# Enterprise Vault Whitepaper

## Managing Exchange Migrations with Enterprise Vault™

This document provides information on how to use Enterprise Vault to migrate email content from Exchange, Domino, and other legacy mail systems to a newer or separate installation of Exchange.

If you have any feedback or questions about this document please email them to **EV-TFE-Feedback@symantec.com** stating the document title.

This document applies to the following version(s) of Enterprise Vault: 7.0, 2007, 8.0, 9.0, and 10.0.

## Document Control

**Contributors**

| Who | Contribution |
|---|---|
| Alex Brown | Original author |
| Evan Barrett | Updates |

**Revision History**

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| 1.0 | 11/2009 | Updated for EV 8.0 |
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**Related Documents**

| Version | Date | Title |
|---|---|---|
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# Introduction

Many organizations are considering replacing their legacy messaging systems with Microsoft Exchange or upgrading from early versions. Whatever the drivers for these migrations are, all projects will face major challenges in terms of project timescales and increased business risks. With email being one of the most critical business applications used within organizations today reducing the risks associated with the project are of paramount importance.

As a significant portion of the time and effort associated with an email migration project is attributed to the movement of the various email and documents contained within the messaging system, reducing this volume of data will help reduce not only the timescales associated with the project but the risk.

Migrations to Microsoft Exchange are typically handled by either the built in Microsoft migration aid tools or specialized 3rd party applications, all of which help to manage the actual migration process but do nothing to reduce the amount of data needing migration. Some migration tools can in fact increase the storage requirements after a migration event due to each new migrated message becoming unique and therefore reducing the single instance ratio achieved in the legacy email system.

The bottom line of any migration is therefore to deliver the benefits of the new technology without introducing undue risk or ongoing costs (both storage and administrative) while delivering a seamless and transparent experience to the user.

# How Does Enterprise Vault Help?

Implementing an Enterprise Vault archiving solution can help aid this migration process by reducing the amount of data that needs migrating (from either a Microsoft Exchange, Lotus Domino or legacy messaging environment). This can reduce the time required to perform the migration while minimizing the overall storage requirements. It can also help with the eradication of PST or NSF files on corporate file shares or end users workstations.

Enterprise Vault also enables the target messaging system to be sized more efficiently as it does not need to store all of the mailbox data from the source environment. Instead the migration data set will comprise of the most recent mail message plus a number of very small shortcuts representing the older archived data.

There are 3 scenarios in which Enterprise Vault can be utilized in the migration process:

- An Exchange to Exchange migration
- A Lotus Domino to Exchange migration
- Other legacy messaging system to Exchange migration

The following sections will outline how each of these scenario's work.

# Exchange to Exchange Migrations

In this scenario Enterprise Vault is deployed in the source or destination environment (Enterprise Vault can archive across multiple domains and forests). The choice may well be driven by the type and direction of any domain or forest trusts as in order for Enterprise Vault to archive data from Exchange its service account will require Exchange Administrative rights over the source and target mailbox and public folders stores.

Once deployed, Enterprise Vault is configured to archive data from users mailboxes and public folders on a relatively relaxed archiving policy (30 days or 80% of quota is very typical) returning shortcuts to the mailboxes and public folders so users can access their archived data[1]. As the migration timescales approach, the administrator, making full use of the granular provisioning functionality within Enterprise Vault, will tighten the archiving constraints on these mailboxes and public folders so that each user and public folder is left with only minimal live mail and posts (7 days or 20% of quota, for example).

To further reduce the amount of data and complexity associated with an Exchange migration, Virtual Vault (Enterprise Vault 8.0SP3 or later) can be used to replace archived item shortcuts in users' mailboxes.  This effectively means that users can have no (or very little) archived item shortcuts with all access to archived items being serviced via the Virtual Vault node in Outlook (and will appear as "Vault - <user-name>").  Virtual Vault has the look and feel of using a PST file within Outlook, but with none of the downsides of potential data loss and/or corruption.  The use of Virtual Vault with or without archived item shortcuts should be taken on a case by case basis as users who access their archived data via OWA or POP3 may still require shortcuts.

