

## Managing Exchange Migration with Enterprise Vault™

### Abstract:

Many organizations today are considering either replacing their legacy mail system, for example GroupWise or ccMail, with Microsoft Exchange or upgrading from older versions of Exchange to Exchange 2003. Additionally, some companies are migrating away from Lotus Notes to Microsoft Exchange to benefit from reduced management and infrastructure costs and to leverage the power of the Microsoft platform. This white paper discusses how such migrations can be eased with Enterprise Vault.

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## 1 INTRODUCTION

Many organizations today are considering either replacing their legacy mail system, for example GroupWise or ccMail, with Microsoft Exchange or upgrading from older versions of Exchange to Exchange 2003. Additionally, some companies are migrating away from Lotus Notes to Microsoft Exchange to benefit from reduced management and infrastructure costs and to leverage the power of the Microsoft platform.

Whatever the driver for moving to Exchange 2003, all projects will face three major challenges: an extensive project time, considerable cost in terms of infrastructure and resources, together with increased business risk. With email arguably being the most business critical application in many organizations, reducing the risks associated with migration should be paramount. The migration of data, its value to the business and the potential downtime of the core email business system should something go wrong are major areas of risk awareness that need to be managed.

When migrating from a legacy email system there are five main considerations to focus on, namely:

- Mailbox profile
- Mailbox content
- Personal folder content
- Public folder content
- Address books, both personal and corporate

A significant proportion of the time, effort and costs associated with a migration project are attributed to the physical amount of email that has to be migrated. Focusing on reducing the physical volume of data to be migrated will reduce the overall risk and minimize the co-existence time, which in itself is a major load on administration and support resources.

While the overall migration is typically managed through the use of standard Microsoft Exchange or third-party migration tools, nearly all of these tools have unwanted effects on storage. Typical scenarios will involve running parallel mailboxes in the legacy system and in Exchange 2003. The immediate consequence of this is that, for the duration of the migration, email storage will be doubled.

Even after the completion of the migration, the amount of storage consumed is likely to be significantly higher as a result of the loss of message single-instance.<sup>1</sup>

Migration tools themselves operate largely on a MAPI basis where there is no provision for the single-instance (which is usually provided through the Exchange MTA). In effect, every migrated message ends up being unique - the result being that the new email environment consumes a much greater degree of email storage, in some cases 2-3 times greater than the originating mail system.

This issue is well documented by Microsoft and experts in the field of migration as outlined in the following article:

<http://www.storageadmin.com/Articles/Index.cfm?ArticleID=23819&pg=1&show=1373>

*“The migration method is a key factor in maintaining single-instance storage when you move mailbox data from Exchange 5.5 to Exchange 2000 servers because the store uses the MESSAGE-ID of each message to manage and track single-instance storage. If your migration tool doesn't maintain Exchange's protected storage*

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<sup>1</sup>Message Single Instance is often referred to as Single Instance Storage or SIS.

*environment (leaving MESSAGE-IDs intact and in context), the migration process won't maintain single-instance storage."*

There is no way of negating this problem using Microsoft tools when migrating from a non-Exchange system to Exchange, and in fact only one way of negating this explosion in storage when migrating Exchange versions. The method of mitigation is to perform an in-place upgrade of the existing Exchange system. This requires system down time and is high risk since the approach demands all mailboxes are converted at once. Consequently it is not possible to adopt a phased approach and should anything go wrong, the whole process has to be abandoned and the entire system reinstated.

Throughout the process it is important to consider the needs of the end user. They need to have uninterrupted access to the mail system, they want complete access to their personal email knowledge base, and they should have a single point of access with no need to run parallel systems.

The bottom line for any migration or upgrade is to deliver the benefits of the new technology without introducing undue risk and ongoing costs. Addressing the three core principles of controlling storage, reducing admin resource and maintaining user transparency will provide a solid foundation of successful deployment of new technology.

## **1.1 THE BENEFIT OF VERITAS IN MANAGING EXCHANGE MIGRATIONS**

Of the five main areas of a typical migration, moving mailbox content is the area where VERITAS brings the most benefit. Implementing Enterprise Vault™ from VERITAS will minimize the amount of email to be moved. In turn this will reduce the time to perform migrations and minimize the overall storage requirement during the migration itself and ongoing for the Exchange 2003 infrastructure. In the process it is possible (and desirable) to rationalize personal folder file content, thereby removing yet another risk area.

