 4.0's standard message store, the system administrator must have the following:

- the user ID file for individual users
- the password of the individual users
- the appropriate access rights to the individual user mailbox

User Name Information (Lotus Notes)

The structure of the Lotus Notes public address book is shown in page 5. Note that the 'User Name' field is a multi-valued text field. The first entry is always the full Notes user address, which includes the certifier name. The Mail file will be used by the mailbox converter to identify the location of individual users.

The migration tools require that the 'User Name' field and the 'Domain' field be exported to the Internet Exchange 4.0 directory from the Lotus Notes public address book (PAB). Since the Lotus Notes user name is not fully RFC822 compliant, the migration tools bundled with Internet Exchange 4.0 reconstruct the Lotus Notes name into a fully RFC822 compliant address. This is performed by getting the appropriate information from a predefined rule configured by the user. In general, the Lotus Notes user name is in the following format:

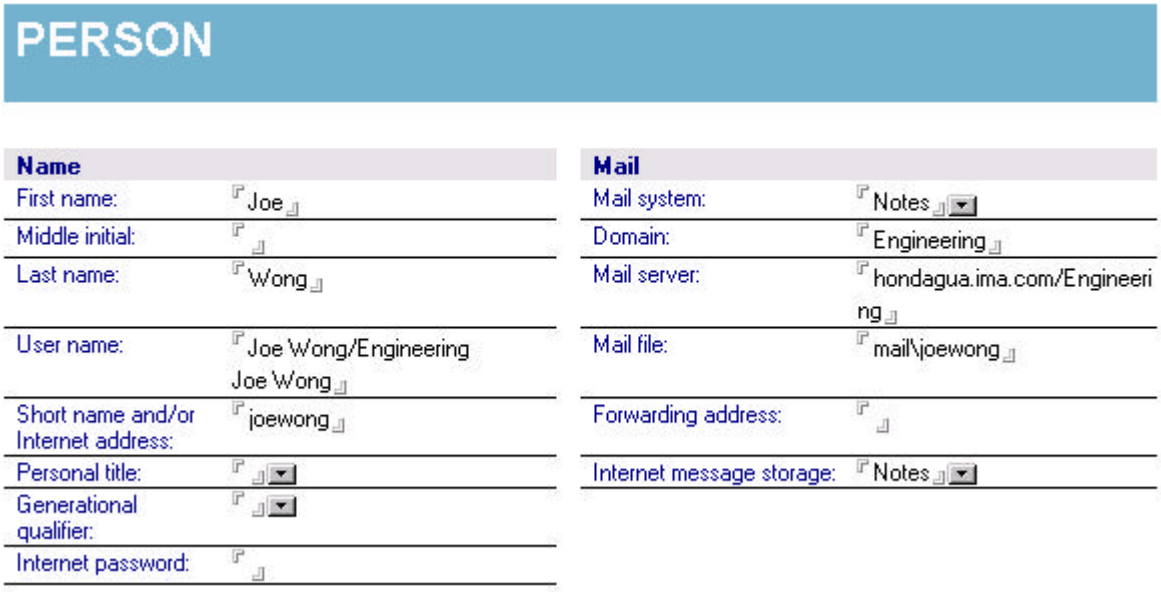
<USER>/<CERTIFIER>@<DOMAIN>

where user can be anything like:

<FIRSTNAME LASTNAME> or
<LASTNAME FIRSTNAME>

It should also be noted that Lotus Notes supports multiple languages like European and Asian languages, raising the need to deal with special European and Asian characters such as Japanese and Chinese, which are stored in double byte format.

The <CERTIFIER> of a Lotus Notes user address denotes the departmental location of the mailbox (i.e.



Joe Wong/Engr/IMA @ IMA). The migration tools are capable of mapping different certifiers to different domains while constructing the users' Internet addresses during migration. Once a valid Internet address is constructed, a dummy password is generated, which will either be a MD5 hashed password or an 8byte long ASCII string.

For users who are already running Internet Exchange 3.x, the migration tools allow the reuse of the users' Alias database (smtpadr.btr) and Domain Mapping database (smtppod.btr) when constructing the Internet Exchange 4.0 directory. The migration tools look up in the individual databases to construct the fully RFC822 compliant address of a particular Notes user.

In addition to the user alias and domain mapping databases, the migration tools provide users with predefined rules to construct a valid RFC822 address: The predefined rules are:

- FirstName LastName
- FirstName MI LastName
- FI LastName
- FI MI LastName
- LastName FirstName
- LastName FirstName MI
- LastName FI
- FirstName LI with separator (underscore and/or dot)

In addition to the above rules, the user has the option to use the short name/Internet name field from the Notes public address book. If this option is used, the above rules will be disabled. For the Internet Domain part, the migration tools allow the user to define mappings between Certifier names and the Internet domain names. The rule set and the mappings are then used to construct a fully RFC822 compliant Internet address.