When the newly created email backlog (due to the tightening of the archiving policy) from the user mailboxes and public folders is archived, they will be greatly reduced in terms of size (the archive shortcuts taking up minimal space) and the migration of the mailbox and public folder content can begin. Often this phase will be staged, moving groups of mailboxes / public folders in turn, and Enterprise Vault can be synchronized with this using granular provisioning to control who and what gets archived and when. The timescales to achieve this phase should now be greatly reduced due to the reduction in data volume requiring migration.

The tools used to achieve mailbox and pubic folder migration between Exchange servers can vary depending on budget and migration path and strategy. Common products include the native Microsoft Migration Wizard and Move Mailbox tools, Quest Migration Manager for Exchange and BinaryTree CMT Universal. Enterprise Vault will work with all of these migration products (and others) as it does

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[1] Journal Mailboxes will continue to be archived by Enterprise Vault on a 60 second policy as usual and this will not change for the duration of the migration.

not need integration to the actual migration process; rather it acts on the data before and after the migration process itself.[2]

If journaling is configured, then as mailboxes are migrated a new journal target can be configured and archived in the new Exchange environment. Once migration is complete, the old journal target can be retired.

Once mailbox and public folder migration is complete, Enterprise Vault will continue to archive content, perhaps on a less aggressive archiving policy (or whatever is appropriate) in the new environment on a regular and on-going basis. Connection to the legacy Exchange environment (from an Enterprise Vault perspective) can be discontinued.

The high level steps are therefore:

1. Plan migration strategy (timescales, processes, migration aids / tools)[3]
2. Install and configure Enterprise Vault into the current messaging environment and configure archiving of current Exchange servers.
3. Enable mailboxes and public folders for archiving and complete archiving of the email backlog.
4. Configure archiving of the new (migration destination) Exchange servers.
5. For first batch of mailboxes to be migrated tighten the archiving constraints.
6. Complete archiving of the new email backlog that results from tightening the archiving policies.
7. Migrate the first batch of mailboxes using the processes and tools identified in step 1.
8. Associate the newly-migrated mailboxes with their existing archives.[4]
9. Relax the archiving constraints on the migrated mailboxes to normal values.
10. Repeat from step 5 for subsequent batches.


**Note –** Some of the steps outlined above can be carried out in parallel. For example, while the first batch of mailboxes or public folders are undergoing migration between Exchange environments, the next batch of mailboxes or public folders can have their archiving constraints tightened and backlog archived, meaning that once the first batch is complete, the second batch is prepared and ready to migrate, and so on. PST Migrations (into Enterprise Vault) can be carried out at any point before, during and after the migration project to help alleviate the storage on corporate file shares and users workstations.

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[2] See Appendix B for more information on moving mailboxes between Exchange environments managed by Enterprise Vault