Additionally, if a customer is considering migrating from a non-Exchange system such as Lotus Notes or GroupWise, Enterprise Vault can be used to minimize the impact of the migration on the new Exchange environment.

When migrating Exchange versions, VERITAS can be used before, during and after migration to minimize storage costs and migration time and reduce project risk. Specifically through the use of Enterprise Vault the Exchange message store can be cut down in size ahead of the physical migration. Experience shows the content to be moved can be reduced by 50% or more by moving older items out into a separate Enterprise Vault repository, which is Exchange version independent and has its own method of single instance and compression. Once in Enterprise Vault, data does not need to be converted when the organization moves to Exchange 2003. It remains accessible to the user in exactly the same seamless way as before and can still, if required, be restored to Exchange in the correct native format.

## **1.2 USING VERITAS ENTERPRISE VAULT IN THE MIGRATION PROCESS**

There are four basic approaches to Enterprise Vault assisted migration. The choice of approach is dependent on how the organization views Enterprise Vault in relation to the migration project, i.e. part of the project itself or a separate project on its own. These choices together with their respective merits and considerations are as follows: -

## 1.2.1 IMPLEMENT EXCHANGE 2003 WITHOUT MOVING MAILBOX CONTENT

In figure 1 below, Enterprise Vault is deployed in the source environment, for example Exchange 5.5 or Exchange 2000 and is used to archive all the email from both public and private (mailbox) stores. At the same time Enterprise Vault is also deployed in the target environment. This reduces the project effort to primarily the migration of personal address books and mailbox profiles. The tasks are as follows: -

- Archive all content from the source environment. Migrate mailbox profile and address books to the target environment. Archive all PST files from the source environment.
- Provide access to archived mailbox and PST content via Enterprise Vault Archive Explorer™.
- Deployment of ongoing archiving in the target environment with access to archived content via both Archive Explorer and shortcuts in mailboxes.

This represents a significant reduction in time, effort, risk and cost since data migration accounts for significant costs during a migration project.

The cost savings are achieved as the user maintains ongoing access to historical mail without the need to move that mail into Exchange 2003.

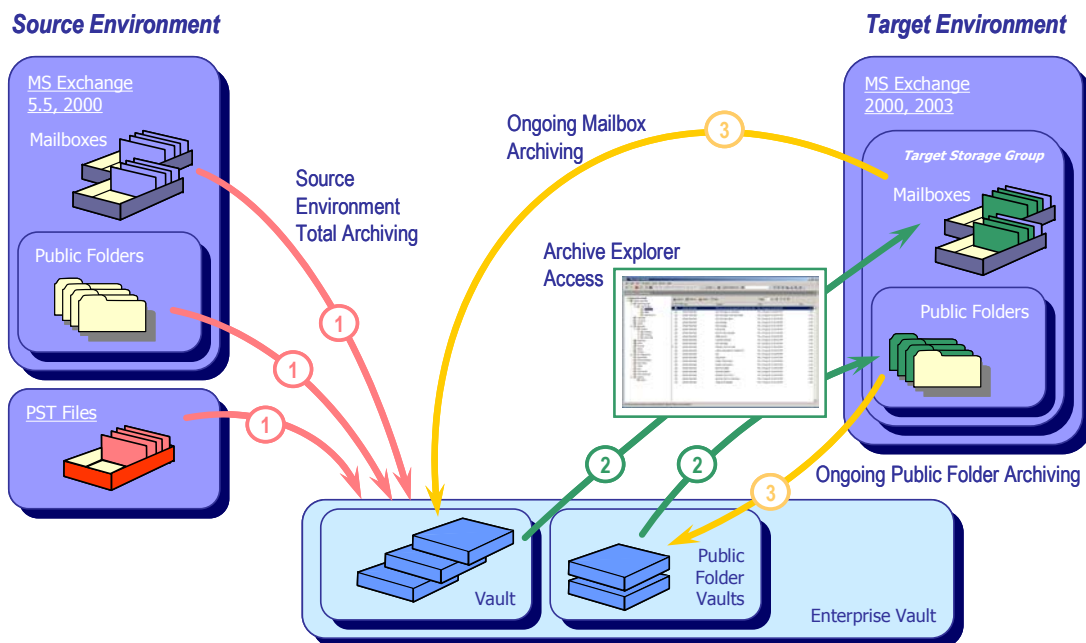


Figure 1

## 1.2.2 MINIMIZING MAILBOX CONTENT TO BE MOVED

The most common way in which Enterprise Vault is used in a migration is to minimize the amount of mailbox content that is physically migrated across the two environments.