User Mailbox (Lotus Notes)

The migration tools are designed to convert the Lotus Notes mailbox into a format supported by Internet Exchange 4.0's standard message store. First, each message is independently exported from the Notes mailbox via the Notes API. It is then converted into a single-part MIME message (if the message contains only one item) or into a multipart/mixed MIME message (if it contains multiple items).

Conclusion

Many email systems today are in a state of migration. With the benefits offered by open Internet messaging standards, it is hardly surprising that most organizations are moving to messaging platforms that support such technologies as IMAP4, Batch SMTP, POP3, and LDAP. However, moving from one messaging system can prove very costly and time-consuming when done with the wrong tool. Internet Exchange 4.0 is a cost-effective tool for ensuring smooth and hassle-free migration from legacy mail systems to messaging platforms based on open Internet standards. With Internet Exchange 4.0, system administrators can support both legacy messaging systems and those based on Internet standards simultaneously via a single Messaging Server, eliminating the need to different versions of expensive software and even hardware. Moreover, the migration tools bundled with Internet Exchange 4.0 come with user-friendly features that enable system administrators to move people from one messaging system to another with very minimal disruption to the users and with very little effort required from them.

Questions & Answers

Q: Some of our clients are complaining that they always get multiple copies of messages that we send out to them. I believe this problem is caused by the way we set up our Internet Exchange gateways. We have eight gateways and 4 CCMAIL PO's, with more than one gateway pointing to the same CCMAIL PO. The gateways are all configured to operate in the send/receive mode, causing duplication of messages. How do we solve this problem?

A: Go to the Internet Exchange Control Panel and click on the  button. In the next screen, click on the *Gateway* tab to access the GUI for configuring various gateway *features. Click on the* Advance button at the bottom of the screen to configure the gateway's advanced features. In the GUI for configuring advanced gateway features, activate the option *Multi-gateway access to the same PO* by checking the box check provided. When this option is enabled, message locking is performed by a gateway on any outbound messages to prevent other gateways from accessing the same messages and making duplicate copies.

Also, check the option *Looping items to postmaster*. This prevent infinite email loops from occurring. Then click on the *OK* button to implement the changes you made.

Q: Our Internet Exchange gateway always logs "Handle table full" messages, and afterwards all attempts to send mail through the gateway fail with "User unknown" rejections. However, the SMTP daemon continues to run. How do we avoid this problem?

A: Please make sure that there is no other Btrieve engine running on the Internet Exchange gateway machine. Check the hard disk of the machine for Btrieve library files such as WBTRCALL.DLL, WBTRV32.DLL,WBTRVRES.DLL etc., and make sure that only one copy of these files are under Internet Exchange's installation directory. In addition, make sure that no other applications (i.e. Microsoft Access, etc.) on the machine running Internet Exchange is using these Btrieve library files.

Q: We have upgraded our gateway to Internet Exchange 3.11 and since then we have been having problems viewing the logfile via Web administrator interface. We can only view the log files using the viewer running on the gateway machine. How can we solve this problem?

A: After upgrading to Internet Exchange 3.11, you will need to reinstall the remote control module from the Internet Exchange 3.11 installation directory. To do this, locate and run the file INSTRC.EXE from the gateway's installation directory. This will enable you to use the Web administrator interface to view the log files in real time.

Information Center, n.: A room staffed by professional computer people whose job is to tell you why you cannot have the information you require.

This Month's Tip

Installing Remote Control for Internet Exchange

The Internet Exchange remote Control is specifically designed to provide system administrators with a convenient and secure tool for monitoring, configuring, and operating Internet Exchange remotely. A third party web server that supports the CGI interface and Secure Socket Layer also required (IMA recommends WebSite Professional by O'Reilly Software). Internet Exchange's setup program INSTRC.EXE automatically installs Remote Control modules on the gateway.

To install the remote Control, run the INSTRC.EXE program. An interface for specifying the physical directories for storing the HTML files and CGI programs will then appear. The URL path for the HTML files is */ieccmail/ or /ienotes/*. The URL path for the CGI programs is */cgi-erc/* . After entering the required physical directories in the text boxes provided, click on the *Install* button. This start the setup process and install the Remote Control.

After setup is completed, start the web server. To remotely access the gateway from any PC, establish an INternet connection and enter the following path into your web browser's location field:

http://web.server/ieccmail/index.htm

A window that allows remote operation, configuration, and monitoring of the gateway will load.