Planning and Implementing an Email Migration Project

At first glance an e-mail migration project might seem like a simple task. The software manufacturer of the new environment usually offers a range of tools (often at no charge) to help you bring your users over to the new system. It may look simple but beware – email systems are complex, layered applications and your users' important data can easily be altered, tangled or completely left behind without careful planning and an understanding of all the elements involved in the migration.

Based on our eight years of experience built from migrating hundreds of thousands of users in over 70 countries, this white paper offers a primer on e-mail migration addressing the major areas of planning to help you insure a successful and pain-free migration.

➔ Overview

Email migration involves many tasks such as data migration, training, change management, hardware purchases, and licensing. This white paper focuses specifically on the data migration. Connected Software recommends the following task list for planning and performing a successful email data migration:

1. Inventory the data to be migrated.
2. Match the inventory to migration software products.
3. Evaluate and select migration software.
4. Perform a pilot project and solicit feedback.
5. Perform the complete migration.

➔ Inventory the Data to be Moved

A common misconception is that you can connect your old email server to your new email server using the new server's migration connector, wait a couple of hours while the connector does its magic, and then your new server will have all of your user's migrated data.

For the migration of most email systems, nothing could be further from the truth. There is often a significant amount of user data that the migration connector either cannot or will not transfer.

To ensure that you do not encounter this problem once the migration starts, it is critical to know where your email and contact data live. Use the checklist in Table 1, below, as a guide for examining your environment. You will need this information for the next section where you will match the Email Data inventory with the capabilities of your migration software.

Make sure you examine the computers of any power users on your company's executive team. These people often feel they can bend the rules and they will be the first to complain when you have not accommodated them. In our experience, it's not uncommon to find rogue POP3 accounts, "my eyes only" mail archives that they don't want appearing on the server and address books beyond the default address book. The moral is to have a thorough understanding of what data really exists, in spite of corporate guidelines and procedures.

Table 1: Categories of Email Data

☑	Data	Examples
☐	Server-side email	GroupWise, Outlook, Lotus Notes, IMAP, etc.
☐	Client-side email	Email archived in Outlook PST files or Lotus Notes archives, locally-stored data from POP3 servers. These files may reside on a file server, but they are still accessed by their drive letter and path.
☐	Server-side personal address books	Outlook contact folders in Exchange, Lotus Notes public address books, GroupWise personal address books.
☐	Client-side personal address books	Personal address books from Netscape 4/6/7, Mozilla, and the Lotus Notes NAMES.NSF files.
☐	Corporate (public) address book	Standard feature in Microsoft Exchange, Lotus Notes, and GroupWise. Other environments often use an LDAP server, such as the Netscape Directory Server.
☐	Web Server Contacts	Some systems, such as Oracle Collaboration Server, maintain the web-based contact list separate from the personal list. This can be an issue when migrating users who solely use web-based email.
☐	Contacts and email on PDAs	Windows Mobile, Palm Computing Environment, Smart Phones.
☐	Appointments and calendar data	Almost always kept server-side, but may not be tightly integrated with your email server (such as Netscape Calendar Server.)
☐	User accounts	Microsoft Active Directory, GroupWise user accounts, Lotus Notes IDs.

➔ Match inventory to migration software products

Now that you know what to migrate, the next step is to determine how to do it effectively. The most common initial plan is to migrate server-side data with a vendor

supplied connector and to import client-side data using tools built into the new email application. Unfortunately, this strategy is rarely gives acceptable results.

The server-side connectors are typically constrained to very specific versions of the applications they support. For example, early versions of Exchange 2003 did not support GroupWise 6. If the versions don't match, then the migration connector won't work for you. Also, these connectors typically migrate user accounts, server-side email, the public address book, and appointments. This is only four of the nine categories of data presented in the last section, so you might have a lot of data left unconverted. Here are some common "gotchas" for popular migration paths:

Table 2: Common Migration "Gotchas"

Notes to Exchange/Outlook	Lotus Notes address books are typically kept on the client in a file called NAMES.NSF. Microsoft's connector will not move address books. Archived email is also kept on the client and also will not be moved.
GroupWise to Exchange/Outlook	Even though address books are stored on the server, Microsoft's connector will not convert them. You'll need a third party tool to do this.
Netscape to Outlook	Microsoft Outlook has a built-in migration tool for moving client-side Netscape data, but it only works for Netscape 4.0, not for Netscape 4.5 or later, nor for Netscape 6/7. Outlook doesn't support importing Mozilla at all.
Netscape or Eudora to anything else:	If you are running a POP3 email server, all messages and address book information is kept on the client and there is no server-side connector that can help out. If you are running an IMAP server, then you email can be migrated IMAP to IMAP but your address books are on the client and will need require a third party tool for migration.