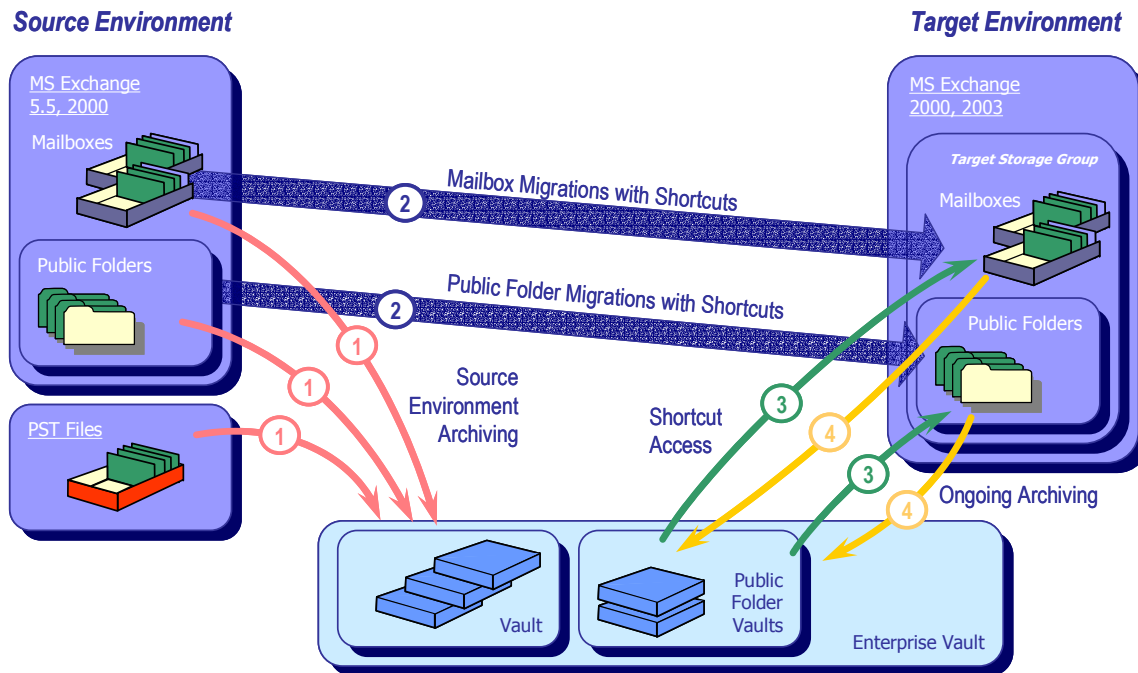


Figure 2

Figure 2 above depicts Enterprise Vault being deployed in both the source environment and target environment. In this scenario Enterprise Vault is used ahead of migration to aggressively archive content from the mailbox into the Enterprise Vault repository. Unlike the first method, with this approach, either all or a percentage of content is archived from the source environment and is replaced with seamless shortcut links in the mailboxes and public folders. The data migration effort is then focused on moving the residual shortcuts and any percentage of content left behind. The tasks are as follows: -

- Archive a percentage of content from the source environment based on age or mailbox quota. Archive all PST files from the source environment.
- Migrate mailbox profiles, residual content, archive shortcuts, and address books to the target environment.
- Provide access to archived mailbox, public folder and PST content via Enterprise Vault shortcuts created in mailboxes and also via Enterprise Vault's Archive Explorer™.
- Deployment of ongoing archiving in the target environment with access to archived content via both Archive Explorer and shortcuts in mailboxes.