[3] See Appendices A, D & E for more information and examples

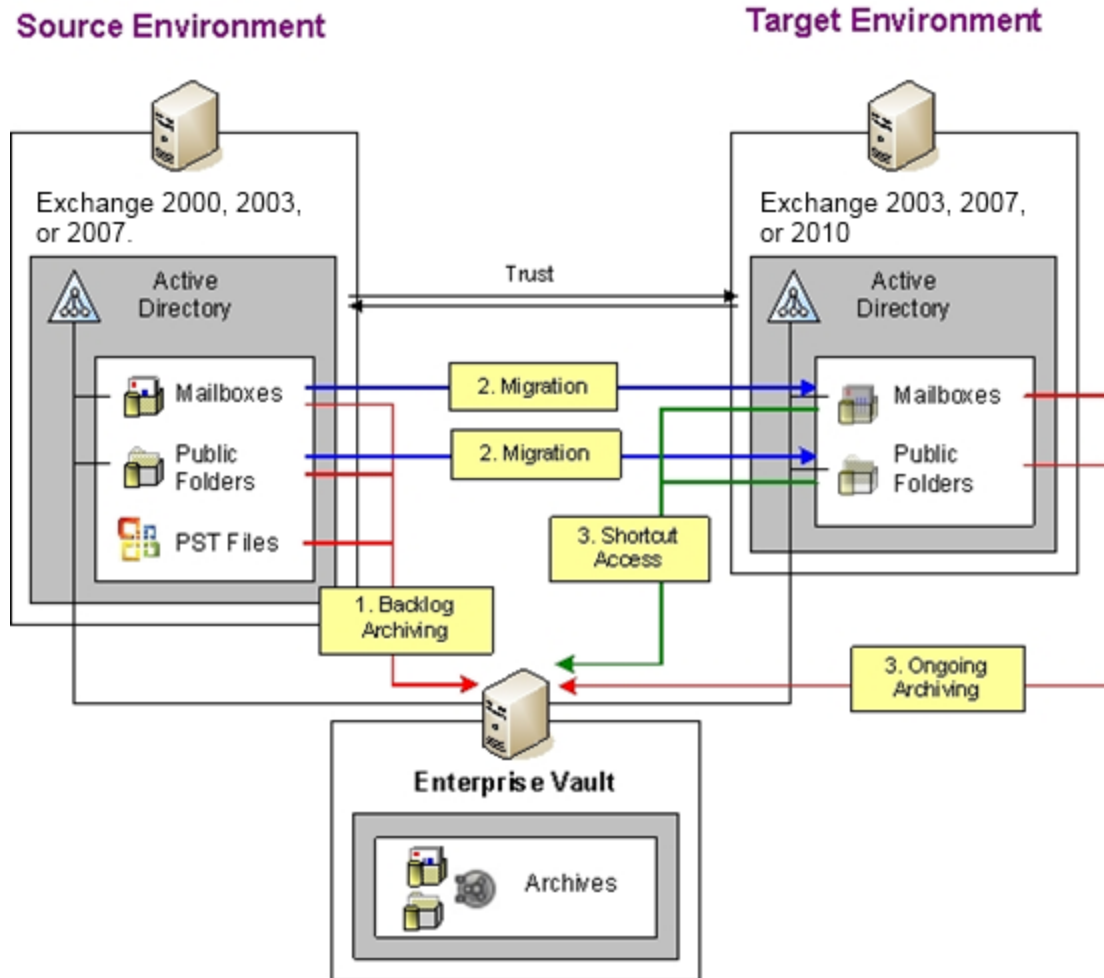[4] See Appendix B for more information

**Figure 1 – Exchange to Exchange Migration High Level Overview**

## Domino to Exchange Migrations

This scenario uses Enterprise Vault deployed in the destination Exchange environment with connectivity to the Domino infrastructure (Enterprise Vault requires an Active Directory to be present as a pre-requisite) and initially archiving from the Domino databases. Enterprise Vault will require a user ID with at least "Editor", "Deletion" and "Create shared folders/views" access over the target user and journal databases.[5]

Once deployed, Enterprise Vault is configured to archive data from the Domino users mail databases on a relatively relaxed archiving policy (30 days or 80% of quota is very typical) returning shortcuts to

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[5] See Appendix C and the Enterprise Vault 'Installing and Configuring' guide for more information on the required level of permissions (supplied with the Enterprise Vault kit)

the mail databases so users can access their archived data[6]. As the migration timescales approach, the administrator, making full use of the granular provisioning functionality within Enterprise Vault, will tighten the archiving constraints on these mail databases so that each user is left with only minimal live documents (7 days or 20% of quota for example).

When the newly created email backlog (due to the tightening of the archiving policy) from the user mail databases is archived, they will be greatly reduced in terms of size (the archive shortcuts taking up minimal space) and the migration of the mail database content can begin. Often this phase will be staged, moving groups of mail databases in turn, and Enterprise Vault can be synchronized with this using granular provisioning to control who and what gets archived and when. The timescales to achieve this migration should now be greatly reduced due to the reduction in data volume requiring movement.

Once each mail database is migrated to Exchange, some additional work needs to be done on each mailbox and archive to ensure full compatibility in the Exchange environment. Enterprise Vault supplies a tool to achieve this[7]. The tool should be run per mailbox to ensure all migrated shortcuts and user access work as expected.

If journaling is configured, then as mailboxes are migrated a new Exchange journal target can be configured and archived in the new Exchange environment. Once migration is complete the old Domino journal target can be retired.

Once all mail databases are migrated to Exchange, Enterprise Vault will continue to archive content, perhaps on a less aggressive archiving policy (or whatever is appropriate) in the new Exchange environment on a regular and on-going basis. Connection to the legacy Domino environment (from an Enterprise Vault perspective) can be discontinued.