On the client-side, the built-in import tools are invariably in the form of a wizard user interface that someone must sit in front of and respond to. This might be fine for a few dozen users, but it doesn't fit well into the migration of hundreds or thousands of users. Third party tools are automated and can be run non-interactively and automatically. Third party tools are also continually updated and will be much more likely to be compatible with recent releases of applications like Netscape, Thunderbird, and Eudora.

Migrating to New Computers

If you are upgrading your users' computers at the same time as the email migration or you are re-imaging their disks, you'll need an "intermediate form" to store the address book because you won't be able to read one application and write the other at the same time. CSV files are not a good choice for this because they don't support distribution lists. LDIF is also not a good choice because it doesn't allow storage of all types of data. Some vendors have an intermediate rich file format that is designed to solve exactly this problem.

Finish this step by selecting a set of software to evaluate that will move all of the categories of data you identified in the last section. This will often require software from more than one vendor because the technical expertise required to migrate server-side data is very different from the technical expertise required to migrate client-side data. Very few companies have products that do a good job migrating both types of data.

The only way to be certain if the software will meet your needs is to test it in your environment. The next section presents criteria to help you set up your pilot and choose the software tools that will help you to be successful.

➔ Evaluate and select migration software

The hardest part of evaluating migration software is knowing what to look for. The last thing you want to do is hire a company to "fix" data after you've already paid to migrate it, but that's not an uncommon scenario. This section presents sample migration tasks along with criteria for evaluating positive and negative outcomes.

Before beginning your evaluation of any software, if you aren't hiring experts already familiar with the system, talk to the technical support of the company that makes the migration tool. Describe your environment and make sure that you are using the software in its optimal way. This discussion will also give you the opportunity to evaluate the expertise and responsiveness of the companies. Optimal use of the software can mean the difference between sending a technician to each and every computer versus sitting back in a chair and watching a script do the whole migration automatically.

To emphasize this point, consider the migration of Netscape to Outlook. If you are running version 6 or 7 and your mailboxes are on a file server, then the migration can probably be run from a central point, unless you are a subsidiary of another company and don't have admin rights on Exchange. If you are running version 4 and you are upgrading users' computers, then there will probably be a pre-upgrade and post-upgrade step – but not always. Confused yet? The permutations are endless and professionals that specialize in migrations will have the best chance of picking the optimal (and most cost effective) deployment strategy.

Here are some recommendations for testing mail migration in a pilot environment, both client-side and server-side. The criteria below will highlight problems commonly found in migration software. Not all of the criteria may be important to you, but be sure to test the ones that are:

Client-side software usability

Test: Configure and deploy the software

If you have to configure the software for operation on each workstation, the complexity of deployment goes up dramatically. Client-side migration software should automatically configure itself for the workstation on which it is run to allow fully automated deployment.

- Did you have to install the software or can it be run without installing it?
- Can you pre-configure the software so it can be run non-interactively?

- Were the data files located automatically by the software or did you have to tell the software where to find everything?
- Does the software return an exit status so you can determine from a batch file whether it succeeded?
- Does the software require Windows 2000/XP or will it run on Windows 95/98?
- If converting to an archive PST file in Outlook, was the PST file created automatically and put in the proper place?

Message conversion

Test: Migrate a small mailbox to the new email system.

- Did all the folders convert?
- Does each folder contain the correct number of messages?
- Did subject of each message come though properly?
- Are the dates correct? (Received, Created, Sent, etc.)
- Are unread messages appropriately marked?
- Did attachments come through? Try opening them.
- Are embedded pictures converted properly?
- Are items from the old application's "Sent" folder put in the new application's "Sent" folder? (Same for Inbox.)
- Can you reply to a migrated message and get the correct email address?
- If you are migrating from Notes, are user's distinguished names converted to SMTP addresses?
- If you are in Europe or Asia, did all of the characters come through correctly?