The common settings applied to this approach are to archive anything older than 30 days. Residual shortcuts are left behind for all the archived content or this can be adjusted, for example anything up to a year old. These policies typically reduce the source mailbox and public folder content by around 80% and again, significantly reduce the data migration effort, with the added benefit of providing seamless access to content archived from the source environment in the target mailboxes.

Again, as with the previous method, this approach represents a significant reduction in time, effort, risk and cost of the migration process.

If shortcuts are only created for items for example less than a year old, then Archive Explorer can still be used to access content, together with the other search interfaces within Enterprise Vault.

### 1.2.3 PROTECTING THE INVESTMENT IN EXCHANGE 2003

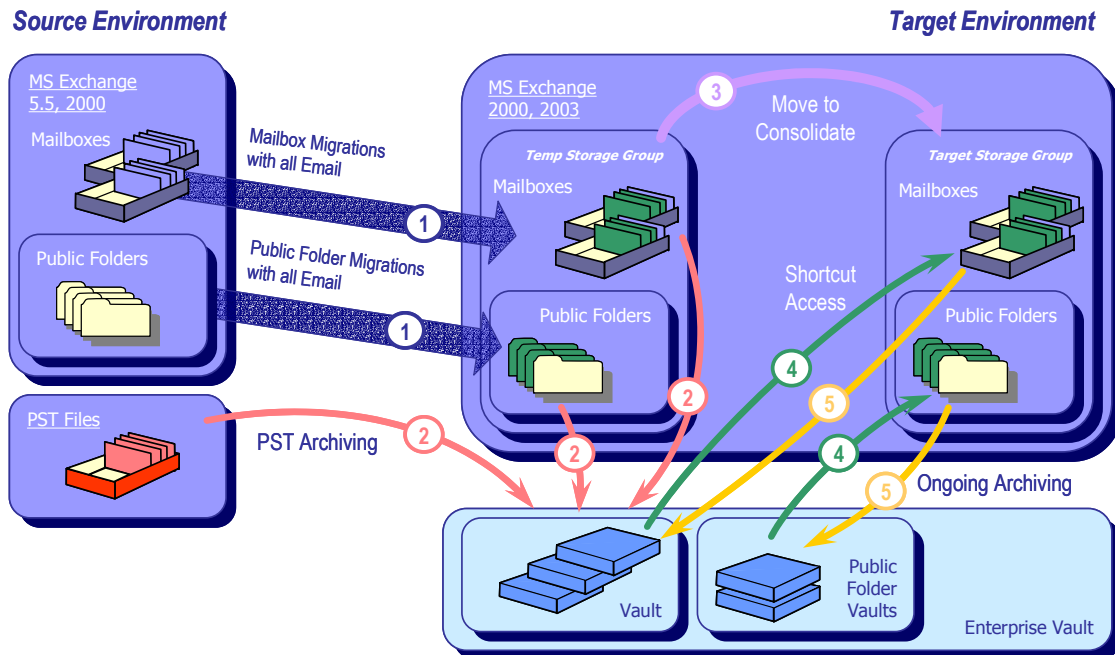


Figure 3

In instances where companies have already begun their Exchange migration project or are even migrating content from legacy mail systems e.g. GroupWise or All-in-One, it may not be possible or deemed appropriate to introduce a new technology into the legacy environment. In this case, Enterprise Vault can be introduced solely into the Exchange 2003 environment to ensure best practice mailbox management from day one.

As mentioned earlier, a significant side-effect of migration to Exchange 2003 is likely to be the loss of single-instancing. This in turn means that migrated data in the target environment essentially takes up more physical storage than necessary. Enterprise Vault can be used to minimize the impact of this data by reducing the physical requirements for its storage through archiving and, in turn, the re-creation of lost single-instance. The process is, again, seamless to users who have their original items replaced with shortcuts.

Figure 3 above depicts a scenario where the data migration exercise is underway prior to the introduction of Enterprise Vault. Consequently Enterprise Vault is only deployed in the target environment with the following process: -

1. Migrate mailbox profiles, mailbox and public folder content, and address books from the originating Exchange system or legacy mail system to the transitory storage group in the target Exchange environment, using the Microsoft migration wizards or similar tools.