The high level steps are therefore:

1. Plan migration strategy (timescales, processes, migration aids / tools)[8]
2. Install and configure Enterprise Vault into the target Exchange messaging environment and configure archiving of the Domino mail servers.
3. Enable users' mail databases for archiving and complete archiving of the email backlog.
4. Configure archiving of the (migration destination) Exchange servers.
5. For first batch of mail databases to be migrated tighten the archiving constraints.
6. Complete archiving of the new email backlog that results from tightening the archiving policies.

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[6] Journal mail files will continue to be archived by Enterprise Vault on a 60 second policy as usual and this will not change for the duration of the migration.

[7] See Appendix C

[8] See Appendices C and D for more information

7.  Migrate the first batch of mail databases using the process and tools identified in step 1.
8.  Run the EVDominoExchangeMigration[9] tool against each migrated mailbox.
9.  Relax the archiving constraints on the migrated mailboxes to normal values.
10. Repeat from step 5 for subsequent batches.

**Note –** Some of the steps can be carried out in parallel, for example while the first batch of mail databases are undergoing migration to the Exchange environment, the next batch of mail databases can have their archiving constraints tightened and backlog archived, meaning that once the first batch is complete, the second batch is prepared and ready to migrate, and so on.

Additionally, refer to the Enterprise Vault Compatibility Guide for supported versions of Lotus Domino and Enterprise Vault.  The compatibility guide can be found here:

**http://www.symantec.com/business/support/index?page=content&id=TECH38537**
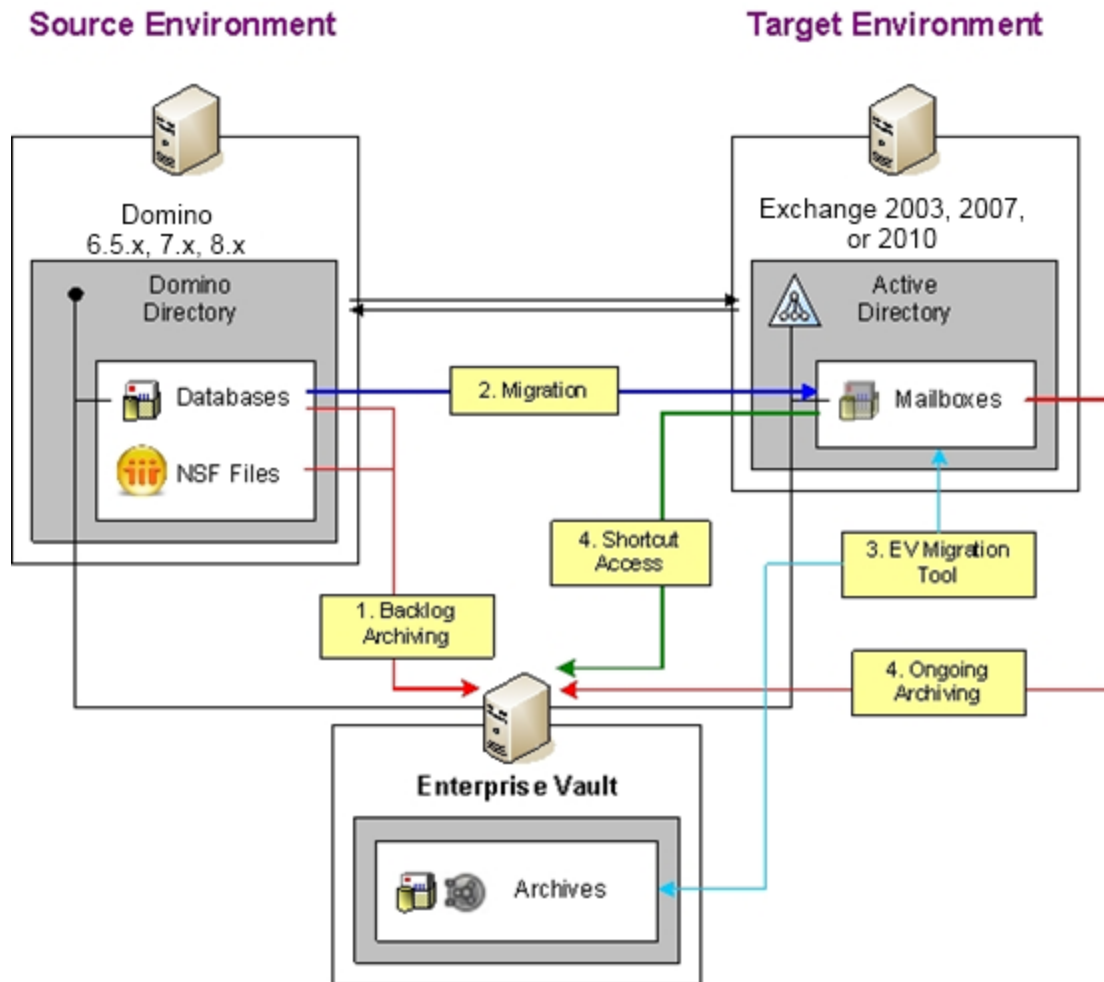
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[9] See Appendix C