Stress Testing

Test: Migrate a very large mailbox.

- Did all the folders convert, even nested folders several levels down?
- Did the software complete the migration without incident?
- For migrations to Microsoft Outlook before Outlook 2003, did the software handle folders with more than 16,000 messages?
- Were very large messages migrated successfully? Finding users with 100MB attachments should be expected in a large deployment.

Contact Conversion

Test: Migrate a user's contacts/address books.

- Were all address books converted?
- Can you open a contact?
- Were contacts from the old default address book correctly placed in the default contacts folder/address book in the destination application?
- Are all relevant fields migrating correctly? (For example, many migration applications don't convert fields like birthday, spouse, and comments.)
- If you create an email and try to address it, can you use a name from the default address book?
- For conversions from Notes, were distinguished names converted to SMTP addresses?
- Were secondary email addresses copied correctly?
- For Netscape and Outlook, was the Plain Text/HTML message attribute copied?

- Were distribution lists converted?
- Were distribution list members converted who didn't appear elsewhere in the address book? ("One offs")
- Were distribution list members converted that were referenced in the public address book (particularly important for migrations from Notes or Outlook.)

For Outlook users only:

- If you create an email and try to address it, can you use a name from a contacts folder other than the default contacts folder?
- Are phone numbers "normalized" to the standard Outlook format?
- If you open a contact and click the Full Name button, are the parts of the name properly filled out?
- If you open a contact and click the Business button for the address, are the parts of the address filled out?

The list above is not comprehensive, but it gives you a solid foundation to perform a basic evaluation.

➔ Perform a pilot project and solicit feedback

It is hard to overstate the importance of a pilot project, even for a small migration. Testing on the desktops of one or two IT people is not a substitute for trying it on user's desktops. The purpose of this step is to make absolutely sure that there are no surprises. Far too many companies skip the pilot project and discover at the 11th hour that something doesn't work or an important component is missing.

The goal of the pilot project is to pick a set of users and workstations that are representative of the whole. Make sure you get both power users and beginners. If you are running software client-side, select both old and new workstations.

The test should be run exactly as the final deployment will be executed. If users will walk in on Monday morning and everything has changed, then that's what should happen for the pilot project. If the data will be converted when the user logs in, then that should happen in the pilot project. There should be no handholding or special casing unless the same thing will be done during the final deployment.

This is a good opportunity to test your training curriculum too. Microsoft Outlook in particular is a very feature rich and will be a significant change for users familiar with Netscape or Notes.

Solicit feedback from your users during and after the pilot project. You may find that some users had depended on an obscure feature of the old email application. One example is that GroupWise has separate categories for Companies and Users. That's common for contact managers, but unusual for email applications. Another common problem is differences in performance. Users who are used to client-based email systems may take some time to get used to the behavior of server-based email applications like Microsoft Outlook and Notes. Such users usually discover that the benefits of calendaring and shared information more than make up for the change.

Common complaints from users after a migration include not knowing where to find email folders (especially with Outlook), not knowing how to sort on first name or last name, and why FAX numbers appear in the address book in Outlook. Use the pilot project to prep your help desk and create a list of Frequently Asked Questions.

➔ Perform the complete migration

If you have followed the recommendations in this document, the final user migration should be anticlimactic. With enterprise-ready tools designed for deployment to thousands of desktops, you should expect a success rate well over 99%. In fact, it's common to make no technical support calls to the vendor at all during the final migration. Preparation, planning and testing should help you insure a painless migration.

➔ About Connected Software

Connected Software is a leader in client-side email and address book migration, with Address Magic Enterprise Edition for larger organizations and Address Magic Personal Edition for consumers as well as consulting services and custom software to help you with your migration. Connected Software has produced a long string of technical "firsts" in the last eight years. Address Magic was the first commercial software tool to successfully migrate each of Outlook, Outlook Express, Netscape 4, and more.

Connected Software's products have been used to migrate over 250,000 users in 63 countries and have been positively reviewed by The Wall Street Journal,. Our products are recommended by the Microsoft Knowledge Base, Google Answers, About.com, Data Doctors, Interguru and eMailman.

You can contact us at 978-363-2700 or sales@connectedsw.com for more information about our software products or any level of technical support with your migration project.

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