2. Archive all PST files from the source environment to the archive deployed in the current environment. 'SID' history is required to map permissions. Aggressively archive content from mailboxes and public folders in the transitory storage group until archiving thresholds are reached.
3. Move the archived mailboxes and public folders into the target storage group for fragmentation elimination and storage consolidation.
4. Provide access to archived mailbox and PST content via Enterprise Vault shortcuts created in mailboxes and also via Enterprise Vault's Archive Explorer.
5. Deployment of ongoing archiving in the target environment with access to archived content via both Archive Explorer and shortcuts in mailboxes.

Exchange 2003 adopts a storage group model which allows mailboxes and content to be organized more efficiently within an Exchange site. To optimize the migration process and ensure that migrated mailboxes suffer the least fragmentation, VERITAS recommends having a transitory storage group into which mailboxes in particular are migrated. Enterprise Vault should then be configured to constantly and aggressively archive from these mailboxes, perhaps under a 30 day policy as discussed above. The archiving services would run every 15 minutes during the migration to archive content quickly into the target environment as it arrives from the Exchange migration wizards, again with shortcuts replacing the original items. After a mailbox has been migrated the resultant archived mailbox would then be transferred to the target storage group whereupon it would be consolidated and any fragmentation eliminated.

The migration of PST files can be undertaken independently from the mailbox migration and, as a result, a significant risk is further mitigated from the project. Additionally, the need to populate the new target mailboxes with residual shortcuts for the migrated PST content can also be negated through the use of Enterprise Vault's web-based Archive Explorer, as discussed previously.

In short, this approach, while not reducing the amount of time taken to perform the migration, does minimize the risk associated with it and, of course, the storage and associated costs of managing the migrated content.

#### **1.2.4 APPLICATION AFTER MIGRATION**

Finally, Enterprise Vault can help in instances where companies have already completed their Exchange migration projects and, as a result, are suffering large private and public databases sizes together with the associated impact on backup and recovery times.

Figure 4 below highlights this scenario where Enterprise Vault is effectively deployed into a stand alone Exchange implementation with no mailbox migration requirements.

In such an example the primary concern is to reduce the size of the Exchange databases quickly and, if necessary, cap them to control growth. The goal is to provide a defined service level agreement (SLA) on Exchange, a predictable backup and recovery strategy and ongoing reductions in associated storage costs. Mailbox quotas may be used to cap mailbox sizes, but this approach is highly intrusive for the end user and may result in corporate records being lost. The introduction of an archiving policy working with a mailbox quota provides the ability to control Exchange growth and is completely non-intrusive for the end user, preserving long term access to important Exchange content. An example archiving policy using this model might constrain mailbox sizes by archiving at 75% of a mailbox quota of 100Mb, thus effectively capping Exchange to 75Mb multiplied by the number of mailboxes, with an effective mailbox size governed by the amount of storage allocated to a mailbox archive. The following steps highlight the process for achieving this: -