**Figure 2 - Domino to Exchange Migration High Level Overview**

# Other Legacy Messaging Systems to Enterprise Vault

This scenario is different in that Enterprise Vault only supports archiving from Domino and Exchange messaging environments (with the exception of Windows SMTP email). Therefore the options to use Enterprise Vault in a migration of this sort are limited to archiving from a compatible source. The two options for migration aid are:

1. Export the entire legacy messaging system content to PST files and then use Enterprise Vault to ingest this content via its suite of PST Migration tools. Do not migrate any content to the Exchange environment, only user information (SMTP addresses etc.)
2. Migrate the legacy messaging system content to Exchange and use Enterprise Vault to immediately archive the older messages (mailbox archiving), reducing the content stored in the new Exchange environment.

Each of these options has advantages and disadvantages as outlined in Table 1:

| Option | Advantages | Disadvantages |
|---|---|---|
| **1.** | • Keeps the destination Exchange environment lean.<br>• Reduces the messaging system migration timescales | • User has zero mail in their mailbox on Exchange day 1 making them heavily reliant on their archive.<br>• Requires a process and tool set to migrate to PST file.<br>• PST migration can be slow when compared to Mailbox archiving |
| **2.** | • Mailbox archiving is much easier to implement compared to PST migration.<br>• Users still have visibility and use of messages in their mailbox on Exchange day 1. | • Exchange stores will initially grow with the migrated content possibly requiring defragmentation after content is archived.<br>• Requires a process and tool set to migrate content between legacy and Exchange mailboxes. |

**Table 1 – Advantages and Disadvantages of Migration Methods from Legacy Messaging Systems**

Regardless of the option chosen Enterprise Vault will require installing and configuring in an Active Directory environment with connectivity to the target Exchange environment. The Enterprise Vault service account will require Exchange Administrative rights over the destination mailbox stores.

Once deployed, Enterprise Vault will be configured to archive data from the Exchange mailboxes on whatever archiving strategy is suitable (30 days or 80% of quota is very typical). Using the granular provisioning functionality within Enterprise Vault, new mailboxes (which may appear as the migration process progresses) can be configured to be automatically enabled for archiving, meaning that as soon as they appear in Exchange (post migration) they will be eligible for archiving.

If choosing to export legacy content to PST, then a suitable PST migration project needs to be initiated to ensure that users are re-connected with their content, post migration, via their archive. The PST project should ensure that all PST files are imported to the correct users archive to ensure maximum security and privacy.

If Exchange journaling is required then Enterprise Vault should be configured to archive from the dedicated journal mailboxes in the Exchange environment as normal. No migration considerations are necessary.

The high level steps are therefore:

1. Plan migration strategy (timescales, processes, migration aids / tools)
2. Install and configure Enterprise Vault into the Exchange messaging environment and configure mailbox archiving of the destination Exchange mail servers and/or Journal mailboxes.
3. Using provisioning groups, ascertain a mechanism to identify newly-migrated mailboxes, and whether to automatically enable them for archiving as they are created in Exchange
4. If exporting all content to PST conduct a PST migration project.
5. For all mailboxes found in Exchange, allow Enterprise Vault to create a new archive. Users' archives must exist before attempting a PST migration project.

**Note –** It is possible to choose a 3rd migration option which consists of a hybrid between options 1 and 2 (shown in Table 1-1) i.e. export the older content (older than 14 days) from the legacy messaging system to PST file and then migrate the remaining content to Exchange.
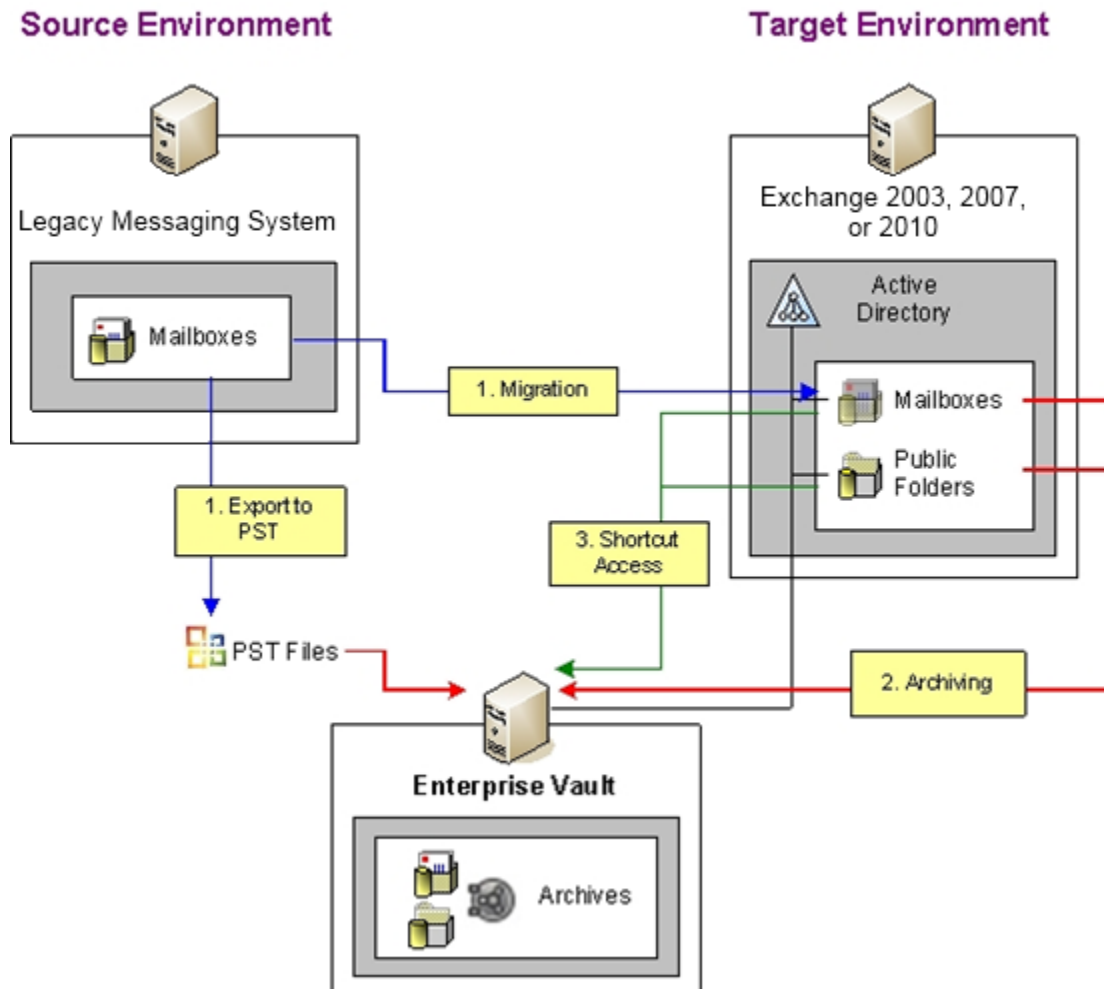


**Figure 3 - Legacy Messaging System to Exchange Migration High Level Overview**

# Conclusion

A successful migration to Exchange depends on a number of key factors. Using Enterprise Vault to assist in the management of Exchange content before, during and after a migration can be a critical success factor, and can help dramatically reduce the risks associated with storage and administrative overheads and user transparency.