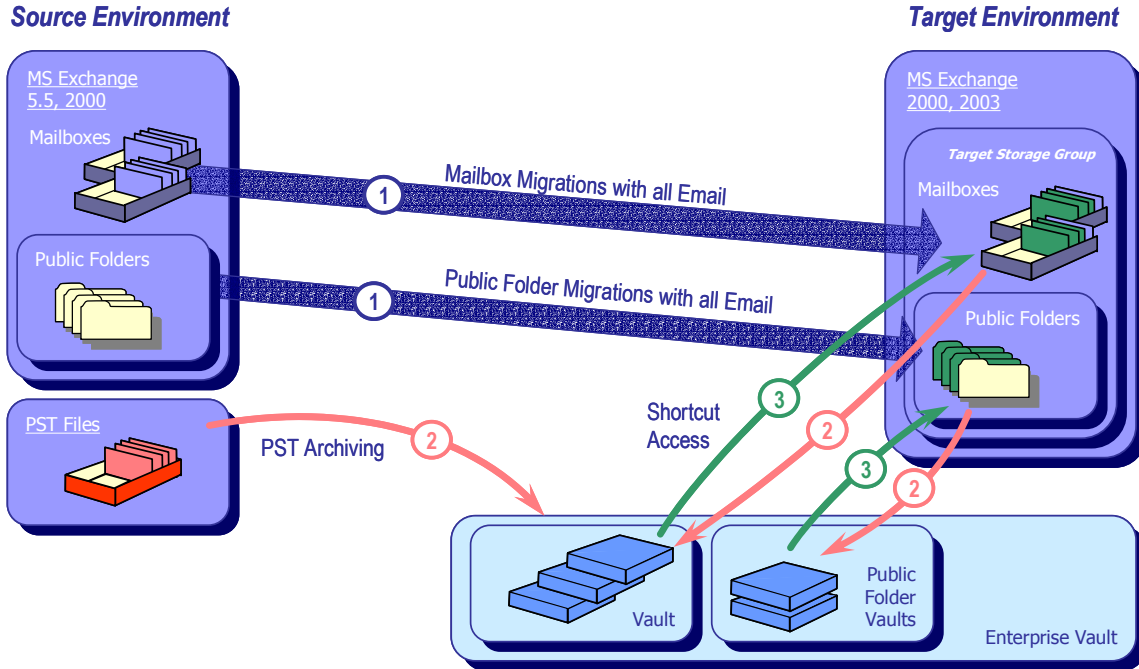


Figure 4

1. Mailbox content already migrated to the target environment.
2. Archive all PST files from the source environment to the archive deployed in the current environment. 'SID' history is required to map permissions. Initially aggressively archive content from mailboxes and public folders in the target environment until the quota archiving thresholds are reached. Subsequent modification of the ongoing archiving in the target environment to a nightly schedule with access to archived content via both Archive Explorer and shortcuts in mailboxes.
3. Provide access to archived mailbox and PST content via Enterprise Vault shortcuts created in mailboxes and also via Enterprise Vault's Archive Explorer.

As before, the migration of PST files can be treated as a separate project and undertaken independently from the archiving of mailboxes to reduce the risk and cost of storage.

## 1.3 RECOMMENDATIONS FOR MIGRATION

Successful and painless migration to Exchange 2003 depends on many factors and it can never be a risk free operation. Using Enterprise Vault to assist in the management of Exchange content can be a critical success factor and dramatically reduce the risks associated with storage, admin overhead and user transparency.

The decision as to the appropriate method of Enterprise Vault assisted Exchange and legacy mail system migration is dependent on a number of factors including: -

- A company's perception of project risk in relation to such migration projects
- Availability of storage to address migrated mail content
- Availability of backup technology to address migrated mail content
- Time to perform the migration exercise
- Status in terms of the migration project i.e. not started, in progress, concluded.
- Budget available to perform the migration in terms of resource and software tools

In a normal migration scenario where a customer engages VERITAS early in the planning of a migration project, the benefits of Enterprise Vault are easily justified in terms of project time, storage cost, resource cost savings together with a general reduction in overall project risk.

The later VERITAS is engaged in a migration project, the more Enterprise Vault's benefits are focused on storage cost savings. In summary though, the most common approach by VERITAS customers in using Enterprise Vault to assist Exchange migration project is to adopt approaches 1 or 2, since these provide the most benefit to an organization.

There is however one category of mail content which, regardless of a company's stage in a migration project, will always gain significantly from the use of Enterprise Vault. This of course is PST file migration. VERITAS understands only too well the pain PST files cause organizations and can justify through a proven Exchange modeling and ROI process the use of its technology purely on the risk, cost and time savings associated with the migration, repatriation and consolidation of PST file content into an archive that is seamlessly accessible by Windows users.

## 1.4 ABOUT VERITAS ENTERPRISE VAULT

VERITAS Enterprise Vault™ software allows policy-based archiving of business critical information held within Microsoft Exchange, Microsoft Office, SharePoint, and file systems. Archiving infrequently accessed information with Enterprise Vault software enables organizations to more easily manage storage growth in their e-mail environments while reducing associated hardware and management costs. Most importantly, Enterprise Vault archiving and indexing simplifies the process of search and discovery. In the event of a regulatory inquiry, administrators can quickly discover and deliver items of interest in a fully automated fashion, minimizing disruption to the business.

For more information, visit [www.veritas.com/enterprisevault](http://www.veritas.com/enterprisevault)