As a flexible archiving and storage management platform Enterprise Vault also offers customers a real solution to cost and resource challenges associated with data management in a messaging environment.

In summary Enterprise Vault can:

- Shorten migration timescales – Running two messaging environments concurrently requires increased administrative and resource overheads. Keeping the duration of email migrations to a minimum is essential. Enterprise Vault does this by reducing the amount of data that requires migration to a minimum.

- Increase accuracy and efficiency – The more data you move the greater the chance of corruption. Using Enterprise Vault to archive data before migration results in moving less data and therefore increases the chances of success.

- Ease transition to new software brand – Enterprise Vault aids the transition between a Domino and Exchange messaging environment by providing tools to allow archive shortcuts to function seamlessly after migration.

- Providing day to day mailbox management – Enterprise Vault provides automated mailbox management to give users the concept of unlimited mailboxes (free of quota restrictions) while solving the data storage issue.

- Eradicate PST and NSF files – Enterprise Vault provides tools to eradicate PST and NSF files from users' workstations and corporate file server, freeing up administrative and storage resource.

# APPENDIX A – Exchange Migration Supplement

There are two basic types of Exchange migration:

**Intra Organization (same Exchange Organization)**

This type of migration will typically involve installing the new destination Exchange servers in the same Exchange organization as the existing Exchange environment. The new Exchange servers may however be in a separate domain to the existing servers.

Migrations of this type will normally not require any specialist migration tools as the Exchange servers share the same directory. Migrations can therefore be carried out in a similar manner to moving mailboxes between existing Exchange servers.

The exception to this is when moving from Exchange 5.5 to an Exchange 2000 or higher environment. This will require an Active Directory connector of some kind in order to be able to replicate directory information such as mailboxes, users and groups between the Exchange 5.5 directory and Active Directory.

**Inter Organization (different Exchange Organization)**

This type of migration will require installing a new Active Directory forest, and establishing an inter-forest trust (for permissions only) between the two organizations.

Migrations of this type will most likely require the use of specialist migration tools such as those offered by Microsoft, BinaryTree or Quest. These tools manage the replication, movement of data and co-existence between the two organizations, and help to provide a seamless connection between the two from an end user perspective. See Technotes referenced below for more information on the Microsoft offering.

Enterprise Vault can be used in either of these cases to help reduce data volumes pre migration, however in either case make sure the Enterprise Vault compatibility tables are checked (see extract below) to ensure Exchange version support:

**http://www.symantec.com/business/support/index?page=content&id=TECH38537**


Please also note these extra caveats and information points:

- Enterprise Vault must be installed in an Active Directory domain.
- Enterprise Vault can use a different service account for each Exchange server it is configured to archive from.
- Enterprise Vault can archive across domains and forests (with suitable trusts in place) and therefore can exist in either the source or destination migration domains.
- Enterprise Vault can be easily moved between domains / forests if necessary.
- Only specific versions of Enterprise Vault support Exchange 5.5 server (support was retired in 7.0). Always check the compatibility charts.

See the following MS Technotes for more information on Exchange migrations:

Exchange 5.5 Migrations

**http://technet.microsoft.com/en-us/library/aa997461(EXCHG.80).aspx**


Migrating to Exchange 2007

**http://technet.microsoft.com/en-us/library/bb124008(EXCHG.80).aspx**


Migrating to Exchange 2010

**http://technet.microsoft.com/en-us/library/dd351084.aspx**


Microsoft Exchange Migration Wizard

**http://support.microsoft.com/kb/328871**

# Appendix B – Ensuring Mailbox/Archive Association

**Definitions:**

- Mailbox GUID – This is the unique ID for the mailbox, used by Exchange and stored in Active Directory.

- Hidden Message – This is a MAPI document placed in the users mailbox (in the root and hidden from a normal users view) that contains, amongst other information,  that mailbox's archive ID, its Enterprise Vault home server, the archiving policy applied to the mailbox and which archiving buttons and functionality to show the user. This document is updated every time the mailbox is synchronized.

When moving a mailbox between Exchange environments that are serviced by the same Enterprise Vault archiving infrastructure, Enterprise Vault will attempt one of a number of actions on the newly-migrated mailbox in order to re-link it with its existing archive. The successful action depends on whether the migration process (and tools used in the process) allowed the mailbox to keep the same GUID and /or the same Enterprise Vault hidden message. Table 2 summarizes the options:

| Mailbox GUID | Legacy MailboxDN | Re-link behavior |
|---|---|---|
| Preserved | Preserved | Mailbox automatically re-linked by the provisioning task |
| Preserved | Not Preserved | Mailbox automatically re-linked by the provisioning task |
| Not Preserved | Preserved | Admin intervention required. Use of the SynchInMigrationMode registry value (see below) |
| Not Preserved | Not Preserved | Admin intervention required. Manually specify the archive to use for each migrated mailbox. |

**Table 2 – Exchange & AD Re-Link Options**

**SynchinMigrationMode** registry key:

Name:  SynchinMigrationMode

Path:   HKLM\SOFTWARE[\Wow6432Node]\KVS\Enterprise Vault\Agents

Value: **0**      (Issue Warnings for migrated mailboxes, but do nothing)

        **1**      (Assigned newly migrated mailboxes to existing archives based on matching their LegacyMailboxDN)

        **2**      (Do not assign newly migrated mailboxes to existing archives, instead create new archives).

# Appendix C – Domino Migration Supplement

**EVDominoExchageMigration Tool**

Tool Name: EVDominoExchangeMigration.exe

Location: Can be found in the Enterprise Vault installation directory \Program files\Enterprise Vault

Summary: Modifies Enterprise Vault shortcuts that have been migrated from Domino to Exchange server:

- Applies Exchange permissions on the users archive
- Changes the message class of the Enterprise Vault shortcuts
- Corrects the universal shortcut hyperlink in Enterprise Vault shortcuts
- Add an Outlook paperclip icon (if item had an attachment)

Compatibility: Only supported in conjunction with using either BinaryTree or Quest migration tools. Other migration tools will require testing (including ensuring the appropriate Enterprise Vault message attributes are mapped to their corresponding MAPI attributes) before compatibility is confirmed. See the document referenced below for more information.

How to use it: There is a document available from the Symantec support website which explains usage in full. Do a search for "EVDominoExchangeMigration" on the support site.

Please also note these extra caveats and information points:

- Enterprise Vault must be installed in an Active Directory domain.
- Enterprise Vault will require a Domino user ID with one of the following sets of permissions over the target mail databases. See the Enterprise Vault Installing and Configuring guide for more information.
  - o Editor Access + Delete + Create Shared Folders/Views

    or

  - o Manager Access (If you intend not to archive unread items)
- Enterprise Vault can be easily moved between Active Directory domains / forests if necessary.
- Only Enterprise Vault 2007 or later supports archiving from Domino mailboxes. Always check the compatibility charts.

# Appendix D – Support Tech Notes

Enterprise Vault Compatibility Charts:

**http://www.symantec.com/business/support/index?page=content&id=TECH38537**


How to Migrate users from one Exchange server to another

**http://www.symantec.com/business/support/index?page=content&id=TECH48928**


Steps to migrate Exchange 5.5/2000/2003 Enterprise Vault enabled users to Exchange 2003

**http://www.symantec.com/business/support/index?page=content&id=TECH49450**


AD user objects such as MDBUseDefaults may have corrupt values preventing synchronization in Enterprise Vault

**http://www.symantec.com/business/support/index?page=content&id=TECH48899**


After running a Quest EMW or other Migration tool sync the archive task will fail

**http://www.symantec.com/business/support/index?page=content&id=TECH59376**
**http://www.symantec.com/business/support/index?page=content&id=TECH51336**


How to decommission an Exchange Server from Enterprise Vault

**http://www.symantec.com/business/support/index?page=content&id=TECH50256**


How to turn off automatic synchronization in Enterprise Vault for Exchange

**http://www.symantec.com/business/support/index?page=content&id=TECH48973**


Exchange 2010 Archiving Configuration Whitepaper

**http://www.symantec.com/business/support/index?page=content&id=TECH144726**

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For specific country offices and

contact numbers, please visit our

Web site: **www.symantec.com**

Symantec Corporation

World Headquarters

350 Ellis Street

Mountain View, CA 94043 USA

+1 (650) 527 8000

+1 (800) 721 3934